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I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter.

- ☒ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

22504

OR

- ☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A or equivalent):

Name	Registration Number	Name	Registration Number

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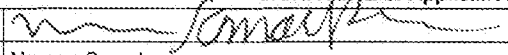
OR

☐ Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

I am the Applicant:

- ☐ Inventor or Joint Inventor
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature		Date	March 1, 2013
Name	Mansour Samadpour	Telephone	
Title and Company	Principal, Institute for Environmental Health, Inc.		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms for more than one signature, see below *.

- ☒ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Peachie Chan			
Attorney Docket Number:	66090-008US3			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	98	98
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125
Pages:				
Claims:				
Claims in excess of 20	2202	14	31	434
Miscellaneous-Filing:				
Late Filing Fee for Oath or Declaration	2051	1	65	65

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1032

Electronic Acknowledgement Receipt

EFS ID:	15113635
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	04-MAR-2013
Filing Date:	
Time Stamp:	19:40:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1032
RAM confirmation Number	8264
Deposit Account	040258
Authorized User	

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Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

National Fee 1010

Page 004

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	ApplicationDataSheet.PDF	1433368	no	6
			d2c3f0622ea027de85143641dcc042b61455f721		
Warnings:					
Information:					
2		ContinuationApplication.pdf	192162	yes	31
			9445fccf683cafe3ace1833727233395f1545ebd		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	24	
	Application Data Sheet		25	30	
	Abstract		31	31	
Warnings:					
Information:					
3	Transmittal Letter	TransmittalForPowerOfAttorney.pdf	137803	no	1
			40e9991983edd900d9b6f6fd73b68323084fb410		
Warnings:					
Information:					
4	Power of Attorney	PowerOfAttorney.pdf	625806	no	1
			6b4fcf12d18c2ace7b2d2e2a000e9db8b4478c3a		
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	38192	no	2
			664d0ecfca5350692ea3a758b48b801dcc8b0a41		
Warnings:					
Information:					
Total Files Size (in bytes):			2427331		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	66090-008US3
		Application Number	
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--

Inventor Information:

Inventor 1					Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Mansour		Samadpour			
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service						
City	Seattle	State/Province	WA	Country of Residence ⁱ	US	
Mailing Address of Inventor:						
Address 1		6050 50th Avenue NE				
Address 2						
City	Seattle	State/Province	WA			
Postal Code	98155	Country ⁱ	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	22504		
Email Address	dwtpat@dwt.com	Add Email	Remove Email

Application Information:

Title of the Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		
Attorney Docket Number	66090-008US3	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	0	Suggested Figure for Publication (if any)	0

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	66090-008US3
		Application Number	
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.			
Please Select One:			
☒	Customer Number	☐	US Patent Practitioner
☐	Limited Recognition (37 CFR 11.9)		
Customer Number	22504		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.					
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
	Continuation of	12360796	2009-01-27	8389233	2013-03-05
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12360796	Continuation of	11199871	2005-08-08	7534584	2009-05-19
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
11199871	non provisional of	60599473	2004-08-06		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					Add

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	66090-008US3
		Application Number	
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		

			Remove
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Priority Claimed
			☐ Yes ☒ No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices
If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.		
Applicant 1		Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.		
		Clear
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor
☐ Person to whom the inventor is obligated to assign.	☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		66090-008US3	
		Application Number			
Title of Invention		MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
Name of the Deceased or Legally Incapacitated Inventor :					
If the Applicant is an Organization check here. ☒					
Organization Name		Institute for Environmental Health, Inc.			
Mailing Address Information:					
Address 1		15300 Bothell Way NE			
Address 2					
City		Lake Forest Park	State/Province		WA
Country i	US	Postal Code		98155	
Phone Number			Fax Number		
Email Address					
Additional Applicant Data may be generated within this form by selecting the Add button. Add					

Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.				
Assignee 1				
Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).				
Remove				
If the Assignee is an Organization check here. ☐				
Prefix	Given Name	Middle Name	Family Name	Suffix

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	66090-008US3
		Application Number	
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		

Mailing Address Information:			
Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the Add button. Add			

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications					
Signature	/Barry L. Davison, Ph.D., J.D./			Date (YYYY-MM-DD)	2013-03-04
First Name	Barry	Last Name	Davison	Registration Number	47309
Additional Signature may be generated within this form by selecting the Add button. Add					

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

FIELD OF THE INVENTION

5 Aspects of the present invention relate generally to improving the efficiency of producing food and health related (*e.g.*, pharmaceutical) products, and the safety and quality thereof. Particular embodiments relate to novel methods for microbial pathogen testing that allow for enhanced sensitivity, cost savings and traceability (*e.g.*, source tracking) for remedial purposes. The methods are broadly applicable to many product areas including, but not limited to beef,
10 pork, sheep, bison, deer, elk, poultry (*e.g.*, chicken and turkey) and fish and other seafood, produce, juices, dairy products, dry goods (*e.g.*, cereals, nuts, etc.), fruits and vegetables, herbs and spices, and all manners of raw and processed foods, environmental samples (*e.g.*, water, wastewater, soil, surface samples, air samples taken by impingers and filtration, etc.), pharmaceuticals, and other types of samples to be analyzed using microorganism enrichment-
15 detection protocols.

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation of United States Provisional Patent Application Serial Number 12/360,796, filed 27 January 2009 (issuing as U.S. Patent No. 8,389,233 on 05
20 March 2013) and entitled MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS, which is a continuation of United States Provisional Patent Application Serial Number 11/199,871, filed 08 August 2005 (Now U.S. Patent No. 7,534,584) and entitled MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR
25 DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS, which claims the benefit of priority to United States Provisional Patent Application Serial Number 60/599,473, filed 06 August 2004 and entitled MODULAR WET

COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, all which are incorporated by reference herein in their entirety.

BACKGROUND

5 Manufacturers and respective regulatory agencies strive to continually improve the safety and the quality of foods, pharmaceuticals, neutraceuticals, water and the environment. Under recent United States Department of Agriculture, Food Safety and Inspection Service (FSIS) directives and guidelines, many food producers in the United States have adopted sampling plans that involve testing, for example, of raw beef trims and/or ground beef for *E. coli* O157:H7, and
10 ready-to-eat products for *Listeria monocytogenes* and/or *Salmonella*. Similar trends are observed in other countries, for products detained for domestic consumption and/or export. For example, the pharmaceutical industry spends considerable resources on sterility testing and environmental monitoring, and the water and wastewater industry and their respective regulatory agencies allocate considerable resources to monitor the quality of water (*e.g.*, drinking, recreational and
15 fisheries resources), wastewater (treated and untreated) and sludge (biosolids). Concern for the quality of air has resulted in monitoring of indoor air for the presence of microbial contaminants and pathogens. These sampling plans associated with such testing determine, for example, the disposition of products and the production lots, or result in decisions regarding the safety of water, receiving waters and recreational waters, and the impact of wastewater discharge, and
20 quality of air.

 The operative art with respect to such product “hold and release” monitoring efforts comprises various different sampling plans, typically pursuant to International Commission on Microbial Specifications for Food (ICMSF) guidelines for testing food products, FDA and USDA or EPA guidelines, or intuitive sampling plans. The common feature of these sampling
25 plans is that several samples representing production lots, or a number of environmental samples, are combined into a combined production lot prior to sampling. For example, a typical plan for

microbial pathogen detection calls for taking more than one sample, for instance ten (10) to sixty (60) sample pieces from a given sample lot (combined production lot), to form a *composite sample* for testing. The number of pieces taken to form the composite sample depends, under ICMSF or other regulatory guidelines, on the outcome of infection/poisoning (*e.g.*, the severity), the level of hazards, and potential increase in the hazard levels due to storage. The same holds true in detecting microbial constituents and/or spoilage organisms. With respect to *E. coli* O157 testing, for example, a typical plan calls for taking 60 samples (*e.g.*, sample pieces) from a production lot to form a single composite sample. With respect to *Listeria monocytogenes*, thirty (30) samples are typically taken from a production lot to form a composite sample. With respect to sterility testing, a typical plan may call for compositing 10-100 units of the product, and in the case of environmental sampling, 2-10 samples are often composited. Generally, the number of samples that are composited reflects: the overall sensitivity of the test method and the limit of detection that applies to the test unit; the ability to concentrate/enrich the composite sample to achieve the desired sensitivity; and the cost of sampling compared with the cost of analysis.

The costs associated with testing food are substantial, and consequently manufacturer's often resort to increasing the size of the "production lot" to be tested. For instance, the standard size production lot for trim testing for *E. coli* O157 in the U.S. beef industry is five (5) 'combos' (each combo weighing approximately 2,000 pounds), and for *Listeria* and *Salmonella* in ready-to-eat (RTE) products, it is one composite sample per production line per shift. A primary problem associated with the use of large size test lots is that a large quantity of products must be downgraded or destroyed when there is a positive finding of a pathogen. Additionally, because of the nature of combination 'lotting' (combining, for purposes of forming the test lot, several independent sub-lots that collectively span a long period of production time), it is very difficult to investigate the cause of the failure and pinpoint the source/cause, and remedial measures cannot be effectively taken. Furthermore, compositing a large number of samples may result in reduced sensitivity for the test unit and adversely effect the limit of detection.

Typically, once a composite sample is constructed (following the art with respect to particular testing) it is then enriched for the presence of a given pathogen/microbe by addition of appropriate amounts of enrichment media and incubation at an appropriate temperature for a given amount of time. If the pathogen/microbe is present, then it grows and multiplies under the favorable conditions of enrichment, thereby providing more material which can be detected by subsequent analysis. The composite sample is then tested by one or more available, art recognized methods including, for example, enrichment followed by immunoassay-based tests or PCR-based methods, or culturing of the organism of interest, or other DNA- or immunochemical-based methods.

The above-described prior art has several substantial deficiencies. *First*, even though the prior art production lot encompasses several production sublots (for instance 5 combo/pallets of products, or an entire shift of production), if a positive finding is obtained for the production lot (composite test sample), the entire production lot is rejected (all 5 combos/pallets, or one shift of production) and diverted to economically undesirable end uses (*e.g.*, cooking or disposal), even though the pathogen of concern may be confined to only a limited portion of the production sublots (corresponding to one or two combos/pallets or an hour of production) comprising the production lot.

Second, the current art does not allow for retesting of any production sublots, primarily because microbial contaminants are unevenly spread throughout the products, and in many instances the levels of contamination are minute and may be present on very small portions of the products in each subplot. Therefore, once a composite sample is constructed if it tests positive all of the sublots are destroyed. The regulatory agencies do not allow for re-testing of the sublots, premised on the argument that after a production lot tests positive, negative test results obtained for production sublots, or even a new production lot composite sample, are meaningless since the microbial contaminants are not uniformly present throughout the products.

Third, the current protocols for collecting a composite sample representing a production lot often group together production sublots that are unrelated by virtue of product type or hours of production. This makes investigating the nature of the failure a difficult task even when relevant information is available. As an example, information is frequently available on a 'per combo' basis including (but not limited to) hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps. However, when five unrelated combos/pallets are included in a production lot it is much harder to rationally analyze the available information since there is no way to determine which combo(s) contained the pathogen (as stated above, prior art re-sampling is not a viable option since it may not yield the same result). Likewise, for sterility testing, when the composite sample tests positive, the entire production will be disposed.

Therefore, there is a pronounced need in the art to implement novel and effective testing protocols that provide a greater measure of assurance that the food product is safe, that provide economic relief to the producer, and that allow for effective tracking of the contaminated lot(s) for remedial purposes (*e.g.*, pinpointing the time of the contamination and determine the segment of production which was impacted).

SUMMARY OF THE INVENTION

Aspects of the present invention provide novel enrichment, testing and detection methods for detection of pathogens or other microbes in, for example, food, water, wastewater, industrial, pharmaceutical, botanical, environmental samples and other types of samples analyzed by detection methods (*e.g.*, enrichment-detection methods). According to particular aspects, where any microbiological testing program involves compositing a number of samples to form a test lot, independent enrichment of each of the components of the composite sample is performed with subsequent formation of a modular (*e.g.*, wet modula) composite sample by combining portions from each independent enrichment, which allows for determining the outcome of the

test for each individual subunit of the composite as opposed to generalizing the results of the test sample to all of its' subunits. This individual outcome determination is achieved by retesting the individual enrichment samples in the event that the composite enrichment tests positive.

In preferred aspects, a reportable lot is defined as a single unit of a modular (e.g.,
5 modular wet) composite lot, rather than as an entire composite lot comprised of multiple sublots. For example, a reportable production lot is defined as a single unit of production and corresponds to a single unit of a modular wet composite production lot, rather than (as in the prior art) as an entire composite lot comprised of multiple production units (multiple sublots). With respect to testing each reportable lot (e.g., each single unit of production), a plurality of pieces/portions of
10 sample are separately collected from each single reportable lot (e.g., from each single production unit; individual test unit) and composited to form, for example, one '*single-unit production lot sample*' (corresponding, in each case, to a particular single unit of production), which is enriched using appropriate enrichment protocols to allow for the levels of the target organism to reach detection levels and uniformity of presence in the enriched sample. Multiple aliquots of the
15 enrichment media may be removed for analysis, thus circumventing the prior art problem of having to re-sample a test production lot where microbial contaminants are not uniformly present throughout the product.

In the exemplary context of enriched single units of production, equal portions of enrichment buffer are removed (aseptically) from each single-unit production lot sample and
20 combined to form a *Modular Wet Composite Sample* (MWCS). The MWCS is then tested using an appropriate test (detection assay) for the target agent (e.g., target organism). If a *negative* result is obtained from the MWCS, then all of the individual single-unit production lots are released. Significantly, if a *positive* result is obtained from a MWCS, the enrichment buffers from each of the individual single-unit production lot samples are separately (individually)
25 tested, using the same test protocol, or a test protocol with enhanced sensitivity, or any appropriate test protocol. According to particular preferred aspects, the signal obtained from a

MWCS is due to one or more of its' components (*e.g.*, reportable lots (*e.g.*, individually enriched single production units)), and it is, therefore, possible in all cases to trace a positive signal to one or more individual subunits by testing each individual enrichment sample for the same target. When a *positive* finding is obtained for any individual reportable lot sample (*e.g.*, single-unit production lot sample), that particular reportable lot (*e.g.*, single-unit production lot) is deemed to be positive, and appropriate actions are taken based on the result. In the case of pathogen/microbial testing for foods, the individual positive sublots can be diverted to cooking, disposal, or other acceptably safe endpoint. The rest of the individually enriched test units that test negative are deemed to be negative and will be reported as such (are validated).

DETAILED DESCRIPTION OF THE INVENTION

Particular aspects provide novel enrichment, testing and validation methods for detection of pathogens or other microbes in any type of samples (*e.g.*, food production lots, water, wastewater, industrial, pharmaceutical, botanical, environmental samples, etc.) analyzable by enrichment-detection methods. In preferred aspects, a test lot (single-unit production lot), rather than (as in the prior art) a composite lot comprised of multiple test lots (*e.g.*, single-unit production lot units), is defined and established as the single unit of production. A plurality of portions (*e.g.*, product portions) are separately collected from each test lot (*e.g.*, single-unit production lot) and composited to form a corresponding set of test lot samples (*e.g.*, single-unit production lot samples), which are enriched using suitable enrichment protocols to allow target agents/organisms to reach detectable levels and sample uniformity. In particular embodiments, equal portions of enrichment buffer are removed (preferably aseptically) from the enriched samples, and combined to form a modular composite sample (*e.g.*, modular wet composite sample; MWCS). The MWCS, for example, is tested using a suitable detection assay for the target agent/organism. If a *negative* result is obtained from the MWCS, then all of the individual single-unit production lots are validated and releasable. If a *positive* result is obtained from a

MWCS, the enrichment sample corresponding to individual test lots (*e.g.*, individual single-unit production lots) are separately (individually) tested, using the same, or a more sensitive test protocol. If a *positive* finding is obtained for any test lot sample (*e.g.*, individual single-unit production lot sample), that particular respective lot is diverted to cooking, disposal, or other acceptably safe endpoint. If a *negative* finding is obtained for any individual test lot sample (*e.g.*, single-unit production lot sample), then that particular lot is validated and releasable. In this manner, any member lot of the MWCS that tests *negative* using the same method (about 5-fold more sensitive relative to the prior art), or an enhanced method (about fifty times more sensitive), will be validated and releasable for consumption.

DEFINITIONS

The term “test lot” or “reportable lot” as used herein to refer to an assemblage of one or more specimens of a medium or process (*e.g.*, assemblage of specimens of air, water, solids, or of products of a production process, etc.), where such assemblage can be sampled by taking portions of the one or more specimens thereof, and where the one or more specimens of the assemblage are operationally linked in a manner (*e.g.*, proximity, time, process step, etc.) whereby information derived about sampled portions is operationally applicable to all specimens of the assemblage, and thus to the test lot. In particular instances, portions are synonymous with specimens.

The term “single production unit” or “single-unit production lot” as used herein is a form of test lot, and refers to a single unit of production (*e.g.*, for beef trim a “combo,” or for almonds a “bin”) rather than, as in the prior art, to a composite comprised of multiple, non-operationally linked single production units (production sublots).

The term “product portion” as used herein refers to a product piece (*e.g.*, a piece of solid beef trim, etc.), aliquot of product (*e.g.*, a volume of liquid juice) or weight of product (*e.g.*, a weight of semi-solid pudding). A single unit of production is composed of multiple product

portions. In preferred embodiments, the number of product portions which comprise a single unit of production is great enough that removal of some product portions to form a sample does not impose an unacceptable economic loss to the producer. In particular instances, a product portion may be a specimen of a test lot as defined above.

5 The term “compositing” as used herein refers to combining a number of single product portions to form one larger sample. In preferred embodiments, the number and selection of single product portions to be combined conform to statistical-based sampling plans which seek to form a typical or average sample that is representative of the test lot (*e.g.*, single production unit) being sampled.

10 The term “test lot sample” or “single-unit production lot sample” or “single production unit lot sample,” as used herein refers to a sample formed by combining multiple product portions from a test lot (*e.g.*, single production unit), such that each test sample (*e.g.*, each single-unit production lot sample) is attributed to a particular corresponding test lot (*e.g.*, production unit). For production lot samples, the number of portions/pieces combined may be essentially
15 any number, but preferably is selected so as to conform to statistical-based sampling plans. Preferably the number of pieces combined is selected from the range group consisting of from about 5 to about 100, from about 10 to about 90, from about 20 to about 80, from about 30 to about 70, from about 30 to about 60, and from about 40 to about 50 product portions. Preferably, the number of independent product portions is selected so as to yield a sample size that is equal
20 to or greater than that required by the subsequent analysis to be applied.

 The term “enrichment” as used herein refers to incubating a test lot sample (*e.g.*, single-unit production lot sample) under conditions suitable to allow levels of a target agent/organism that is present to reach detectable levels and become uniform or substantially uniform throughout the enriched test lot sample (*e.g.*, single-unit production lot sample). Preferably, enrichment
25 comprises addition of an amount of an enrichment medium or buffer to a sample, and incubating the sample at a favorable temperature for a period of time sufficient to allow the organism to

grow and multiply.

The term “enrichment medium” as used herein refers to a mixture which contains nutrients and which has properties (*e.g.*, pH and/or oxygen content) which favor the growth of the target agent/organism. Preferably, the enrichment medium is formulated to mimic the environment of the target agent/organism or take advantage of a known metabolic property of the target agent/organism. Preferably, the enrichment medium will omit nutrients needed by competing undesired agents/organisms. Preferably, the enrichment medium will include selective agents that will inhibit competing undesired agents/organisms. An example of an enrichment medium is that used for the isolation of nitrogen fixing bacteria (those that can use nitrogen gas as their sole nitrogen source) contains no source of fixed nitrogen in the medium. A second example is an enrichment medium for the isolation of bacteria capable of utilizing 2,4-dichlorophenoxyacetic acid (also known as 2,4-D, a common herbicide) as a source of carbon and energy. The enrichment medium is formulated to contain benzoate as the only organic compound.

The term “wet enrichment” as used herein refers to diluting a solid, semisolid or liquid single-unit production lot sample (single production unit lot sample) with enrichment medium in a ratio of approximately 1:10 (wt./v), consistent with conventional methods for expanding and testing a variety of target agents/organisms as set forth in widely recognized published methods. For example, the conventional method for expanding and testing for coliforms, fecal coliforms and *E. Coli* in food, comprises a 1:10 dilution of the samples (*e.g.*, 50 g into 450 ml) (*see, e.g.*, U.S. FDA Bacteriology Analytical Manual Online, Chapter 4 and 4A, describing standard 1:10 dilution procedures for testing of coliforms, fecal coliforms and *E. Coli* in food, shellfish and juices).

The term “dry enrichment” as used herein refers to enriching a solid, semisolid or liquid single unit production lot sample either with no addition of other compounds if the sample’s intrinsic properties (water activity, nutrients and pH) are sufficient/proper to promote the growth

of the target agent/organism, or by dilution of the sample with minimal amounts of enrichment medium in ratios ranging from about 0.1 (wt/v) to about 1 (wt/v).

The term “modular composite sample” as used herein refers to a sample formed by removing, preferably aseptically, equal portions of each of a plurality of enriched single-unit production lot samples, and combining the removed portions.

The phrase “suitable detection assay” as used herein refers to any assay that is suitable for detecting a particular agent/organism. Preferably, the assay is optimized to detect the particular agent/organism, and may be combined with one or more concentration steps for concentration of the agent/organism being assayed.

The term “validation” as used herein with respect to production lots refers to determining that a particular sample tests *negative* using the detection assay. Where a modular composite sample tests *negative*, all single-unit production lot samples comprising the composite sample are validated along with the respective single-unit production lots, which are thus cleared for release. Where a modular composite sample tests *positive*, individual single unit production lots may nonetheless yet be validated if particular respective single-unit production lot samples test *negative*.

“Trim” refers to small pieces of meat and fat which are excised during, for example, the beef fabrication process in order to produce primal and subprimal pieces and marketable cuts.

“Trim testing” refers to the process of testing trim, or raw materials which are to be used for ground meat production for microbial/pathogen content.

A “combo” or “combo-bin” refers, in the beef industry, to the single production unit packaging unit. Alternatively raw materials corresponding to a single production unit to be tested can be packaged into boxes, bags or other appropriate containers, which can be placed, for example, on pallets.

A “composite lot-unit” or “five-combo-lot unit” refers to a *composite* unit, comprised of five combos (combo-bins). In prior art sampling plans, the composite lot-unit represents the raw

material (composite trim) upon which sampling, testing and acceptance or rejection is based.

Therefore, according to particular aspects, a test lot (or test unit) (*e.g.*, a single-unit production lot or single production unit lot) is defined and taken as one or more operationally-linked specimens of a medium or process. A test lot may be a single unit of production (*e.g.*, a single combo, bin, pallet, or segment of production, etc.), or a single environmental sample (*e.g.*, single air sample, single water and wastewater sample, etc.), rather than, as in the prior art, as a composite of multiple production units or environmental samples.

In preferred embodiments, a number of pieces or portions of sample are collected from a test lot (*e.g.*, from a single production unit (*e.g.*, from the single combo, bin, pallet, or segment of production, etc.)), and composited to form one '*single-unit test sample*' (or '*single-unit production lot sample*.') In particular embodiments (*e.g.*, wet enrichment), enrichment buffer is added to the sample. In alternate embodiments, 'dry enrichment' (as defined herein above) is done.

Significantly, in the inventive modular (*e.g.*, wet modular) compositing method, samples taken from each unit of production are enriched *separately* using appropriate enrichment protocols to allow for the levels of the target organism to reach detection levels and *uniformity of presence* in the enriched sample. In preferred aspects, such enrichment obviates the prior art problem of having microbial contaminants that are not uniformly present throughout the product sample. Specifically, while microbes are not necessarily uniformly distributed in food, water, air, pharmaceuticals, etc., after enriching a sample as described herein, the target microbes are uniformly, or at least substantially uniformly, present in the enrichment medium or extract from dry or semi dried enrichments.

Following incubation for the target organism, equal portions of enrichment buffer or sample are removed (aseptically) from each of several test lot samples (*e.g.*, from several single-unit production lot samples; preferably 5) and pulled together to form a Modular Wet Composite Sample (MWCS). The MWCS is then tested using an appropriate test (detection assay) for the

target organism. If a *negative* result is obtained from the MWCS, then all of the individual single unit production Lots are released.

If a *positive* result is obtained from a MWCS, the enrichment buffers from each of the individual single unit production lot samples are then separately (individually) tested, using the same test protocol, or any other appropriate tests. Alternately, an augmented protocol that uses a concentration step for the target organism, such as immunomagnetic bead separation, affinity chromatography, etc., followed by an appropriate detection method is used to test the enriched individual test lot samples (e.g., the individual single-unit production lot samples).

In preferred aspects, the inventive methods of analysis are modified by introducing a concentration step (e.g., employing antibody-coated paramagnetic beads into the procedure (e.g., DNA-based detection, biosensor based detection, classical microbiological detections, etc)). Antibody-coated paramagnetic beads, for example, afford an approximately 10-fold increase in sensitivity. This concentration step, combined with the fact that the individual test lot samples (e.g., individual single-unit production lot samples) are not 5-fold diluted relative to the MWCS, allows for an overall 50-fold increase in sensitivity relative to prior art sampling and testing protocols. If a lateral flow device is used for detection, such immunomagnetic concentration may or may not be used, in which case the detection sensitivity is increased by about 5-fold.

Where a *positive* finding (test result) is obtained for any individual test lot sample (e.g., single-unit production lot sample), that particular corresponding test lot (e.g., single-unit production lot) is deemed to be positive, and appropriate decisions are then made on the positive results (e.g., in the case of food products, diversion to cooking, disposal, or other acceptably safe endpoint). For each of the rest of the test lot samples (e.g., single-unit production lot samples) belonging to the positive MWCS, where a *negative* finding is obtained, that particular test lot sample (e.g., that single-unit production lots sample) is deemed to be negative. In this manner, any test lot (e.g., any single-unit production lot) that is a member of the group of test lots (e.g., single-unit production lots) that comprise a corresponding MWCS, will be considered to be

negative, if it tests *negative* using the same method (about 5-fold more sensitive relative to the prior art), or the enhanced method (about fifty times more sensitive).

In alternate preferred embodiments, a new Modular Wet Composite Sample is reconstructed from the member lots (test lots) that have tested *negative*, and subjected to a third layer of testing to again show (confirm) that they are negative. Specifically if one of the five individual test lots (*e.g.*, individual single-unit production lots) has tested positive (and the other four negative), and the protocols call for testing of composites consisting of five test lots, a new single test lot sample can be formed from a new test lot, and can be used along with the four negative samples to form a new MWCS.

The methods of the present invention provide substantial economic savings to the food and pharmaceutical industries, because of the precision in detecting in the context of operationally-linked portions of production (*e.g.*, test lots; single production units; single-unit production lots) which are contaminated. The inventive methods prevent unnecessary destruction of *negative* lots that are condemned because of guilt by association (*e.g.*, simply because they were grouped with a contaminated composite prior art multiple production unit lot in a prior art testing protocol). Where a *positive* finding is obtained, a smaller quantity of material is diverted to an economically undesirable end use. The proposed invention has substantial utility (*e.g.*, bringing savings, accuracy and precision in pinpointing problems) in the environmental industry.

Additionally, and significantly, it is easier to trace the source of the contamination and apply remedial measures, because the single-unit test component points, for example, to single point of production or a single sampling site.

Particular Preferred Aspects:

Particular aspects provide a method of sampling, testing and validating test lots, comprising: separately collecting a plurality of portions from each of a plurality of test lots, the

test lots each comprising an assemblage of one or more operationally-linked specimens, wherein the assemblage can be sampled by taking portions thereof; combining the collected portions corresponding to each of the test lots to provide a corresponding set of test lot samples, wherein each test lot sample is attributed to a particular corresponding test lot; incubating the set of test lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched test lot samples; removing, aseptically, equal portions of each enriched test lot sample, and combining the removed portions to provide a modular composite sample; and testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all test lot samples are validated, and wherein where such testing is positive, individual test lots may nonetheless yet be validated by further testing of a portion of the respective enriched test lot sample using the same or a more sensitive protocol and obtaining a negative test result.

In particular aspects, the test lot is selected from the group consisting of an environmental lot comprising one or more operationally-linked environmental specimens, pharmaceutical lot comprising one or more operationally-linked pharmaceutical specimens, single-unit product lot comprising one or more operationally-linked product specimens, and combinations thereof. In particular aspects, the test lot is a single-unit production lot, comprised of operationally-linked product specimens. In particular aspects, product specimens are synonymous with product portions. In particular aspects, the methods further comprise incubating the modular composite sample prior to testing it. In particular aspects, incubating each test lot sample comprises adding an amount of enrichment medium to the sample, and removing enriched sample portions comprises removing a portion of the enrichment medium from each enriched sample and combining the removed portions to provide a modular composite sample. In particular aspects,

testing of the modular composite sample, using a suitable detection assay comprises use of a concentration step to concentrate the microbial agent or organism.

In particular aspects, where testing of the modular composite sample is positive, and wherein the individual test lots are further tested, such further testing comprises use of the more sensitive protocol. Preferably, the more sensitive protocol comprises use of a concentration step to concentrate the microbial agent or organism, in combination with the same test protocol used to test the modular composite sample.

In particular aspects, the methods further comprise forming an additional modular composite sample from the enriched test lot samples and testing the additional modular composite sample, using the same or a different suitable assay, to confirm the testing status. In particular aspects, the methods further comprise forming an additional modular composite sample from an additional enriched test lot sample along with any enriched test lot samples that test negative, and testing the additional modular composite sample, using the same or a different suitable assay. In particular aspects, the methods further comprise, where testing of the modular composite sample is negative, forming an additional modular composite sample from the enriched test lot samples, and testing the additional modular composite sample, using a different suitable assay, to confirm the negative testing status.

In particular aspects, the test lot is selected from the lot group consisting of a single combo, single bin, single pallet, and a segment of production. Preferably, the number of test lots is from about 3 to about 10, about 5 to about 8, or about 5.

In particular aspects, the methods further comprise, where testing of the modular composite sample is positive, determining which individual test lots are positive, and application of remedial measures that are specific to one or more individual test lots that test positive. In particular aspects, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot a number of portions selected from the group consisting of from about 5 to about 100, from about 10 to about 90, from about 20 to about 80,

from about 30 to about 70, from about 30 to about 60, and from about 40 to about 50 portions. Preferably, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 30 to about 60 portions. Alternatively, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 30 portions. Preferably, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 60 portions.

Particular aspects provide a method of sampling, testing and validating test lots, comprising: separately collecting a plurality of portions from each of a plurality of single-unit production lots, the single-unit production lots each comprising an assemblage of one or more product specimens, wherein the assemblage can be sampled by taking portions thereof; combining the collected product portions corresponding to each of the single-unit production lots to provide a corresponding set of single-unit production lot samples, wherein each single-unit production lot sample is attributed to a particular corresponding single-unit production lot; incubating the set of single-unit production lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the single-unit production lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched single-unit production lot samples; removing, aseptically, equal portions of each enriched single-unit production lot sample, and combining the removed portions to provide a modular composite sample; and testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all single-unit production lot samples are validated, and wherein where such testing is positive, individual single-unit production lots may nonetheless yet be validated by further testing of a portion of the respective enriched single-unit production lot sample using the same or a more sensitive protocol and obtaining a negative test result.

The following Examples are exemplary are not intended, and should not be construed to limit the scope of the aspects of the present conception that are claimed hereunder.

EXAMPLE I

5 (The present inventive methods were shown to provide a substantial economic advantage, while providing for enhanced safety, and implementation of remedial measures)

At present, the standard size ‘production lot’ for trim testing for *E. coli* O157 in the beef industry in the USA is a combination of five *combos*, where each *combo* represents a single production unit and weighs approximately 2,000 pounds. An inventive modular composite sample method, and in particular a Modular Wet Composite Sample (MWCS) method was
10 implemented at a United States beef producer. TABLE 1 shows, according particular aspects, the result of testing 62,919 MWCS samples, and then retesting the individual single-unit production lot (combo) samples whenever a *positive* result was obtained from the MWCS sample.

15 TABLE 1 shows that out of 62,919 MWCS samples, a total of 217 yielded a *positive* testing result for *E. coli* O157. Using prior art protocols, all of the single-unit production lots that comprised the 271 positive samples would go to rendering or be downgraded for cooking. As each MWCS represents five single-unit production lots of 2,000 lbs each, this would represent approximately 2,710,000 pounds of product (*i.e.*, $271 \times 5 \times 2,000$ pounds = 2,710,000
20 pounds).

Specifically, the individual single-unit production lot samples comprising the MWCS were analyzed separately following each *positive* MWCS result. As can be seen in TABLE I, only 391 individual single-unit production lot samples yielded a *positive* result out of the cumulative total of 1,085 individual single-unit production lot samples comprising the MWCS
25 samples which yielded a *positive* result. If only the 391 individual single-unit production lots yielding a *positive* sample result were diverted to rendering or downgraded for cooking this would represent 782,000 lbs of product. The remaining 694 individual single-unit production

lots, corresponding to 1,928,000 lbs of product, are, according to preferred aspects of the present invention, validated and releasable into the chain of commerce.

The product, in this Example I, being produced by this U.S. beef producer was beef trim. The release of the validated 19,280,000 lbs of beef trim into commerce using the present invention, instead of diverting or downgrading the product, trim, represents a cost savings to the producer of about \$2,500,000, relative to prior art methods. Additionally, the testing of the single-unit production lots by augmented testing protocols (representing a 5- to 50-fold increase in sensitivity relative to the MWCS testing) provides *substantial* additional assurance of the safety of the food products.

Furthermore, as outlined above under “BACKGROUND,” information is frequently available on a ‘per combo’ basis including, but not limited to hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps. However, when five unrelated *combos* are included in a combined ‘production lot’ (as in the prior art) it is much harder to rationally analyze the available information since there is no way to determine which combo(s) contained the pathogen (as stated above, prior art re-sampling is not a viable option since it may not yield the same result).

By contrast, in this Example I and according to preferred aspects of the present invention, any *combo*-specific information including, but not limited to hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps can be brought to bear in the context of the 391 individual single-unit production lots yielding a *positive* sample result, thereby providing an effective means not only to trace contamination, but also to affect remedial measures in view thereof.

TABLE 1: Results of modular wet composite sampling of 62,919 multiple lots and number of Individual Production Unit Lot (IPUL) which tested positive when MWCS tested positive

Location	Total # Analyses	# Positives	1 IPUL	2 IPULs	3 IPULs	4 IPULs	5 IPULs
Est. A, B, C.	62,919	271	180	39	18	11	7

EXAMPLE II

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of Ready-to-Eat (RTE) products (e.g., meat and poultry products))

5 Under United States Department of Agriculture, Food Safety and Inspection Service (USDA FSIS) guidelines, producers of Ready-to-Eat (RTE) meat and poultry products may adapt an 'end product' sampling program as verification that their product is free of the pathogen *Listeria monocytogenes*. The frequency of end product sampling is selected by the producer/establishment, based on valid sampling statistics. Typically, samples are collected at
10 random times over a production shift (e.g., from 'cleanup to cleanup'), and from several product lines. The samples are combined to form a composite sample, and enrichment buffer is added to the composite sample to allow *Listeria* spp. or *L. monocytogenes* to grow and multiply under the favorable conditions of enrichment, thereby providing more material that can be detected by subsequent analysis.

15 According to particular aspects of the present invention the producer of RTE meat or poultry products collects samples from individual single-unit production lots. Preferably, the producer defines and produces these single-unit lots in such a fashion as to maximize the information available for investigating the nature of a failure. For example, possible definitions of an individual single-unit production lot include, but are limited to all of the product produced
20 by a particular production line (or produced by a particular production line in a particular period of time), a volume of product such as a pallet of packed boxes produced on a particular production line, or a production area in the plant, etc.

Individual single-unit production lot samples are collected, to which, in wet enrichment
embodiments, enrichment medium/buffer is added. Following incubation under conditions
25 suitable to allow levels of a target agent or organism that is present to reach detectable levels and become uniform or substantially uniform throughout the respective sample(s), aliquots of the enrichment medium/buffers from individual single-unit production lot samples are combined to

form a MWCS. The MWCS is then analyzed for the presence or absence of, for example, *Listeria* spp. or *L. monocytogenes*. In the event that a *positive* result is obtained for the MWCS, enrichment medium/buffer sample from the individual single-unit production lot samples comprising that MWCS is analyzed using the same, or augmented testing protocols.

5 Individual single-unit production lots for which the enrichment medium/buffer from the corresponding sample yields a *positive* result are diverted to cooking, disposal or other safety endpoint. Individual single-unit production lots for which the enrichment medium/buffer from the corresponding sample yields a *negative* result are released into commerce. The latter fraction represents a direct cost savings to the producer relative to a prior art approaches where a
10 ‘production lot’ is defined to include multiple single-unit production lots (e.g., multiple product lines and an extended period of time (‘cleanup to cleanup’)).

Furthermore, by defining and establishing the individual single-unit production lots in such a fashion as to maximize the information available for investigating the nature of a failure, the producer is able to narrow the scope of investigation and apply remediative resources more
15 effectively and efficiently. For example, where a *positive* result(s) is associated with one or more specific production lines, targeted aggressive sanitation is used to resolve the problem. Alternatively, for example, where a *positive* result(s) is associated with one or more specific products, determining whether raw materials are contaminated, or whether process microbial intervention steps were operating properly are effectively and efficiently used.

EXAMPLE III

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility for providing cost-effective and effective monitoring means for pathogen levels in nut products (e.g., almond products) and the like)

25 A large number of almond products may be produced by using one or more processes including slivering, scalding, blanching, slicing, roasting, and dicing. Anti-microbial treatments may also be applied, such as use of propylene oxide. In practice, these processes may be used in

many various combinations, and the output from one process may be the input for another. This makes it very difficult to trace finished product all the way back to raw materials.

As indicated by a recent outbreak, almond products are susceptible to contamination by *Salmonella* spp. According to additional aspects, the present inventive methods provide a cost-effective means of implementing an effective monitoring program for pathogen levels in nut products (e.g., almond products). In such embodiments, final almond products of each type are collected at random times over a production shift. The producer defines and establishes individual single-unit production lots as the amount of product produced during a production shift (from 'cleanup to cleanup'), or as some smaller production unit (e.g., a 'truckload'), provided that one sample was collected from each such single-unit production lot. The single-unit production lot samples are combined to form a corresponding composite sample, and, in wet enrichment embodiments, enrichment medium/buffer is added to the composite sample to allow *Salmonella* spp. to grow and multiply under the favorable conditions of enrichment (as described herein above), thereby providing more material that can be detected by subsequent analysis.

Aliquots of the enrichment medium/buffers from individual single-unit production lot samples are combined to form a MWCS. The MWCS are analyzed for the presence or absence, for example, of *Salmonella* spp. Where a *positive* result is obtained for the MWCS, each enrichment buffer from the individual single-unit production lot samples comprising that MWCS is analyzed using the same, or augmented testing protocols.

Individual single-unit production lots for which the enrichment buffer from the corresponding sample yields a *positive* result are returned for application of additional microbial intervention steps (e.g., roasting), or are diverted to a safe endpoint (e.g., a cooked product). Individual single-unit production lots for which the enrichment buffer from the corresponding sample yields a *negative* result are thereby validated and are releasable into commerce. The latter fraction represents a direct cost savings to the producer relative to prior art approaches

where effective testing is not done, and discovery of contamination with a pathogen leads to large scale recalls of product.

Furthermore, by defining and establishing the individual production single-unit production lots in such a fashion as to maximize the information available for investigating the nature of a failure, the producer is able to narrow the scope of investigation and apply remediative resources more effectively and efficiently. For example, the processes used to produce the almond product(s) yielding *positive* result(s) are rationally analyzed, and associations between the pathogen contamination and one or more of the processes of slivering, scalding, blanching, slicing, roasting, and dicing are determined, and targeted effective and efficient remedial measures are applied.

EXAMPLE IV

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of contaminants that enter a production line at a given time point, and then clear)

Sterility testing of food and pharmaceuticals, or purity testing of fermentation processes often involves compositing a number of samples to form a composite test lot. Detection of microbial contamination in the composite sample, as discussed in detail herein above, results in rejection of the whole production. Practically speaking, often a pinpoint contaminant enters production at a given time point, and then clears within a few minutes. Aspects of the present invention allow for identifying the time of entry, and informed elimination of products (operationally linked test lots) flanking the contamination event.

EXAMPLE V

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of environmental monitoring (*e.g.*, with samples of water, wastewater, sludge, soil, surface sponges, surface swabs, condensates, air or liquids))

In the context of environmental monitoring, when several samples (water, wastewater, sludge, soil, surface sponges, surface swabs, condensates, air or liquids) are composited and subjected to enrichment, followed by testing to detect environmental contamination, the current invention allows for pinpointing the test lots (*e.g.*, operationally-linked unit(s)) that are positive for the microbe of concern.

5

CLAIMS

1. A method of sampling, testing and validating test lots for microbial contamination, comprising:

a) collecting a plurality of portions from each of a plurality of test lots, the test lots each comprising an assemblage of one or more specimens, wherein each test lot is separately sampled by taking said plurality of portions thereof;

b) combining the collected plurality of portions corresponding to each of the separate test lots to provide a corresponding set of separate test lot samples, wherein each separate test lot sample is attributed to a particular corresponding separate test lot;

c) incubating the set of separate test lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the separate test lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more separate test lot samples, to provide a set of separate test lot samples enriched for the target microbial agent or organism;

d) removing portions of each enriched separate test lot sample, and combining the removed portions to provide a modular composite sample; and

e) testing of the modular composite sample, using a suitable detection assay, for the target microbial agent or organism, wherein when such testing is negative all of said separate test lot samples are validated, and wherein when such testing is positive, individual separate test lots may nonetheless yet be validated by further testing of a portion of the respective enriched separate test lot sample using the same or a more sensitive protocol and obtaining a negative test result.

2. The method of claim 1, wherein the test lot is selected from the group consisting of an environmental lot comprising one or more operationally-linked environmental specimens, pharmaceutical lot comprising one or more operationally-linked pharmaceutical specimens,

single-unit product lot comprising one or more operationally-linked product specimens, and combinations thereof.

3. The method of claim 1, wherein the test lot is a single-unit production lot, comprised of operationally-linked product specimens.

5 4. The method of claim 3, wherein product specimens are synonymous with product portions.

5. The method of claim 1, further comprising incubating the modular composite sample of d), prior to testing in e).

6. The method of claim 1, wherein incubating each test lot sample in c) comprises
10 incubating each separate test lot sample with enrichment medium suitable to enrich for the target microbial agent or organism, and wherein removing in d) comprises removing a portion of the enrichment medium from each enriched separate sample and combining the removed portions to provide a modular composite sample.

7. The method of claim 1, wherein testing of the modular composite sample, using a
15 suitable detection assay comprises use of a concentration step to concentrate the microbial agent or organism.

8. The method of claim 1, wherein where testing in e) of the modular composite sample is positive, and wherein the individual separate test lot samples are further tested, such further testing comprises use of the more sensitive protocol.

20 9. The method of claim 8, wherein the more sensitive protocol comprises use of a concentration step to concentrate the microbial agent or organism, in combination with the same test protocol used to test the modular composite sample.

10. The method of claim 1, further comprising, forming an additional modular composite sample from the set of enriched separate test lot samples of c) and testing the
25 additional modular composite sample, using the same or a different suitable assay, to confirm the testing status.

11. The method of claim 1, further comprising, forming an additional modular composite sample from an additional enriched separate test lot sample along with any enriched separate test lot samples of c) that test negative in e), and testing the additional modular composite sample, using the same or a different suitable assay.

5 12. The method of claim 1, further comprising, where testing of the modular composite sample in e) is negative, forming an additional modular composite sample from the set of enriched separate test lot samples of c), and testing the additional modular composite sample, using a different suitable assay, to confirm the negative testing status.

10 13. The method of claim 1, wherein the test lot is selected from the lot group consisting of a single combo, single bin, single pallet, and a production assemblage.

14. The method of claim 1, wherein the number of separate test lots is from 3 to 10.

15 15. The method of claim 1, further comprising, where testing of the modular composite sample is positive, determining which individual separate test lots are positive, application of remedial measures to said separate positive test lots, and validating by further testing of a portion of the respective remediated separate test lots and obtaining a negative test result.

16. The method of claim 1, wherein, in a), separately collecting said plurality of portions from each of said plurality of separate test lots comprises separately collecting from each separate test lot a number of portions from 5 to 100.

20 17. The method of claim 1, wherein, in a), separately collecting said plurality of portions from each of said plurality of separate test lots comprises separately collecting 30 to 60 portions from each separate test lot.

25 18. The method of claim 1, wherein, in a), separately collecting said plurality of portions from each of said plurality of separate test lots comprises separately collecting 30 portions from each separate test lot.

19. The method of claim 1, wherein, in a), separately collecting said plurality of portions from each of said plurality of separate test lots comprises separately collecting 60 portions from each separate test lot.

20. A method of sampling, testing and validating test lots for microbial
5 contamination, comprising:

a) collecting a plurality of portions from each of a plurality of single-unit production lots, the single-unit production lots each comprising an assemblage of one or more product specimens, wherein each single-unit production lot is separately sampled by taking said plurality of portions thereof;

10 b) combining the collected plurality of product portions corresponding to each of the separate single-unit production lots to provide a corresponding set of separate single-unit production lot samples, wherein each separate single-unit production lot sample is attributed to a particular corresponding separate single-unit production lot;

c) incubating the set of separate single-unit production lot samples under conditions
15 suitable to allow levels of a target agent or organism that is present in one or more of the separate single-unit production lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more separate single-unit production lot samples, to provide a set of separate single-unit production lot samples enriched for the target microbial agent or organism;

20 d) removing portions of each enriched separate single-unit production lot sample, and combining the removed portions to provide a modular composite sample; and

e) testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein when such testing is negative all of said separate single-unit production lot samples are validated, and wherein when such testing is positive, individual
25 separate single-unit production lots may nonetheless yet be validated by further testing of a portion of the respective enriched separate single-unit production lot sample using the same or a more sensitive protocol and obtaining a negative test result.

21. The method of claim 1, wherein removing portions in step d) is removing equal portions, aseptically, so as to preclude contamination of the enriched separate test lot samples.

22. The method of claim 20, wherein removing portions in step d) is removing equal portions, aseptically, so as to preclude contamination of the enriched separate single-unit
5 production lot samples.

23. The method of claim 1, wherein the target microbial agent or organism comprises at least one selected from the group consisting of *Listeria*, *Salmonella* and *Escherichia coli*.

24. The method of claim 1, wherein the target microbial agent or organism comprises at least one selected from the group consisting of *Listeria* spp., *Listeria monocytogenes*,
10 *Salmonella* spp., *Escherichia coli* O157:H7, coliforms and fecal coliforms.

25. The method of claim 1, wherein the target microbial agent or organism comprises a spoilage organism.

26. The method of claim 1, wherein removing portions of each separate enriched test lot sample comprises removing equal volume portions of each enriched separate test lot sample.

27. The method of claim 1, wherein testing of the modular composite sample, using a
15 suitable detection assay comprises use of at least one of a DNA-based method, an immunochemistry-based method, and a biosensor-based method.

28. The method of claim 7 wherein the concentration step comprises at least one of immunomagnetic bead separation, and affinity chromatography.

29. The method of claim 1, wherein the separate test lots are production lots of a meat
20 or poultry product, comprising an assemblage of one or more meat or poultry specimens, respectively.

30. The method of claim 29, wherein the meat or poultry specimens are meat trim pieces or poultry trim pieces, respectively.

31. The method of claim 29, wherein the meat is that of beef, pork, sheep or bison.
25

32. The method of claim 1, wherein the separate test lots are separate production lots of a fish or seafood product, comprising an assemblage of one or more fish or seafood specimens, respectively.

33. The method of claim 1, wherein the separate test lots are separate production lots
5 of a ready-to-eat product.

34. The method of claim 6, wherein the medium comprises a selective agent that will inhibit a competing non-target microbial agent or organism.

10

ABSTRACT OF THE DISCLOSURE

Particular aspects provide a method of sampling, testing and validating test lots (e.g., single-unit production lots), comprising: assembling a plurality of product portions from each of a plurality of test lots and combining the collected product portions to provide a corresponding set of test lot samples (wherein each test lot sample is attributed to a particular corresponding test lot); enriching the set of test lot samples; removing equal portions of each enriched sample, and combining the removed portions to provide a modular composite sample; and testing of the modular composite sample for the target agent/organism, wherein where such testing is positive, individual test lots may nonetheless yet be validated by further testing of a respective enriched test lot sample and obtaining a negative test result. The methods have broad utility for monitoring all sorts of test lots (*e.g.*, environmental lots, production lots, pharmaceutical lots, etc.) and for efficiently affecting informed, targeted remedial measures.

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Application Number	Not yet assigned
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Title	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
Art Unit	Not yet assigned
Examiner Name	Not yet assigned
Attorney Docket Number	66090-008US3

SIGNATURE of Applicant or Patent Practitioner

Signature	/Barry L. Davison, Ph.D., J.D./	Date	March 4, 2013
Name	Barry L. Davison, Ph.D., J.D.	Telephone	(206) 757-8023
Registration Number	47,309		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3

CONFIRMATION NO. 3227

22504

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1201 Third Avenue, Suite 2200
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NOTICE



Date Mailed: 04/02/2013

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The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Mansour Samadpour
Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number
13/784,606

APPLICATION AS FILED - PART I

(Column 1)		(Column 2)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	300		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A	
TOTAL CLAIMS (37 CFR 1.16(j))	34	minus 20 = *	x 40 =	560	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *	x 210 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
			TOTAL	1290		TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
13/784,606	03/04/2013		1032	66090-008US3	34	2

CONFIRMATION NO. 3227

22504

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FILING RECEIPT



Date Mailed: 04/02/2013

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

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Applicant(s)

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Assignment For Published Patent Application

INSTITUTE FOR ENVIRONMENTAL HEALTH, INC., Lake Forest Park, WA

Power of Attorney: The patent practitioners associated with Customer Number 22504

Domestic Priority data as claimed by applicant

This application is a CON of 12/360,796 01/27/2009 PAT 8389233
which is a CON of 11/199,871 08/08/2005 PAT 7534584
which claims benefit of 60/599,473 08/06/2004

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/784,606**

Projected Publication Date: 07/11/2013

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF
PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3

22504
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CONFIRMATION NO. 3227
POA ACCEPTANCE LETTER



Date Mailed: 04/02/2013

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 03/04/2013.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/Nguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3

CONFIRMATION NO. 3227

PUBLICATION NOTICE



OC000000062503362

22504
DAVIS WRIGHT TREMAINE, LLP/Seattle
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

Title:MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

Publication No.US-2013-0177920-A1

Publication Date:07/11/2013

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227

22504 7590 12/17/2013
DAVIS WRIGHT TREMAINE, LLP/Seattle
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

EXAMINER

SRIVASTAVA, KAILASH C

ART UNIT	PAPER NUMBER
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1657

NOTIFICATION DATE	DELIVERY MODE
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12/17/2013

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

seapatentdocket@dwt.com

Office Action Summary	Application No. 13/784,606	Applicant(s) SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/04/2013.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

- 5) ☒ Claim(s) 1-34 is/are pending in the application.
5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-34 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some** c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) ☒ Notice of References Cited (PTO-892) | 3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date ____. | 4) ☐ Other: ____. |

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The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Applicant's communication filed 04 March 2013 is acknowledged and entered.

Claims Status

According to the communication filed 04 March 2013, Claims 1-34 are presented for examination.

Informals

The instant application (i.e., 13/784,606) has been assigned to Kailash C. Srivastava in Art Unit 1657 at the United States Patent and Trademark Office (i.e., USPTO). To aid in correlating any papers for the instant application (i.e., 13/784,606), all further correspondence regarding the instant application (i.e., 13/784,606) should be directed to Examiner Kailash C. Srivastava in **Art Unit 1657**.

Priority

Claim for domestic priority under 35 U.S.C. §119 (e) to U.S. 60/599,473 filed 06 August 2004 is acknowledged.

Claim for domestic priority under 35 U.S.C. §121 to U.S. 11/199,871 filed 08 August 2005, now US Patent 7,534,584 B2 is acknowledged.

Claim for domestic priority under 35 U.S.C. §121 to U.S. 12/360,796 filed 27 January 2009, now US Patent 8,389,233 B2 is acknowledged.

Non-Statutory Double Patenting

The non-statutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper time wise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Long*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*,

686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 C.F.R. 1.321(c) may be used to overcome an actual or provisional rejection based on a non-statutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 C.F.R. 3.73(b).

Web-based e-Terminal Disclaimer (e-TD)

A terminal disclaimer may be effective to overcome an obviousness-type double patenting rejection over a prior patent (37 C.F.R. §§1.321(b) and (c)). The USPTO internet Web site contains terminal disclaimer forms which may be used. Please visit <http://www.uspto.gov/forms/>. The filing date of the application will determine what form should be used. A web-based e-TD may be filled out completely online using web-screens. An e-TD that meets all requirements is auto-processed and approved immediately upon submission. For more information about e-TD, refer to: <http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-L.jsp>.

Claims 1 and 3-34 are rejected under the judicially created doctrine of obviousness-type double patenting as being un-patentable over Claims 1-33 of U.S. Patent 7,534,584B2. Although, the conflicting claims are not identical, they are not patentably distinct from each other because the claimed method steps of the instant application are used in the methods and compositions of cited U.S. Patent 7,534,584B2. E.g., method in the instant application is drawn to identify/detect a microorganism in a sample, except that the method step in:

Clam 2 of the cited U.S. Patent 7,534,584B2 is only one member (i.e., test lot is a single unit production lot) of the Markush Group of samples recited in the Claim 2 of the instant U.S. Patent Application, (i.e., USSN 13784606); and

the independent claim 8 of the instant application is drawn to a method to detect “a microorganism” and is therefore broader.

All other steps in each of the two methods, i.e., those in the instantly presented application (i.e., USSN 13784606) and said US Patent employ same materials including the test

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sample (e.g., fish, poultry or meat or ready to eat food (i.e., Claims 29-33 of the instant application, or Claims 24-26 & 32 -33 of the cited U.S. Patent) and evaluate the same contaminant/ spoilage microorganisms (e.g., *Listeria*, *Salmonella*, *Escherichia coli* (Claims 23 of the instant application and Claim 19 of said U.S. Patent); or *Listeria* spp., *Listeria monocytogenes*, *Salmonella* spp., *Escherichia coli* O157:H7, coliforms and fecal coliforms (Claims 24 of the instant application and Claim 20 of said U.S. Patent) including concentration and detection methods (i.e., Claims 27-28 in the instant application and Claims 23 and 29 in the U.S. Patent cited *supra*). Thus, one of skill in the art would have expected successful results for the instantly claimed method and would have been motivated to claim methods and compositions based on the claimed subject matter in the instant USSN 13784606 and the U.S. Patent 7,534,584 B2 cited *supra*.

The claimed invention in the instant USSN 13784606 is also not distinct from the U.S. Patent 7,534,584 B2 cited *supra* because claims presented in the instant USSN 13784606 are obvious variants of the claims presented in said US Patent 7,534,584 B2. Additionally, the currently presented Claims 1-34 in the instant USSN 13784606 are another set of the Claims presented in said US Patent 7,534,584 B2 and the instant application is a CON of the USSN12360796 which is a CON of 11/199,871 that issued as U.S. Patent 7,534,584 B2.

Claims 1 -34 are rejected under the judicially created doctrine of obviousness-type double patenting as being un-patentable over Claims 1-34 of U.S. Patent 8,389,233 B2. Although, the conflicting claims are not identical, they are not patentably distinct from each other because the claimed method steps of the instant application are used in the methods and compositions of cited U.S. Patent 8,389,233 B2. E.g., method in the instant application is drawn to identify/detect a microorganism in a sample, except that the method step in:

Claim 1 e) of the cited U.S. Patent 8,389,233 B2 is also recited limitation of “and individual testing of each of the enriched separate test lot sample”;

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the independent claim 8 of the instant application is drawn to a claim that does not recite said “and individual testing of each of the enriched separate test lot sample” limitation. and

the language in instantly presented Claims 9-10 equivalent of the Claims 31 and 9 of said U.S. Patent 8,389,233 B2 is slightly different despite being drawn to the subject matter claimed in instantly presented Claims 9-10.

All other steps in each of the two methods, i.e., those in the instantly presented application (i.e., USSN 13784606) and said US Patent employ same materials including the test sample (e.g., fish, poultry or meat or ready to eat food (i.e., Claims 29-33 of the instant application, or Claims 26-28 & 33 -34 of the cited U.S. Patent) and evaluate the same contaminant/ spoilage microbes (e.g., *Listeria*, *Salmonella*, *Escherichia coli* (Claims 23 of the instant application and Claim 22 of said U.S. Patent); or *Listeria* spp., *Listeria monocytogenes*, *Salmonella* spp., *Escherichia coli* O157:H7, coliforms and fecal coliforms (Claims 24 of the instant application and Claim 23 of said U.S. Patent) including concentration and detection methods (i.e., Claims 27-28 in the instant application and Claims 25 and 30 in the U.S. Patent cited *supra*). Thus, one of skill in the art would have expected successful results for the instantly claimed method and would have been motivated to claim methods and compositions based on the claimed subject matter in the instant USSN 13784606 and the U.S. Patent 8,389,233 B2 cited *supra*.

The claimed invention in the instant USSN 13784606 is also not distinct from the U.S. Patent 8,389,233 B2 cited *supra* because claims presented in the instant USSN 13784606 are obvious variants of the claims presented in said US Patent 8,389,233 B2. Additionally, the currently presented Claims I-34 in the instant USSN 13784606 are another set of the Claims presented in said US Patent 8,389,233 B2 and the instant application is a CON of the USSN12360796 which resulted in the U.S. Patent 8,389,233 B2 and said USSN12360796 is CON of 11/199,871 that issued as U.S. Patent 7,534,584 B2.

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Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (571) 272-0923. The examiner can normally be reached on Monday to Thursday from 7:30 A.M. to 6:00 P.M. (Eastern Standard, or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Jon Weber can be reached at (571)-272-0925 Monday through Thursday and every other Friday between 7:30 A.M. to 6:00 P.M (Eastern Standard, or Daylight Savings Time). The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding may be obtained from the Patent Application Information Retrieval (i.e., PAIR) system. Status information for the published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (i.e., EBC) at: (866)-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kailash C Srivastava/
Examiner
Art Unit 1657
☎ (571) 272-0923

/JON P WEBER/
Supervisory Patent Examiner, Art Unit 1657

Notice of References Cited	Application/Control No. 13/784,606		Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA		Art Unit 1657	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,534,584 B2	05-2009	Samadpour, Mansour	435/34
*	B	US-8,389,233 B2	03-2013	Samadpour, Mansour	435/34
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
Partial Search in WEST	Partial Search in WEST	12/11/2013	KCS
NONE	NONE	12/11/2013	KCS

SEARCH NOTES		
Search Notes	Date	Examiner
Discussed Claims 1-34 with Dr. Weber and decided to make an ODP rejection based on 7534584 B2 & 8389,233B2	11/26/2013	KCS
Performed Inventor Name Search in e-DAN	12/11/2013	KCS
Performed Assignee Name Search in e-DAN	12/11/2013	KCS
Verified Application Priority data (e.g., CON of 12/360,796 filed 01/27/2009, now USPAT 8389233 which is a CON of 11/199,871 filed 08/08/2005, now US PAT 7534584 which claims benefit of 60/599,473 filed 08/06/2004) in e-DAN	12/11/2013	KCS
WEST Search in DWPI, EPAB, FPRS, JPAB, PGPB, USOC AND USPT According to the Search Strategy in hereto attached Search History.	12/11/2013	KCS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657	
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BIB DATA SHEET

CONFIRMATION NO. 3227

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
13/784,606	03/04/2013	435	1657	66090-008US3	
APPLICANTS INSTITUTE FOR ENVIRONMENTAL HEALTH, INC, Lake Forest Park, WA INVENTORS Mansour Samadpour, Seattle, WA; ** CONTINUING DATA ***** This application is a CON of 12/360,796 01/27/2009 PAT 8389233 which is a CON of 11/199,871 08/08/2005 PAT 7534584 which claims benefit of 60/599,473 08/06/2004 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 03/25/2013					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and /KAILASH C SRIVASTAVA/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY WA	SHEETS DRAWINGS 0	TOTAL CLAIMS 34	INDEPENDENT CLAIMS 2
ADDRESS DAVIS WRIGHT TREMAINE, LLP/Seattle 1201 Third Avenue, Suite 2200 SEATTLE, WA 98101-3045 UNITED STATES					
TITLE MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS					
FILING FEE RECEIVED 1032	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

WEST Search History for Application 13784606

Creation Date: 2013121108:34

Prior Art Searches

Query	DB	Op.	Plur.	Thes.	Date
quality control	USPT	ADJ	YES		12-11-2013
composite sample	USPT	ADJ	YES		12-11-2013
Intermediate sample	USPT	ADJ	YES		12-11-2013
ladder sampl\$5	USPT	ADJ	YES		12-11-2013
(mixed lot) same (sample)	USPT	ADJ	YES		12-11-2013
(composite sample) same (Intermediate sample)	USPT	ADJ	YES		12-11-2013
(quality control) same (composite sample)	USPT	ADJ	YES		12-11-2013
(quality control) and (Intermediate sample)	USPT	ADJ	YES		12-11-2013
(stepwise)same (sample analysis)	USPT	ADJ	YES		12-11-2013
discriminat\$8 same sampl\$5	USPT	ADJ	YES		12-11-2013
(stepwise) same (sample analysis)	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and ((stepwise) same (sample analysis))	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and (composite sample)	USPT	ADJ	YES		12-11-2013
(Pharmaceutical sample)	USPT	ADJ	YES		12-11-2013
(quality control) and ((Pharmaceutical sample))	USPT	ADJ	YES		12-11-2013
(Intermediate sample) and ((Pharmaceutical sample))	USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	USPT	ADJ	YES		12-11-2013
(quality control) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and (quality control and (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
(composite sample) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
		ADJ	YES		12-11-2013

(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	EPAB, JPAB, DWPI				
quality control	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
composite sample	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(mixed lot)and (sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((mixed lot)and (sample))	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(mixed lot) and (sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(stepwise)and (sample analysis)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
discriminat\$8 and sampl\$5	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(Pharmaceutical sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(composite sample) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(discriminat\$8 and sampl\$5) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((Pharmaceutical sample)) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013

((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) same (sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))	PGPB, USPT	ADJ	YES		12-11-2013
(pooled same sample)	PGPB, USPT	ADJ	YES		12-11-2013
sample Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		12-11-2013
((pooled same sample)) same (sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella same sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
(sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(pooled and sample)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
sample and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((pooled and sample)) and (sample and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((pooled and sample) and sample and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot	PGPB, USPT	ADJ	YES		12-11-2013
(target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic	PGPB, USPT	ADJ	YES		12-11-2013

microb\$6))					
(composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)	PGPB, USPT	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))	PGPB, USPT	ADJ	YES		12-11-2013
((((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		12-11-2013
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) same ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))	PGPB, USPT	ADJ	YES		12-11-2013
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		12-11-2013
quality control	PGPB, USPT	ADJ	YES		12-11-2013
composite sample	PGPB, USPT	ADJ	YES		12-11-2013
((mixed or combined) same lot) same (sample or specimen or material or portion)	PGPB, USPT	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)	PGPB, USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013
((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) same (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella	PGPB, USPT	ADJ	YES		12-11-2013

or(pathogenic microb\$6)))					
(((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((composite sample) or ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))) or (((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)) or ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (quality control)	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	PGPB, USPT	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) or (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or	PGPB, USPT	ADJ	YES		12-11-2013

((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))					
(((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control)	PGPB, USPT	ADJ	YES		12-11-2013
(((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same (meat or pork or	PGPB, USPT	ADJ	YES		12-11-2013

chicken or beef or bison or sandwich or cold cut) same Salmonella)					
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))) or ((((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013

(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion)) and (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion) and (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot))) and (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
Escherichia\$6	USOC, EPAB,	ADJ	YES		12-11-2013

	JPAB, DWPI				
Escherichia\$12 and Hemorrhage\$6	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(Escherichia\$12 and Hemorrhage\$6) and (Escherichia\$6)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion))) and ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion))) and ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013

material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)) and (sampl\$5 or specimen or material or portion) and (pooled or composite or lot)) and (Escherichia\$12 and Hemorrhage\$6 and Escherichia\$6)					
Escherichia\$13	PGPB, USPT	ADJ	YES		12-11-2013
Escherichia\$12 and Hemorrhage\$6	PGPB, USPT	ADJ	YES		12-11-2013
((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((quality control) or (composite sample))) or ((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) or ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or (((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or (((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))	PGPB, USPT	ADJ	YES		12-11-2013
Escherichia\$12 same Hemorrhage\$6	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6 same Escherichia\$13) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or	PGPB, USPT	ADJ	YES		12-11-2013

(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))					
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))	PGPB, USPT	ADJ	YES		12-11-2013
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013
(injured or dehydrated or damaged ornon-culturable) same microorganism	PGPB, USPT	ADJ	YES		12-11-2013
((injured or dehydrated or damaged ornon-culturable) same microorganism) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or	PGPB, USPT	ADJ	YES		12-11-2013

portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
((injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same ((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion))) or (((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))))	PGPB, USPT	ADJ	YES		12-11-2013
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or	PGPB, USPT	ADJ	YES		12-11-2013

(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or	PGPB, USPT	ADJ	YES		12-11-2013

sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))))					
20090291086.pn.	PGPB, USPT	ADJ	YES		12-11-2013
20050197295.pn.	PGPB, USPT	ADJ	YES		12-11-2013
7407475.pn.	PGPB, USPT	ADJ	YES		12-11-2013
6962903.pn.	PGPB, USPT	ADJ	YES		12-11-2013
3097141.pn.	PGPB, USPT	ADJ	YES		12-11-2013
(435/7.2).cls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/7.32).cls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/31).cls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/32).cls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/33).cls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/34).cls.	PGPB, USPT	ADJ	YES		12-11-2013

(435/36).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/38).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/39).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/40).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/308.1).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/849).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/973).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls.) and ((435/7.32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls.) and ((435/39).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls.) and ((435/849).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/849).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls.) and ((435/32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls.) and ((435/33).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls. and (435/33).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls. and (435/33).ccls. and (435/34).ccls.) and ((435/38).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls.) and ((435/973).ccls. and (435/7.32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls. and (435/973).ccls. and (435/7.32).ccls.) and ((435/849).ccls. and (435/32).ccls. and (435/33).ccls. and (435/34).ccls. and (435/38).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013

((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls. and (435/973).ccls. and (435/7.32).ccls.) and ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))))	PGPB, USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
quality control	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot	USOC, EPAB, JPAB,	ADJ	YES		12-11-2013

	DWPI, FPRS				
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(((mixed or combined) and lot) and(sample or specimen or material or portion)) ((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(((mixed or combined) and lot) and(sample or specimen or material or portion)) and ((meat or pork or chicken	USOC, EPAB,	ADJ	YES		12-11-2013

or beef or bison or sandwich or cold cut) and Salmonella)	JPAB, DWPI, FPRS				
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) and ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) and (quality control)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB,	ADJ	YES		12-11-2013

	DWPI, FPRS				
(slaughter house) and hygiene	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism) and ((composite\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(quality control) or (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composite\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microbe\$6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microbe\$6)) and (carcass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene) or (((microbe\$4 or microbiology\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene or ((microbe\$4 or microbiology\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or ((injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism and (composite\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene or ((microbe\$4 or microbiology\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)) or (injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism and (composite\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (quality control or ((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013

and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)					
Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6)) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)) or (injured or dehydrated or damaged or non-culturable or resuscittat\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and quality control or ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((slaughter house) and hygiene)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013

and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)					
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) and (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Mansour Samadpour

Application No.: 13/784,606

Filing Date: 04 March 2013

For: MODULAR COMPOSITING-MULTIPLE LOT SCREENING
PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL
CONTAMINANTS AND/OR CONSTITUENTS

Examiner: Srivastava, Kailash C.

Art Unit: 1657

Docket No.: 66090-008US3

Date: 17 June 2014

Mail Stop Amendment
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

RESPONSE AND AMENDMENT UNDER 37 CFR § 1.111

This is a Response and Amendment in reply to a non-final Office Action dated 17 December 2013 for the above-identified patent application. Kindly extend the time for response three months, up to and including 17 June 2014. The requisite fee is being submitted herewith.

Prior to examination on the merits, kindly amend the above-identified application as follows:

IN THE CLAIMS:

Applicant, pursuant to 37 C.F.R. § 1.121, submits the following amendments to the claims:

1. (Currently amended) A method of sampling ~~and testing and validating test lots for microbial contamination~~ microbes in multiple separate test lots, comprising:

a) ~~separately collecting a plurality of portions~~ multiple independent samples from each of a ~~plurality of~~ multiple separate test lots, the test lots each comprising an assemblage of one or more specimens, wherein each separate test lot is separately sampled by taking said plurality of ~~portions~~ multiple independent samples thereof;

b) ~~combining separately compositing the collected multiple independent samples from each of the separate test lots plurality of portions corresponding to each of the separate test lots to~~ provide a corresponding set of separate composited test lot samples, wherein each of the separate composited test lot samples is attributed to a particular corresponding separate test lot;

c) ~~incubating the set~~ enriching each of the separate composited test lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the separate test lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more separate test lot samples, to provide a set of separate composited test lot samples enriched for the target microbial agent or organism microbe(s);

d) removing portions of each separate enriched composited ~~separate~~ test lot sample, and combining the removed portions to provide a pooled modular composite sample; and

e) testing of the pooled modular composite sample, using a suitable detection assay, for the target microbe(s) ~~microbial agent or organism~~, wherein when such testing is negative all of said samples that were composited to form the separate composited test lot samples are ~~validated~~ deemed

negative for the target microbe(s) and each of the multiple separate test lots is validated, and
wherein when such testing is positive, each of the individual separate composited test lot samples
that were used to form the pooled modular composite sample are individually tested to determine
which of the separate composited test lot samples is positive for the target microbe(s), wherein the
test lots corresponding to any negatively testing composited test lot samples are validated~~may~~
~~nonetheless yet be validated by further testing of a portion of the respective enriched separate test~~
~~lot sample using the same or a more sensitive protocol and obtaining a negative test result.~~

2. (Currently amended) The method of claim 1, wherein ~~the each of the multiple~~
separate test lots is selected from the group consisting of an environmental lot comprising ~~one or~~
~~more~~multiple operationally-linked environmental specimens, pharmaceutical lot comprising ~~one or~~
~~more~~multiple operationally-linked pharmaceutical specimens, single-unit product lot comprising
~~one or more~~multiple operationally-linked product specimens, and combinations thereof.

3. (Currently amended) The method of claim 1, wherein each of the multiple separate
test lots is a single-unit production lot, comprised of operationally-linked product specimens.

4. (Original) The method of claim 3, wherein product specimens are synonymous with
product portions.

5. (Currently amended) The method of claim 1, further comprising incubating the
pooled modular composite sample of d), prior to testing in e).

6. (Currently amended) The method of claim 1, wherein ~~incubating-enriching each~~
separate composited test lot sample in c) comprises incubating each separate composited test lot
sample with enrichment medium suitable to enrich for the target ~~microbial agent or~~
~~organism~~microbe(s), and wherein removing in d) comprises removing a portion of the enrichment
medium from each enriched separate composited test lot sample and combining the removed
portions to provide a pooled modular composite sample.

7. (Currently amended) The method of claim 1, wherein testing of the pooled modular composite sample, using a suitable detection assay comprises use of a concentration step to concentrate the ~~microbial agent or organism~~target microbe(s).

8. (Currently amended) The method of claim 1, wherein where testing in e) of the pooled modular composite sample is positive, and wherein the separate individual ~~separate~~ composited test lot samples are further tested ~~using a, such further testing comprises use of the more~~ sensitive protocol.

9. (Currently amended) The method of claim 8, wherein the more sensitive protocol comprises use of a concentration step to concentrate the ~~microbial agent or organism~~target microbe(s), in combination with the same test protocol used to test the pooled modular composite sample.

10. (Currently amended) The method of claim 1, further comprising, forming an additional pooled modular composite sample from the set of enriched separate composited test lot samples of c) and testing the additional pooled modular composite sample, using the same or a different suitable assay, to confirm the testing status.

11. (Currently amended) The method of claim 1, further comprising, forming an additional pooled modular composite sample from an additional enriched separate composited test lot sample along with any enriched separate composited test lot samples of c) that test negative in e), and testing the additional pooled modular composite sample, using the same or a different suitable assay.

12. (Currently amended) The method of claim 1, further comprising, where testing of the pooled modular composite sample in e) is negative, forming an additional pooled modular composite sample from the set of enriched separate composited test lot samples of c), and testing

the additional pooled modular composite sample, using a different suitable assay, to confirm the negative testing status.

13. (Currently amended) The method of claim 1, wherein each of the test lots is selected from the lot group consisting of a single combo, single bin, single pallet, and a production assemblage.

14. (Original) The method of claim 1, wherein the number of separate test lots is from 3 to 10.

15. (Currently amended) The method of claim 1, further comprising, where testing of the pooled modular composite sample is positive, determining which individual separate test lots are positive, application of remedial measures to said separate positive test lots, and validating by further testing of ~~a portion of~~ the respective remediated separate test lots and obtaining a negative test result.

16. (Currently amended) The method of claim 1, wherein, in a), separately collecting said ~~plurality of portions~~ multiple independent samples from each of ~~said plurality of the multiple~~ separate test lots comprises separately collecting from each separate test lot a number of ~~portions~~ samples from 5 to 100.

17. (Currently amended) The method of claim 1, wherein, in a), separately collecting said ~~multiple independent samples~~ plurality of portions from each of ~~said plurality of the multiple~~ separate test lots comprises separately collecting 30 to 60 ~~portions~~ samples from each separate test lot.

18. (Currently amended) The method of claim 1, wherein, in a), separately collecting said ~~multiple independent samples~~ plurality of portions from each of ~~said plurality of the multiple~~ separate test lots comprises separately collecting at least 30 ~~portions~~ samples from each separate test lot.

19. (Currently amended) The method of claim 1, wherein, in a), separately collecting said ~~multiple independent samples~~plurality of portions from each of said ~~plurality of the multiple~~
separate test lots comprises separately collecting at least 60 portions~~samples~~ from each separate test lot.

20. (Currently amended) A method of sampling, ~~and testing and validating test lots for~~
~~microbial contamination~~microbe(s) in multiple separate test lots, comprising:

a) ~~separately collecting a plurality of portions~~multiple independent samples from each of a ~~plurality of multiple separate~~
single-unit production lots, the ~~single-unit production lots each~~
~~comprising an assemblage of one or more product specimens~~, wherein each separate single-unit
production lot is separately sampled by taking said ~~plurality of portions~~multiple independent
samples thereof;

b) ~~combining separately compositing the collected~~ multiple independent samples from each
~~of the separate test lots~~plurality of product portions corresponding to each of the separate single-
~~unit production lots~~ to provide a corresponding set of separate composited single-unit production lot
samples, wherein each of the separate composited single-unit production lot samples is attributed to
a particular corresponding separate single-unit production lot;

c) ~~incubating the set~~enriching of the separate composited single-unit production lot samples
~~under conditions suitable to allow levels of a target agent or organism that is present in one or more~~
~~of the separate single-unit production lot samples to reach detectable levels and become uniform, or~~
~~substantially uniform, throughout the respective one or more separate single-unit production lot~~
~~samples~~, to provide a set of separate composited single-unit production lot samples enriched for the
target ~~microbial agent or organism~~microbe(s);

d) removing portions of each separate enriched ~~separate composited~~ single-unit production
lot sample, and combining the removed portions to provide a pooled modular composite sample;

and

e) testing of the pooled modular composite sample, using a suitable detection assay, for the target ~~agent or organism~~ microbe(s), wherein when such testing is negative all of said samples that were composited to form the separate composited single-unit production lot samples are deemed negative for the target microbe(s) and each of the multiple separate single-unit production lots is validated, and wherein when such testing is positive, each of the individual separate composited single-unit production lot samples that were used to form the pooled modular composite sample are individually tested to determine which of the separate composited single-unit production lot samples is positive for the target microbe(s), wherein the single-unit production lots corresponding to any negatively testing composited single-unit production lot samples are validated~~may nonetheless yet be validated by further testing of a portion of the respective enriched separate single-unit production lot sample using the same or a more sensitive protocol and obtaining a negative test result.~~

21. (Currently amended) The method of claim 1, wherein removing portions in step d) is removing equal portions, aseptically, so as to preclude contamination of the enriched separate composited test lot samples.

22. (Currently amended) The method of claim 20, wherein removing portions in step d) is removing equal portions, aseptically, so as to preclude contamination of the enriched separate composited single-unit production lot samples.

23. (Currently amended) The method of claim 1, wherein the target ~~microbial agent or organism~~ microbe(s) comprises at least one selected from the group consisting of *Listeria*, *Salmonella* and *Escherichia coli*.

24. (Currently amended) The method of claim 1, wherein the target ~~microbial agent or organism~~microbe(s) comprises at least one selected from the group consisting of *Listeria* spp., *Listeria monocytogenes*, *Salmonella* spp., *Escherichia coli* O157:H7, coliforms and fecal coliforms.

25. (Currently amended) The method of claim 1, wherein the target ~~microbial agent or organism~~microbe(s) comprises a spoilage organism.

26. (Currently amended) The method of claim 1, wherein removing portions of each separate enriched composited test lot sample comprises removing equal volume portions of each separate enriched ~~separate composited~~ test lot sample.

27. (Currently amended) The method of claim 1, wherein testing of the pooled modular composite sample, using a suitable detection assay comprises use of at least one of a DNA-based method, an immunochemistry-based method, and a biosensor-based method.

28. (Original) The method of claim 7 wherein the concentration step comprises at least one of immunomagnetic bead separation, and affinity chromatography.

29. (Currently amended) The method of claim 1, wherein each of the multiple separate test lots are production lots of a meat or poultry product, comprising an assemblage of one or more meat or poultry specimens, respectively.

30. (Original) The method of claim 29, wherein the meat or poultry specimens are meat trim pieces or poultry trim pieces, respectively.

31. (Original) The method of claim 29, wherein the meat is that of beef, pork, sheep or bison.

32. (Currently amended) The method of claim 1, wherein each of the multiple separate test lots are separate production lots of a fish or seafood product, comprising an assemblage of one or more fish or seafood specimens, respectively.

33. (Currently amended) The method of claim 1, wherein each of the multiple separate test lots are separate production lots of a ready-to-eat product.

34. (Currently amended) The method of claim 6, wherein the enrichment medium comprises a selective agent that will inhibit a competing non-target ~~microbial agent or organism~~microbe.

35. (New) The method of claim 1, further comprising in (e) wherein when such testing of the modular composite sample is negative, nonetheless testing each of the separate composited test lot samples for the target microbe(s) to enhance confidence in the negative testing results prior to deeming the test lots validated or releasable into the chain of commerce.

36. (New) The method of claim 1, further comprising, in (e) wherein when such testing of the pooled modular composite sample is positive, each of the individual separate composited test lot samples that were used to form the pooled modular composite sample are individually tested to determine which of the separate composited test lot samples is positive for the target microbe(s), retesting of the separate negatively testing composited test lot samples to enhance confidence in the negative testing results prior to deeming the test lots corresponding to the negatively testing composited test lot samples validated or releasable into the chain of commerce.

37. (New) The method of claim 20, further comprising in (e) wherein when such testing of the pooled modular composite sample is negative, nonetheless testing each of the separate composited single-unit production lot samples for the target microbe(s) to enhance confidence in the negative testing results prior to deeming the single-unit production lots validated or releasable for processing or into the chain of commerce.

38. (New) The method of claim 20, further comprising, in (e) wherein when such testing of the modular composite sample is positive, each of the individual separate composited single-unit production lot samples that were used to form the pooled modular composite sample are

Application No.: 13/784,606
Attorney Docket No.: 66090-008US3
First Applicant's Name: Mansour Samadpour
Application Filing Date: 04 March 2013
Non-final Office Action: 17 December 2013
Response and Amendment: 17 June 2014
Examiner: Srivastava, Kailash C.

individually tested to determine which of the separate composited single-unit production lot samples is positive for the target microbe(s), retesting of the separate negatively testing composited single-unit production lot samples to enhance confidence in the negative testing results prior to deeming the single-unit production lots corresponding to the negatively testing composited single-unit production lot samples validated or releasable into the chain of commerce.

Application No.: 13/784,606
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Examiner: Srivastava, Kailash C.

REMARKS

Claims 1-34 are pending and stand rejected.

Claims 1-3, 5-13, 15-27, 29 and 32-34 have been amended herein.

New claims 35-38 have been added.

No new matter has been added.

Formalities

Priority. Applicant thanks the Examiner for acknowledging Applicant's priority claims

Non-statutory double patenting Rejections

Claims 1 and 3-34 are rejected under the judicially-created doctrine of obviousness-type double patenting, as allegedly being un-patentable over claims 1-33 of Applicant's U.S. 7,534,584 for reasons as stated in the Office Action.

Claims 1 and 3-34 are rejected under the judicially-created doctrine of obviousness-type double patenting, as allegedly being un-patentable over claims 1-34 of Applicant's U.S. 8,389,233 for reasons as stated in the Office Action.

Applicant, without acquiescing to the merits of the rejection, and purely for procedural expediency, provide herewith Terminal Disclaimer's with respect to Applicant's U.S. 7,534,584 and U.S. 8,389,233.

Applicant, therefore, respectfully requests withdrawal of the rejections.

Voluntary claim amendments

The claims have been amended to clarify the claimed subject matter.

Independent Claims 1 and 20 have been amended to recite:

“sample” in place of “portion” (support is found, for example, in the originally-filed specification at page 3, ll. 5-12, and replete throughout);

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Examiner: Srivastava, Kailash C.

“microbe(s)” in place of “microbial agent or organism” (support is found, for example, in the originally-filed specification at page 5, line 20, and replete throughout);

“multiple” in place of “plurality” (English language equivalent; and support for analysis of multiple test lots by use of Applicant’s presently claimed method is replete throughout the originally-filed specification);

“compositing” in place of “combining” (to emphasize that the physical act of compositing the samples collected in step a) is required) (support is found, for example, in the originally-filed specification at page 3, line 10 and 25; page 5, line 23; page 9, ll. 5-9; and replete throughout); and

“enriching” in place of “incubating” (in step c)); pooled modular composite sample in place of pooled modular composite sample (support is found, for example, in the originally-filed specification at page 31, line 6; and replete throughout).

Conforming amendments have been made to claims 2-3, 5-13, 15-19, 21-27, 29 and 32-34

No new matter has been added.

New claims

New dependent claims 35-38 have been added, which generally conform to the claim language of Applicant’s issued U.S. 8,389,233 (cited in the Examiner’s obviousness-type double patenting rejection above.

Support for “releasable into the chain of commerce” is found, for example, in the originally-filed specification at page 19, lines 2 and 4; page 21, line 8; page 22, line 24; and replete throughout.

No new matter has been added.

Favorable consideration and a Notice of Allowance are earnestly solicited.

Application No.: 13/784,606
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CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests entry of the present Response and Amendment and allowance of the claim set provided herein. The Examiner is encouraged to phone Applicant's attorney, Barry L. Davison, to resolve any outstanding issues and expedite allowance of this application.

Davis Wright Tremaine LLP
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Telephone: 206-757-8023
Facsimile: 206-757-7023

Respectfully submitted,
Mansour Samadpour
Davis Wright Tremaine LLP

/Barry L. Davison, Ph.D., J.D./
Barry L. Davison, Ph.D., J.D.
Attorney for Applicant
Registration No. 47,309

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**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING
REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)
66090-008US3

In re Application of: Mansour Samadpour

Application No.: 13/784,606

Filed: March 4, 2013

For: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL
CONTAMINANTS AND/OR CONSTITUENTS

The owner*, Institute for Environmental Health, Inc., of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of **prior patent** No. 8,389,233 as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

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- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 47,309

/Barry L. Davison, Ph.D., J.D./

Signature

June 17, 2014

Date

Barry L. Davison, Ph.D., J.D.

Typed or printed name

(206) 757-8023

Telephone Number

- ☒ Terminal disclaimer fee under 37 CFR 1.20(d) included.

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Electronic Patent Application Fee Transmittal

Application Number:	13784606			
Filing Date:	04-Mar-2013			
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Peachie Chan			
Attorney Docket Number:	66090-008US3			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with \$0 paid	2253	1	700	700

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Statutory or Terminal Disclaimer	1814	2	160	320
Total in USD (\$)				1020

Electronic Acknowledgement Receipt

EFS ID:	19333807
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	17-JUN-2014
Filing Date:	04-MAR-2013
Time Stamp:	19:48:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1020
RAM confirmation Number	5832
Deposit Account	040258
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part / Zip (if appl.)	Pages (if appl.)
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1		ResponseAndAmendment_66090-008US3.pdf	143959 7cf85247e5df1997809e85048637926c50294491	yes	13
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	10	
	Applicant Arguments/Remarks Made in an Amendment		11	13	
Warnings:					
Information:					
2	Terminal Disclaimer Filed	TerminalDisclaimerPatentNo7534584_66090-008US3.pdf	122543 5b2e62fd6c80c66ae4f654ad3dce5f9a0bc2386a	no	1
Warnings:					
Information:					
3	Terminal Disclaimer Filed	TerminalDisclaimerPatentNo8389233_66090-008US3.pdf	122544 130dc99af3c280ca4697e94b6768529a64c8b356	no	1
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	32148 dec29f6e2c901cb4ed76753c977be292abfa5bb2	no	2
Warnings:					
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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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REJECTION OVER A "PRIOR" PATENT**Docket Number (Optional)
66090-008US3

In re Application of: Mansour Samadpour

Application No.: 13/784,606

Filed: March 4, 2013

For: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL
CONTAMINANTS AND/OR CONSTITUENTS

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- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
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Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Reg. No. 47,309

/Barry L. Davison, Ph.D., J.D./

Signature

June 17, 2014

Date

Barry L. Davison, Ph.D., J.D.

Typed or printed name

(206) 757-8023

Telephone Number

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/784,606	Filing Date 03/04/2013	☐ To be Mailed
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ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	06/17/2014	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 38	Minus	** 34	= 4	X \$40 =	160
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
TOTAL ADD'L FEE						160	

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	MINUS	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
TOTAL ADD'L FEE						

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

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LIE
/Tina J. Barden/

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Application Number 	Application/Control No. 13/784,606	Applicant(s)/Patent under Reexamination SAMADPOUR, MANSOUR	

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TERMINAL DISCLAIMER	☐ APPROVED	☒ DISAPPROVED
Date Filed : 6/17/14	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:

ANDRE ROBINSON

2 TDS WEREN'T APPRVD.:

[X] SIGNER FAILED TO STATE ON THE POWER OF ATTORNEY FILED ON 3/4/13 THAT HE IS AUTHORIZED TO ACT ON BEHALF OF ASSIGNEE

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1657
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
	1.	US- 6080437	06-27-2000	Mauer et al.	
	2.	US- 7534584	05-19-2009	Institute for Environmental Health, Inc. (Samadpour)	
	3.	US- 7919232	04-05-2011	Institute for Environmental Health, Inc. (Samadpour)	
	4.	US- 8389233	03-05-2013	Institute for Environmental Health, Inc. (Samadpour)	
	5.	US- 95/001,294	04-05-2010	US- 7534584 B2	
	6.	US- 2004/0241773	02-12-2004	Institute for Environmental Health, Inc. (Samadpour)	
	7.	US- 2009/0258359	10-15-2009	Institute for Environmental Health, Inc. (Samadpour)	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
	8.	WO 2006/017832	02-16-2006	Institute For Environmental Health, Inc. (Samadpour)		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	9.	ANDREWS et al., "BAM: Food Sampling/Preparation of Sample Homogenate," Bacteriological Analytical Manual, 2003, Chapter 1.	
	10.	Andrews, et al., "Salmonella," Compendium of Methods for the Microbiological Examination of Foods, 4 th Ed., 2001, Ch. 37, American Public Health Association, pp. 357-380.	

Examiner
SignatureDate
Considered

DWT 24309709v1 0066090-008US3

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 3

Complete if Known

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1657
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

11.	BERRI, et al., "The Detection of Coxiella Burnetii from Ovine Genital Swabs, Milk and Fecal Samples by the Use of a Single Touchdown Polymerase Chain Reaction." Veterinary Microbiology, 2000, 2:285-293.	
12.	BUDIMAN, et al., "Localization of <i>Jointless-2</i> Gene in the Centromeric Region of Tomato Chromosome 12 based on High Resolution Genetic and Physical Mapping," Theoretical and Applied Genetics, Volume 108, 2004, published online September 2003, pp. 190-196.	
13.	COUSIN, et al., "Psychotropic Microorganisms," Compendium of Methods for the Microbiological Examination of Foods, 4 th Ed., 2001, Ch. 13. American Public Health Association, pp. 159-166.	
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Sheet 3 of 3

Complete if Known

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1657
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

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Electronic Patent Application Fee Transmittal

Application Number:	13784606			
Filing Date:	04-Mar-2013			
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Millie Lein			
Attorney Docket Number:	66090-008US3			
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Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
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Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
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3	Non Patent Literature	Andrews_SalmonellaCompendi umOfMethodsForTheMicrobiol ogicalExaminationAmericanPH Assoc.pdf	3038907 a95a242d8172d29f8ce16d64213039f110b d7836	no	26
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17	Non Patent Literature	MENG_PathogenicEscherichiaColiCompendiumOfMethodsForTheMicrobiologicalAmericanPHAssoc.pdf	3631104 84349e443e4e6360cff7948fc78eca37840dca18	no	13
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18	Non Patent Literature	MicrobiologicalTestingProgramAndOtherVerificationActivitiesUSDeptOfAgriculture.pdf	5139938 c39961fcd3cf31eab344323e789973999b96e56d	no	28
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19	Non Patent Literature	MIDURA_SamplingPlansSampleCompendiumOfMethodsForTheMicrobiologicalAmericanPHAssoc.pdf	2988799	no	13
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28	Non Patent Literature	TheIntlCommitteeOnMicrobiol ogicalSpecificationsForFoodsT heirSignificanceAndMethodsOf Enumeration.pdf	21472435 8c8ee48fd3d37cd94d88d757574ac2565f2 5036c	no	57
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(54) Title: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

(57) Abstract: Particular aspects provide a method of sampling, testing and validating test lots (e.g., single-unit production lots), comprising: assembling a plurality of product portions from each of a plurality of test lots and combining the collected product portions to provide a corresponding set of test lot samples (wherein each test lot sample is attributed to a particular corresponding test lot); enriching the set of test lot samples; removing equal portions of each enriched sample, and combining the removed portions to provide a modular composite sample; and testing of the modular composite sample for the target agent/organism, wherein where such testing is positive, individual test lots may nonetheless yet be validated by further testing of a respective enriched test lot sample and obtaining a negative test result. The methods have broad utility for monitoring all sort of test lots (e.g., environmental lots, production lots, pharmaceutical lots, etc.) and for efficiently affecting informed, targeted remedial measures.

**MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR
DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR
CONSTITUENTS**

FIELD OF THE INVENTION

5 Aspects of the present invention relate generally to improving the efficiency of producing food and health related (*e.g.*, pharmaceutical) products, and the safety and quality thereof. Particular embodiments relate to novel methods for microbial pathogen testing that allow for enhanced sensitivity, cost savings and traceability (*e.g.* source tracking) for remedial purposes. The methods are broadly applicable to many product areas including, but not limited
10 to beef, pork, sheep, bison, deer, elk, poultry (*e.g.*, chicken and turkey) and fish and other seafoods, produce, juices, dairy products, dry goods (cereals, nuts, etc), fruits and vegetables, herbs and spices, and all manners of raw and processed foods, environmental samples (water, wastewater, soil, surface samples, air samples taken by impingers and filtration, etc), pharmaceuticals, and other types of samples to be analyzed using microorganism enrichment-
15 detection protocols.

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application claims the benefit of priority to United States Provisional Patent Application Serial Number 60/599,473, filed 06 August 2004 and entitled MODULAR WET
20 COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, which is incorporated by reference herein in its entirety.

BACKGROUND

Manufacturers and respective regulatory agencies strive to continually improve the safety
25 and the quality of foods, pharmaceuticals, nutraceuticals, water and the environment. Under recent United States Department of Agriculture, Food Safety and Inspection Service (FSIS) directives and guidelines, many food producers in the United States have adopted sampling plans that involve testing, for example, of raw beef trims and/or ground beef for *E. coli* O157:H7, and ready-to-eat products for *Listeria monocytogenes* and/or *Salmonella*. Similar
30 trends are observed in other countries, for products detained for domestic consumption and/or

export. For example, the pharmaceutical industry spends considerable resources on sterility testing and environmental monitoring, and the water and wastewater industry and their respective regulatory agencies allocate considerable resources to monitor the quality of water (e.g., drinking, recreational and fisheries resources), wastewater (treated and untreated) and sludge (biosolids). Concern for the quality of air has resulted in monitoring of indoor air for the presence of microbial contaminants and pathogens. These sampling plans associated with such testing determine, for example, the disposition of products and the production lots, or result in decisions regarding the safety of water, receiving waters and recreational waters, and the impact of wastewater discharge, and quality of air.

The operative art with respect to such product "hold and release" monitoring efforts comprises various different sampling plans, typically pursuant to International Commission on Microbial Specifications for Food (ICMSF) guidelines for testing food products, FDA and USDA or EPA guidelines, or intuitive sampling plans. The common feature of these sampling plans is that several samples representing production lots, or a number of environmental samples, are combined into a combined production lot prior to sampling. For example, a typical plan for microbial pathogen detection calls for taking more than one sample, for instance ten (10) to sixty (60) sample pieces from a given sample lot (combined production lot), to form a *composite sample* for testing. The number of pieces taken to form the composite sample depends, under ICMSF or other regulatory guidelines, on the outcome of infection/poisoning (e.g., the severity), the level of hazards, and potential increase in the hazard levels due to storage. The same holds true in detecting microbial constituents and/or spoilage organisms. With respect to *E. coli* O157 testing, for example, a typical plan calls for taking 60 samples (e.g., sample pieces) from a production lot to form a single composite sample. With respect to *Listeria monocytogenes*, thirty (30) samples are typically taken from a production lot to form a composite sample. With respect to sterility testing, a typical plan may call for compositing 10-100 units of the product, and in the case of environmental sampling, 2-10 samples are often composited. Generally, the number of samples that are composited reflects: the overall sensitivity of the test method and the limit of detection that applies to the test unit; the ability to concentrate/enrich the composite sample to achieve the desired sensitivity; and the cost of

sampling compared with the cost of analysis.

The costs associated with testing food are substantial, and consequently manufacturer's often resort to increasing the size of the "production lot" to be tested. For instance, the standard size production lot for trim testing for *E. coli* O157 in the U.S. beef industry is five (5) 'combos' (each combo weighing approximately 2,000 pounds), and for *Listeria* and *Salmonella* in ready-to-eat (RTE) products, it is one composite sample per production line per shift. A primary problem associated with the use of large size test lots is that a large quantity of products must be downgraded or destroyed when there is a positive finding of a pathogen. Additionally, because of the nature of combination 'lotting' (combining, for purposes of forming the test lot, several independent sub-lots that collectively span a long period of production time), it is very difficult to investigate the cause of the failure and pinpoint the source/cause, and remedial measures cannot be effectively taken. Furthermore, compositing a large number of samples may result in reduced sensitivity for the test unit and adversely effect the limit of detection.

Typically, once a composite sample is constructed (following the art with respect to particular testing) it is then enriched for the presence of a given pathogen/microbe by addition of appropriate amounts of enrichment media and incubation at an appropriate temperature for a given amount of time. If the pathogen/microbe is present, then it grows and multiplies under the favorable conditions of enrichment, thereby providing more material which can be detected by subsequent analysis. The composite sample is then tested by one or more available, art recognized methods including, for example, enrichment followed by immunoassay-based tests or PCR-based methods, or culturing of the organism of interest, or other DNA- or immunochemical-based methods.

The above-described prior art has several substantial deficiencies. *First*, even though the prior art production lot encompasses several production sublots (for instance 5 combo/pallets of products, or an entire shift of production), if a positive finding is obtained for the production lot (composite test sample), the entire production lot is rejected (all 5 combos/pallets, or one shift of production) and diverted to economically undesirable end uses (e.g., cooking or disposal), even though the pathogen of concern may be confined to only a limited portion of the production sublots (corresponding to one or two combos/pallets or an hour of production) comprising the

production lot.

Second, the current art does not allow for retesting of any production sublots, primarily because microbial contaminants are unevenly spread throughout the products, and in many instances the levels of contamination are minute and may be present on very small portions of the products in each subplot. Therefore, once a composite sample is constructed if it tests positive all of the sublots are destroyed. The regulatory agencies do not allow for re-testing of the sublots, premised on the argument that after a production lot tests positive, negative test results obtained for production sublots, or even a new production lot composite sample, are meaningless since the microbial contaminants are not uniformly present throughout the products.

Third, the current protocols for collecting a composite sample representing a production lot often group together production sublots that are unrelated by virtue of product type or hours of production. This makes investigating the nature of the failure a difficult task even when relevant information is available. As an example, information is frequently available on a 'per combo' basis including (but not limited to) hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps. However, when five unrelated combos/pallets are included in a production lot it is much harder to rationally analyze the available information since there is no way to determine which combo(s) contained the pathogen (as stated above, prior art re-sampling is not a viable option since it may not yield the same result). Likewise, for sterility testing, when the composite sample tests positive, the entire production will be disposed.

Therefore, there is a pronounced need in the art to implement novel and effective testing protocols that provide a greater measure of assurance that the food product is safe, that provide economic relief to the producer, and that allow for effective tracking of the contaminated lot(s) for remedial purposes (e.g., pinpointing the time of the contamination and determine the segment of production which was impacted).

SUMMARY OF THE INVENTION

Aspects of the present invention provide novel enrichment, testing and detection methods for detection of pathogens or other microbes in, for example, food, water, wastewater,

industrial, pharmaceutical, botanical, environmental samples and other types of samples analyzed by detection methods (e.g., enrichment-detection methods). According to particular aspects, where any microbiological testing program involves compositing a number of samples to form a test lot, independent enrichment of each of the components of the composite sample is performed with subsequent formation of a modular (e.g., wet modular) composite sample by combining portions from each independent enrichment, which allows for determining the outcome of the test for each individual subunit of the composite as opposed to generalizing the results of the test sample to all of its subunits. This individual outcome determination is achieved by retesting the individual enrichment samples in the event that the composite enrichment tests positive.

In preferred aspects, a reportable lot is defined as a single unit of a modular (e.g., modular wet) composite lot, rather than as an entire composite lot comprised of multiple sublots. For example, a reportable production lot is defined as a single unit of production and corresponds to a single unit of a modular wet composite production lot, rather than (as in the prior art) as an entire composite lot comprised of multiple production units (multiple sublots). With respect to testing each reportable lot (e.g., each single unit of production), a plurality of pieces/portions of sample are separately collected from each single reportable lot (e.g., from each single production unit; individual test unit) and composited to form, for example, one 'single-unit production lot sample' (corresponding, in each case, to a particular single unit of production), which is enriched using appropriate enrichment protocols to allow for the levels of the target organism to reach detection levels and uniformity of presence in the enriched sample. Multiple aliquots of the enrichment media may be removed for analysis, thus circumventing the prior art problem of having to re-sample a test production lot where microbial contaminants are not uniformly present throughout the product.

In the exemplary context of enriched single units of production, equal portions of enrichment buffer are removed (aseptically) from each single-unit production lot sample and combined to form a *Modular Wet Composite Sample* (MWCS). The MWCS is then tested using an appropriate test (detection assay) for the target agent (e.g., target organism). If a *negative* result is obtained from the MWCS, then all of the individual single-unit production lots are

released. Significantly, if a *positive* result is obtained from a MWCS, the enrichment buffers from each of the individual single-unit production lot samples are separately (individually) tested, using the same test protocol, or a test protocol with enhanced sensitivity, or any appropriate test protocol. According to particular preferred aspects, the signal obtained from a MWCS is due to one or more of its components (*e.g.*, reportable lots (*e.g.*, individually enriched single production units)), and it is, therefore, possible in all cases to trace a positive signal to one or more individual subunits by testing each individual enrichment sample for the same target. When a *positive* finding is obtained for any individual reportable lot sample (*e.g.*, single-unit production lot sample), that particular reportable lot (*e.g.*, single-unit production lot) is deemed to be positive, and appropriate actions are taken based on the result. In the case of pathogen/microbial testing for foods, the individual positive sublots can be diverted to cooking, disposal, or other acceptably safe endpoint. The rest of the individually enriched test units that test negative are deemed to be negative and will be reported as such (are validated).

DETAILED DESCRIPTION OF THE INVENTION

Particular aspects provide novel enrichment, testing and validation methods for detection of pathogens or other microbes in any type of samples (*e.g.*, food production lots, water, wastewater, industrial, pharmaceutical, botanical, environmental samples, etc.) analyzable by enrichment-detection methods. In preferred aspects, a test lot (single-unit production lot), rather than (as in the prior art) a composite lot comprised of multiple test lots (*e.g.*, single-unit production lot units), is defined and established as the single unit of production. A plurality of portions (*e.g.*, product portions) are separately collected from each test lot (*e.g.*, single-unit production lot) and composited to form a corresponding set of test lot samples (*e.g.*, single-unit production lot samples), which are enriched using suitable enrichment protocols to allow target agents/organisms to reach detectable levels and sample uniformity. In particular embodiments, equal portions of enrichment buffer are removed (preferably aseptically) from the enriched samples, and combined to form a modular composite sample (*e.g.*, modular wet composite sample; MWCS). The MWCS, for example, is tested using a suitable detection assay for the target agent/organism. If a *negative* result is obtained from the MWCS, then all of the individual single-unit production lots are validated and releasable. If a *positive* result is obtained

from a MWCS, the enrichment sample corresponding to individual test lots (e.g., individual single-unit production lots) are separately (individually) tested, using the same, or a more sensitive test protocol. If a *positive* finding is obtained for any test lot sample (e.g., individual single-unit production lot sample), that particular respective lot is diverted to cooking, disposal, or other acceptably safe endpoint. If a *negative* finding is obtained for any individual test lot sample (e.g., single-unit production lot sample), then that particular lot is validated and releasable. In this manner, any member lot of the MWCS that tests *negative* using the same method (about 5-fold more sensitive relative to the prior art), or an enhanced method (about fifty times more sensitive), will be validated and releasable for consumption.

DEFINITIONS

The term “test lot” or “reportable lot” as used herein to refer to an assemblage of one or more specimens of a medium or process (e.g., assemblage of specimens of air, water, solids, or of products of a production process, etc.), where such assemblage can be sampled by taking portions of the one or more specimens thereof, and where the one or more specimens of the assemblage are operationally linked in a manner (e.g., proximity, time, process step, etc.) whereby information derived about sampled portions is operationally applicable to all specimens of the assemblage, and thus to the test lot. In particular instances, portions are synonymous with specimens.

The term “single production unit” or “single-unit production lot” as used herein is a form of test lot, and refers to a single unit of production (e.g. for beef trim a “combo,” or for almonds a “bin”) rather than, as in the prior art, to a composite comprised of multiple, non-operationally linked single production units (production sublots).

The term “product portion” as used herein refers to a product piece (e.g., a piece of solid beef trim, etc.), aliquot of product (e.g., a volume of liquid juice) or weight of product (e.g., a weight of semi-solid pudding). A single unit of production is composed of multiple product portions. In preferred embodiments, the number of product portions which comprise a single unit of production is great enough that removal of some product portions to form a sample does not impose an unacceptable economic loss to the producer. In particular instances, a product

portion may be a specimen of a test lot as defined above.

The term "compositing" as used herein refers to combining a number of single product portions to form one larger sample. In preferred embodiments, the number and selection of single product portions to be combined conform to statistical-based sampling plans which seek to form a typical or average sample that is representative of the test lot (*e.g.*, single production unit) being sampled.

The term "test lot sample" or "single-unit production lot sample" or "single production unit lot sample," as used herein refers to a sample formed by combining multiple product portions from a test lot (*e.g.*, single production unit), such that each test sample (*e.g.*, each single-unit production lot sample) is attributed to a particular corresponding test lot (*e.g.*, production unit). For production lot samples, the number of portions/pieces combined may be essentially any number, but preferably is selected so as to conform to statistical-based sampling plans. Preferably the number of pieces combined is selected from the range group consisting of from about 5 to about 100, from about 10 to about 90, from about 20 to about 80, from about 30 to about 70, from about 30 to about 60, and from about 40 to about 50 product portions. Preferably, the number of independent product portions is selected so as to yield a sample size that is equal to or greater than that required by the subsequent analysis to be applied.

The term "enrichment" as used herein refers to incubating a test lot sample (*e.g.*, single-unit production lot sample) under conditions suitable to allow levels of a target agent/organism that is present to reach detectable levels and become uniform or substantially uniform throughout the enriched test lot sample (*e.g.*, single-unit production lot sample). Preferably, enrichment comprises addition of an amount of an enrichment medium or buffer to a sample, and incubating the sample at a favorable temperature for a period of time sufficient to allow the organism to grow and multiply.

The term "enrichment medium" as used herein refers to a mixture which contains nutrients and which has properties (*e.g.*, pH and/or oxygen content) which favor the growth of the target agent/organism. Preferably, the enrichment medium is formulated to mimic the environment of the target agent/organism or take advantage of a known metabolic property of the target agent/organism. Preferably, the enrichment medium will omit nutrients needed by

competing undesired agents/organisms. Preferably, the enrichment medium will include selective agents that will inhibit competing undesired agents/organisms. An example of an enrichment medium is that used for the isolation of nitrogen fixing bacteria (those that can use nitrogen gas as their sole nitrogen source) contains no source of fixed nitrogen in the medium.

5 A second example is an enrichment medium for the isolation of bacteria capable of utilizing 2,4-dichlorophenoxyacetic acid (also know as 2,4-D, a common herbicide) as a source of carbon and energy. The enrichment medium is formulated to contain benzoate as the only organic compound.

The term “wet enrichment” as used herein refers to diluting a solid, semisolid or liquid single-unit production lot sample (single production unit lot sample) with enrichment medium in a ratio of approximately 1:10 (wt./v), consistent with conventional methods for expanding and testing a variety of target agents/organisms as set forth in widely recognized published methods. For example, the conventional method for expanding and testing for coliforms, fecal coliforms and *E. Coli* in food, comprises a 1:10 dilution of the samples (*e.g.*, 50 g into 450 ml) (*see, e.g.*,
15 U.S. FDA Bacteriology Analytical Manual Online, Chapter 4 and 4A, describing standard 1:10 dilution procedures for testing of coliforms, fecal coliforms and *E. Coli* in food, shellfish and juices).

The term “dry enrichment” as used herein refers to enriching a solid, semisolid or liquid single unit production lot sample either with no addition of other compounds if the sample’s
20 intrinsic properties (water activity, nutrients and pH) are sufficient/proper to promote the growth of the target agent/organism, or by dilution of the sample with minimal amounts of enrichment medium in ratios ranging from about 0.1 (wt/v) to about 1 (wt/v).

The term “modular composite sample” as used herein refers to a sample formed by removing, preferably aseptically, equal portions of each of a plurality of enriched single-unit
25 production lot samples, and combining the removed portions.

The phrase “suitable detection assay” as used herein refers to any assay that is suitable for detecting a particular agent/organism. Preferably, the assay is optimized to detect the particular agent/organism, and may be combined with one or more concentration steps for concentration of the agent/organism being assayed.

The term “validation” as used herein with respect to production lots refers to determining that a particular sample tests *negative* using the detection assay. Where a modular composite sample tests *negative*, all single-unit production lot samples comprising the composite sample are validated along with the respective single-unit production lots, which are thus cleared for release. Where a modular composite sample tests *positive*, individual single unit production lots may nonetheless yet be validated if particular respective single-unit production lot samples test *negative*.

“Trim” refers to small pieces of meat and fat which are excised during, for example, the beef fabrication process in order to produce primal and subprimal pieces and marketable cuts.

“Trim testing” refers to the process of testing trim, or raw materials which are to be used for ground meat production for microbial/pathogen content.

A “combo” or “combo-bin” refers, in the beef industry, to the single production unit packaging unit. Alternatively raw materials corresponding to a single production unit to be tested can be packaged into boxes, bags or other appropriate containers, which can be placed, for example, on pallets.

A “composite lot-unit” or “five-combo-lot unit” refers to a *composite* unit, comprised of five combos (combo-bins). In prior art sampling plans, the composite lot-unit represents the raw material (composite trim) upon which sampling, testing and acceptance or rejection is based.

Therefore, according to particular aspects, a test lot (or test unit) (*e.g.*, a single-unit production lot or single production unit lot) is defined and taken as one or more operationally-linked specimens of a medium or process. A test lot may be a single unit of production (*e.g.*, a single combo, bin, pallet, or segment of production, etc.), or a single environmental sample (*e.g.*, single air sample, single water and wastewater sample, etc.), rather than, as in the prior art, as a composite of multiple production units or environmental samples.

In preferred embodiments, a number of pieces or portions of sample are collected from a test lot (*e.g.*, from a single production unit (*e.g.*, from the single combo, bin, pallet, or segment of production, etc.)), and composited to form one ‘*single-unit test sample*’ (or ‘*single-unit*

production lot sample.' In particular embodiments (e.g., wet enrichment), enrichment buffer is added to the sample. In alternate embodiments, 'dry enrichment' (as defined herein above) is done.

Significantly, in the inventive modular (e.g., wet modular) compositing method, samples taken from each unit of production are enriched *separately* using appropriate enrichment protocols to allow for the levels of the target organism to reach detection levels and *uniformity of presence* in the enriched sample. In preferred aspects, such enrichment obviates the prior art problem of having microbial contaminants that are not uniformly present throughout the product sample. Specifically, while microbes are not necessarily uniformly distributed in food, water, air, pharmaceuticals, etc, after enriching a sample as described herein, the target microbes are uniformly, or as least substantially uniformly, present in the enrichment medium or extract from dry or semi dried enrichments.

Following incubation for the target organism, equal portions of enrichment buffer or sample are removed (aseptically) from each of several test lot samples (e.g., from several single-unit production lot samples; preferably 5) and pulled together to form a Modular Wet Composite Sample (MWCS). The MWCS is then tested using an appropriate test (detection assay) for the target organism. If a *negative* result is obtained from the MWCS, then all of the individual single unit production Lots are released.

If a *positive* result is obtained from a MWCS, the enrichment buffers from each of the individual single unit production lot samples are then separately (individually) tested, using the same test protocol, or any other appropriate tests. Alternately, an augmented protocol that uses a concentration step for the target organism, such as immunomagnetic bead separation, affinity chromatography, etc., followed by an appropriate detection method is used to test the enriched individual test lot samples (e.g., the individual single-unit production lot samples).

In preferred aspects, the inventive methods of analysis are modified by introducing a concentration step (e.g., employing antibody-coated paramagnetic beads into the procedure (e.g., DNA-based detection, biosensor based detection, classical microbiological detections, etc)). Antibody-coated paramagnetic beads, for example, afford an approximately 10-fold increase in sensitivity. This concentration step, combined with the fact that the individual test lot samples

(e.g., individual single-unit production lot samples) are not 5-fold diluted relative to the MWCS, allows for an overall 50-fold increase in sensitivity relative to prior art sampling and testing protocols. If a lateral flow device is used for detection, such immunomagnetic concentration may or may not be used, in which case the detection sensitivity is increased by about 5-fold.

5 Where a *positive* finding (test result) is obtained for any individual test lot sample (e.g., single-unit production lot sample), that particular corresponding test lot (e.g., single-unit production lot) is deemed to be positive, and appropriate decisions are then made on the positive results (e.g., in the case of food products, diversion to cooking, disposal, or other acceptably safe endpoint). For each of the rest of the test lot samples (e.g., single-unit production lot samples)
10 belonging to the positive MWCS, where a *negative* finding is obtained, that particular test lot sample (e.g., that single-unit production lots sample) is deemed to be negative. In this manner, any test lot (e.g., any single-unit production lot) that is a member of the group of test lots (e.g., single-unit production lots) that comprise a corresponding MWCS, will be considered to be negative, if it tests *negative* using the same method (about 5-fold more sensitive relative to the
15 prior art), or the enhanced method (about fifty times more sensitive).

 In alternate preferred embodiments, a new Modular Wet Composite Sample is reconstructed from the member lots (test lots) that have tested *negative*, and subjected to a third layer of testing to again show (confirm) that they are negative. Specifically if one of the five individual test lots (e.g., individual single-unit production lots) has tested positive (and the other
20 four negative), and the protocols call for testing of composites consisting of five test lots, a new single test lot sample can formed from a new test lot, and can be used along with the four negative samples to form a new MWCS.

 The methods of the present invention provide substantial economic savings to the food and pharmaceutical industries, because of the precision in detecting in the context of
25 operationally-linked portions of production (e.g., test lots; single production units; single-unit production lots) which are contaminated. The inventive methods prevent unnecessary destruction of *negative* lots that are condemned because of guilt by association (e.g., simply because they were grouped with a contaminated composite prior art multiple production unit lot in a prior art testing protocol). Where a *positive* finding is obtained, a smaller quantity of

material is diverted to an economically undesirable end use. The proposed invention has substantial utility (e.g., bringing savings, accuracy and precision in pinpointing problems) in the environmental industry.

Additionally, and significantly, it is easier to trace the source of the contamination and apply remedial measures, because the single-unit test component points, for example, to single point of production or a single sampling site.

Particular Preferred Aspects:

Particular aspect provide a method of sampling, testing and validating test lots, comprising: separately collecting a plurality of portions from each of a plurality of test lots, the test lots each comprising an assemblage of one or more operationally-linked specimens, wherein the assemblage can be sampled by taking portions thereof; combining the collected portions corresponding to each of the test lots to provide a corresponding set of test lot samples, wherein each test lot sample is attributed to a particular corresponding test lot; incubating the set of test lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched test lot samples; removing, aseptically, equal portions of each enriched test lot sample, and combining the removed portions to provide a modular composite sample; and testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all test lot samples are validated, and wherein where such testing is positive, individual test lots may nonetheless yet be validated by further testing of a portion of the respective enriched test lot sample using the same or a more sensitive protocol and obtaining a negative test result.

In particular aspects, the test lot is selected from the group consisting of an environmental lot comprising one or more operationally-linked environmental specimens, pharmaceutical lot comprising one or more operationally-linked pharmaceutical specimens, single-unit product lot comprising one or more operationally-linked product specimens, and combinations thereof. In particular aspects, the test lot is a single-unit production lot, comprised

of operationally-linked product specimens. In particular aspects, product specimens are synonymous with product portions. In particular aspects, the methods further comprise incubating the modular composite sample prior to testing it. In particular aspects, incubating each test lot sample comprises adding an amount of enrichment medium to the sample, and
5 removing enriched sample portions comprises removing a portion of the enrichment medium from each enriched sample and combining the removed portions to provide a modular composite sample. In particular aspects, testing of the modular composite sample, using a suitable detection assay comprises use of a concentration step to concentrate the microbial agent or organism.

10 In particular aspects, where testing of the modular composite sample is positive, and wherein the individual test lots are further tested, such further testing comprises use of the more sensitive protocol. Preferably, the more sensitive protocol comprises use of a concentration step to concentrate the microbial agent or organism, in combination with the same test protocol used to test the modular composite sample.

15 In particular aspects, the methods further comprise forming an additional modular composite sample from the enriched test lot samples and testing the additional modular composite sample, using the same or a different suitable assay, to confirm the testing status. In particular aspects, the methods further comprise forming an additional modular composite sample from an additional enriched test lot sample along with any enriched test lot samples that
20 test negative, and testing the additional modular composite sample, using the same or a different suitable assay. In particular aspects, the methods further comprise, where testing of the modular composite sample is negative, forming an additional modular composite sample from the enriched test lot samples, and testing the additional modular composite sample, using a different suitable assay, to confirm the negative testing status.

25 In particular aspects, the test lot is selected from the lot group consisting of a single combo, single bin, single pallet, and a segment of production. Preferably, the number of test lots is from about 3 to about 10, about 5 to about 8, or about 5.

In particular aspects, the methods further comprise, where testing of the modular composite sample is positive, determining which individual test lots are positive, and application

of remedial measures that are specific to one or more individual test lots that test positive. In particular aspects, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot a number of portions selected from the group consisting of from about 5 to about 100, from about 10 to about 90, from about 20 to about 80, 5 from about 30 to about 70, from about 30 to about 60, and from about 40 to about 50 portions. Preferably, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 30 to about 60 portions. Alternatively, separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 30 portions. Preferably, separately collecting a 10 plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 60 portions.

Particular aspects provide a method of sampling, testing and validating test lots, comprising: separately collecting a plurality of portions from each of a plurality of single-unit production lots, the single-unit production lots each comprising an assemblage of one or more 15 product specimens, wherein the assemblage can be sampled by taking portions thereof; combining the collected product portions corresponding to each of the single-unit production lots to provide a corresponding set of single-unit production lot samples, wherein each single-unit production lot sample is attributed to a particular corresponding single-unit production lot; incubating the set of single-unit production lot samples under conditions suitable to allow levels 20 of a target agent or organism that is present in one or more of the single-unit production lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched single-unit production lot samples; removing, aseptically, equal portions of each enriched single-unit production lot sample, and combining the removed portions to provide a modular composite sample; and testing of the 25 modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all single-unit production lot samples are validated, and wherein where such testing is positive, individual single-unit production lots may nonetheless yet be validated by further testing of a portion of the respective enriched single-unit production lot sample using the same or a more sensitive protocol and obtaining a negative test result.

The following Examples are exemplary are not intended, and should not be construed to limit the scope of the aspects of the present conception that are claimed hereunder.

EXAMPLE I

(The present inventive methods were shown to provide a substantial economic advantage, while providing for enhanced safety, and implementation of remedial measures)

At present, the standard size 'production lot' for trim testing for *E. coli* O157 in the beef industry in the USA is a combination of five *combos*, where each *combo* represents a single production unit and weighs approximately 2,000 pounds. An inventive modular composite sample method, and in particular a Modular Wet Composite Sample (MWCS) method was implemented at a United States beef producer. TABLE 1 shows, according particular aspects, the result of testing 62,919 MWCS samples, and then retesting the individual single-unit production lot (combo) samples whenever a *positive* result was obtained from the MWCS sample.

TABLE 1 shows that out of 62,919 MWCS samples, a total of 217 yielded a *positive* testing result for *E. coli* O157. Using prior art protocols, all of the single-unit production lots that comprised the 271 positive samples would go to rendering or be downgraded for cooking. As each MWCS represents five single-unit production lots of 2,000 lbs each, this would represent approximately 2,710,000 pounds of product (*i.e.*, $271 \times 5 \times 2,000$ pounds = 2,710,000 pounds).

Specifically, the individual single-unit production lot samples comprising the MWCS were analyzed separately following each *positive* MWCS result. As can be seen in TABLE I, only 391 individual single-unit production lot samples yielded a *positive* result out of the cumulative total of 1,085 individual single-unit production lot samples comprising the MWCS samples which yielded a *positive* result. If only the 391 individual single-unit production lots yielding a *positive* sample result were diverted to rendering or downgraded for cooking this would represent 782,000 lbs of product. The remaining 694 individual single-unit production lots, corresponding to 1,928,000 lbs of product, are, according to preferred aspects of the present invention, validated and releasable into the chain of commerce.

The product, in this Example I, being produced by this U.S. beef producer was beef trim. The release of the validated 1,9280,000 lbs of beef trim into commerce using the present invention, instead of diverting or downgrading the product, trim, represents a cost savings to the producer of about \$2,500,000, relative to prior art methods. Additionally, the testing of the single-unit production lots by augmented testing protocols (representing a 5- to 50-fold increase in sensitivity relative to the MWCS testing) provides *substantial* additional assurance of the safety of the food products.

Furthermore, as outlined above under “BACKGROUND,” information is frequently available on a ‘per combo’ basis including, but not limited to hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps. However, when five unrelated *combos* are included in a combined ‘production lot’ (as in the prior art) it is much harder to rationally analyze the available information since there is no way to determine which combo(s) contained the pathogen (as stated above, prior art re-sampling is not a viable option since it may not yield the same result).

By contrast, in this Example I and according to preferred aspects of the present invention, any *combo*-specific information including, but not limited to hour of production, vendor source of raw materials, production employees present, and operational status of microbial intervention process steps can be brought to bear in the context of the 391 individual single-unit production lots yielding a *positive* sample result, thereby providing an effective means not only to trace contamination, but also to affect remedial measures in view thereof.

TABLE 1: Results of modular wet composite sampling of 62,919 multiple lots and number of Individual Production Unit Lot (IPUL) which tested positive when MWCS tested positive

Location	Total # Analyses	# Positives	1 IPUL	2 IPULs	3 IPULs	4 IPULs	5 IPULs
Est. A, B, C.	62,919	271	180	39	18	11	7

EXAMPLE II

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of Ready-to-Eat (RTE) products (e.g., meat and poultry products))

Under United States Department of Agriculture, Food Safety and Inspection Service (USDA FSIS) guidelines, producers of Ready-to-Eat (RTE) meat and poultry products may adapt an 'end product' sampling program as verification that their product is free of the pathogen *Listeria monocytogenes*. The frequency of end product sampling is selected by the producer/establishment, based on valid sampling statistics. Typically, samples are collected at random times over a production shift (e.g., from 'cleanup to cleanup'), and from several product lines. The samples are combined to form a composite sample, and enrichment buffer is added to the composite sample to allow *Listeria* spp. or *L. monocytogenes* to grow and multiply under the favorable conditions of enrichment, thereby providing more material that can be detected by subsequent analysis.

According to particular aspects of the present invention the producer of RTE meat or poultry products collects samples from individual single-unit production lots. Preferably, the producer defines and produces these single-unit lots in such a fashion as to maximize the information available for investigating the nature of a failure. For example, possible definitions of an individual single-unit production lot include, but are limited to all of the product produced by a particular production line (or produced by a particular production line in a particular period of time), a volume of product such as a pallet of packed boxes produced on a particular production line, or a production area in the plant, etc.

Individual single-unit production lot samples are collected, to which, in wet enrichment embodiments, enrichment medium/buffer is added. Following incubation under conditions suitable to allow levels of a target agent or organism that is present to reach detectable levels and become uniform or substantially uniform throughout the respective sample(s), aliquots of the enrichment medium/buffers from individual single-unit production lot samples are combined to form a MWCS. The MWCS is then analyzed for the presence or absence of, for example, *Listeria* spp. or *L. monocytogenes*. In the event that a *positive* result is obtained for the MWCS, enrichment medium/buffer sample from the individual single-unit production lot samples comprising that MWCS is analyzed using the same, or augmented testing protocols.

Individual single-unit production lots for which the enrichment medium/buffer from the corresponding sample yields a *positive* result are diverted to cooking, disposal or other safety

endpoint. Individual single-unit production lots for which the enrichment medium/buffer from the corresponding sample yields a *negative* result are released into commerce. The latter fraction represents a direct cost savings to the producer relative to a prior art approaches where a 'production lot' is defined to include multiple single-unit production lots (e.g., multiple product lines and an extended period of time ('cleanup to cleanup')).

Furthermore, by defining and establishing the individual single-unit production lots in such a fashion as to maximize the information available for investigating the nature of a failure, the producer is able to narrow the scope of investigation and apply remediative resources more effectively and efficiently. For example, where a *positive* result(s) is associated with one or more specific production lines, targeted aggressive sanitation is used to resolve the problem. Alternatively, for example, where a *positive* result(s) is associated with one or more specific products, determining whether raw materials are contaminated, or whether process microbial intervention steps were operating properly are effectively and efficiently used.

EXAMPLE III

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility for providing cost-effective and effective monitoring means for pathogen levels in nut products (e.g., almond products) and the like)

A large number of almond products may be produced by using one or more processes including slivering, scalding, blanching, slicing, roasting, and dicing. Anti-microbial treatments may also be applied, such as use of propylene oxide. In practice, these processes may be used in many various combinations, and the output from one process may be the input for another. This makes it very difficult to trace finished product all the way back to raw materials.

As indicated by a recent outbreak, almond products are susceptible to contamination by *Salmonella* spp. According to additional aspects, the present inventive methods provide a cost-effective means of implementing an effective monitoring program for pathogen levels in nut products (e.g., almond products). In such embodiments, final almond products of each type are collected at random times over a production shift. The producer defines and establishes individual single-unit production lots as the amount of product produced during a production shift (from 'cleanup to cleanup'), or as some smaller production unit (e.g., a 'truckload'),

provided that one sample was collected from each such single-unit production lot. The single-unit production lot samples are combined to form a corresponding composite sample, and, in wet enrichment embodiments, enrichment medium/buffer is added to the composite sample to allow *Salmonella* spp. to grow and multiply under the favorable conditions of enrichment (as described herein above), thereby providing more material that can be detected by subsequent analysis.

Aliquots of the enrichment medium/buffers from individual single-unit production lot samples are combined to form a MWCS. The MWCS are analyzed for the presence or absence, for example, of *Salmonella* spp. Where a *positive* result is obtained for the MWCS, each enrichment buffer from the individual single-unit production lot samples comprising that MWCS is analyzed using the same, or augmented testing protocols.

Individual single-unit production lots for which the enrichment buffer from the corresponding sample yields a *positive* result are returned for application of additional microbial intervention steps (*e.g.*, roasting), or are diverted to a safe endpoint (*e.g.*, a cooked product). Individual single-unit production lots for which the enrichment buffer from the corresponding sample yields a *negative* result are thereby validated and are releasable into commerce. The latter fraction represents a direct cost savings to the producer relative to prior art approaches where effective testing is not done, and discovery of contamination with a pathogen leads to large scale recalls of product.

Furthermore, by defining and establishing the individual production single-unit production lots in such a fashion as to maximize the information available for investigating the nature of a failure, the producer is able to narrow the scope of investigation and apply remedial resources more effectively and efficiently. For example, the processes used to produce the almond product(s) yielding *positive* result(s) are rationally analyzed, and associations between the pathogen contamination and one or more of the processes of slivering, scalding, blanching, slicing, roasting, and dicing are determined, and targeted effective and efficient remedial measures are applied.

EXAMPLE IV

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of contaminants that enter a production line at a given time point, and then clear)

5 Sterility testing of food and pharmaceuticals, or purity testing of fermentation processes often involves compositing a number of samples to form a composite test lot. Detection of microbial contamination in the composite sample, as discussed in detail herein above, results in rejection of the whole production. Practically speaking, often a pinpoint contaminant enters production at a given time point, and then clears within a few minutes. Aspects of the present invention allow for identifying the time of entry, and informed elimination of products
10 (operationally linked test lots) flanking the contamination event.

EXAMPLE V

(According to particular aspects of the present invention, the inventive sampling methods have substantial utility in the context of environmental monitoring (*e.g.*, with samples of water,
15 wastewater, sludge, soil, surface sponges, surface swabs, condensates, air or liquids))

In the context of environmental monitoring, when several samples (water, wastewater, sludge, soil, surface sponges, surface swabs, condensates, air or liquids) are composited and subjected to enrichment, followed by testing to detect environmental contamination, the current invention allows for pinpointing the test lots (*e.g.*, operationally-linked unit(s)) that are positive
20 for the microbe of concern.

CLAIMS

1. A method of sampling, testing and validating test lots, comprising:

a) separately collecting a plurality of portions from each of a plurality of test lots, the test lots each comprising an assemblage of one or more specimens, wherein the assemblage can be sampled by taking portions thereof;

b) combining the collected portions corresponding to each of the test lots to provide a corresponding set of test lot samples, wherein each test lot sample is attributed to a particular corresponding test lot;

c) incubating the set of test lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched test lot samples;

d) removing, aseptically, equal portions of each enriched test lot sample, and combining the removed portions to provide a modular composite sample; and

e) testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all test lot samples are validated, and wherein where such testing is positive, individual test lots may nonetheless yet be validated by further testing of a portion of the respective enriched test lot sample using the same or a more sensitive protocol and obtaining a negative test result.

2. The method of claim 1, wherein the test lot is selected from the group consisting of an environmental lot comprising one or more operationally-linked environmental specimens, pharmaceutical lot comprising one or more operationally-linked pharmaceutical specimens, single-unit product lot comprising one or more operationally-linked product specimens, and combinations thereof.

3. The method of claim 1, wherein the test lot is a single-unit production lot, comprised of operationally-linked product specimens.

4. The method of claim 3, wherein product specimens are synonymous with product portions.

5. The method of claim 1, further comprising incubating the modular composite

sample of d), prior to testing in e).

6. The method of claim 1, wherein incubating each test lot sample in c) comprises adding an amount of enrichment medium to the sample, and wherein removing in d) comprises removing a portion of the enrichment medium from each enriched sample and combining the removed portions to provide a modular composite sample.

7. The method of claim 1, wherein testing of the modular composite sample, using a suitable detection assay comprises use of a concentration step to concentrate the microbial agent or organism.

8. The method of claim 1, wherein where testing in e) of the modular composite sample is positive, and wherein the individual test lots are further tested, such further testing comprises use of the more sensitive protocol.

9. The method of claim 8, wherein the more sensitive protocol comprises use of a concentration step to concentrate the microbial agent or organism, in combination with the same test protocol used to test the modular composite sample.

10. The method of claim 1, further comprising, forming an additional modular composite sample from the enriched test lot samples of c) and testing the additional modular composite sample, using the same or a different suitable assay, to confirm the testing status.

11. The method of claim 1, further comprising, forming an additional modular composite sample from an additional enriched test lot sample along with any enriched test lot samples of c) that test negative in e), and testing the additional modular composite sample, using the same or a different suitable assay.

12. The method of claim 1, further comprising, where testing of the modular composite sample in e) is negative, forming an additional modular composite sample from the enriched test lot samples of c), and testing the additional modular composite sample, using a different suitable assay, to confirm the negative testing status.

13. The method of claim 1, wherein the test lot is selected from the lot group consisting of a single combo, single bin, single pallet, and a segment of production.

14. The method of claim 1, wherein the number of test lots is from about 3 to about 10, about 5 to about 8, or about 5.

15. The method of claim 1, further comprising, where testing of the modular composite sample is positive, determining which individual test lots are positive, and application of remedial measures that are specific to one or more individual test lots that test positive.

16. The method of claim 1, wherein, in a) separately collecting a plurality of portions
5 from each of a plurality of test lots comprises separately collecting from each test lot a number of portions selected from the group consisting of from about 5 to about 100, from about 10 to about 90, from about 20 to about 80, from about 30 to about 70, from about 30 to about 60, and from about 40 to about 50 portions.

17. The method of claim 1, wherein, in a) separately collecting a plurality of portions
10 from each of a plurality of test lots comprises separately collecting from each test lot about 30 to about 60 portions.

18. The method of claim 1, wherein, in a) separately collecting a plurality of portions from each of a plurality of test lots comprises separately collecting from each test lot about 30 portions.

19. The method of claim 1, wherein, in a) separately collecting a plurality of portions
15 from each of a plurality of test lots comprises separately collecting from each test lot about 60 portions.

20. A method of sampling, testing and validating test lots, comprising:

a) separately collecting a plurality of portions from each of a plurality of single-unit
20 production lots, the single-unit production lots each comprising an assemblage of one or more product specimens, wherein the assemblage can be sampled by taking portions thereof;

b) combining the collected product portions corresponding to each of the single-unit production lots to provide a corresponding set of single-unit production lot samples, wherein each single-unit production lot sample is attributed to a particular corresponding single-unit
25 production lot;

c) incubating the set of single-unit production lot samples under conditions suitable to allow levels of a target agent or organism that is present in one or more of the single-unit production lot samples to reach detectable levels and become uniform, or substantially uniform, throughout the respective one or more samples, to provide a set of enriched single-unit

production lot samples;

d) removing, aseptically, equal portions of each enriched single-unit production lot sample, and combining the removed portions to provide a modular composite sample; and

5 e) testing of the modular composite sample, using a suitable detection assay, for the target agent or organism, wherein where such testing is negative all single-unit production lot samples are validated, and wherein where such testing is positive, individual single-unit production lots may nonetheless yet be validated by further testing of a portion of the respective enriched single-unit production lot sample using the same or a more sensitive protocol and obtaining a negative test result.

10

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT2905066

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MANSOUR SAMADPOUR	06/18/2014
RECEIVING PARTY DATA	
Name:	INSTITUTE FOR ENVIRONMENTAL HEALTH, INC.
Street Address:	15300 BOTHELL WAY NE
City:	LAKE FOREST PARK
State/Country:	WASHINGTON
Postal Code:	98155
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13784606
CORRESPONDENCE DATA	
Fax Number:	(206)757-7779
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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Address Line 2:	1201 THIRD AVENUE, SUITE 2200
Address Line 4:	SEATTLE, WASHINGTON 98101-3045
ATTORNEY DOCKET NUMBER:	66090-008US3
NAME OF SUBMITTER:	BARRY L. DAVISON, PH.D., J.D.
SIGNATURE:	/Barry L. Davison, Ph.D., J.D./
DATE SIGNED:	06/19/2014
This document serves as an Oath/Declaration (37 CFR 1.63).	
Total Attachments: 3	
source=2014-06-19 Declaration and Assignment (as filed) 66090-008US3#page1.tif	
source=2014-06-19 Declaration and Assignment (as filed) 66090-008US3#page2.tif	
source=2014-06-19 Declaration and Assignment (as filed) 66090-008US3#page3.tif	

DECLARATION AND ASSIGNMENT**DECLARATION (37 CFR 1.63) FOR UTILITY APPLICATION**

WHEREAS, I, Mansour Samadpour, as the sole inventor of an invention entitled "MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS," as described and claimed in the specification forming part of an application for United States letters patent filed on March 4, 2013 as United States Patent Application Serial No. 13/784,606, hereby declare that this declaration is directed to said application.

The above-identified application was made or authorized to be made by me. I believe that I am the original inventor of a claimed invention in the above-identified application. I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

WHEREAS, I, Mansour Samadpour (hereinafter referred to as ASSIGNOR), having a post office address of 16810 Shore Drive NE, Lake Forest Park, Washington 98155, am the sole inventor of an invention entitled "MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS," as described and claimed in the specification forming part of an application for United States letters patent filed on March 4, 2013 as United States Patent Application Serial No. 13/784,606. The application claims the benefit of U.S. Patent Application Serial No. 12/360,796 (now U.S. Patent No. 8,389,233), filed on January 27, 2009, entitled "MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS," which is a Continuation of U.S. Patent Application Serial No. 11/199,871 (now U.S. Patent No. 7,534,584), filed on August 8, 2005, entitled "MODULAR COMPOSITING-MULTIPLE

LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS," and claims priority to U.S. Provisional Patent Application Serial No. 60/599,473, filed August 6, 2004, entitled "MODULAR WET COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS," all of which are incorporated herein by reference.

WHEREAS, Institute for Environmental Health, Inc. (hereinafter referred to as ASSIGNEE), a corporation of the State of Washington having a place of business at 15300 Bothell Way NE, Lake Forest Park, Washington 98155, is desirous of acquiring the entire right, title and interest in and to the invention and in and to any letters patent that may be granted therefor in the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby sells, assigns and transfers unto said ASSIGNEE, the entire right, title and interest in and to said invention, said application and any and all letters patent which may be granted for said invention in the United States of America and its territorial possessions and in any and all foreign countries, and in any and all divisions, reissues and continuations thereof, including the right to file foreign applications directly in the name of ASSIGNEE and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said invention, application and all letters patent on said invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, transfer and sale not been made. ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue all letters patent on said invention to ASSIGNEE. ASSIGNOR agree to execute all instruments and documents required for the making and prosecution of applications for United States and foreign letters patent on said invention, for litigation regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefor.

6/18/2014
Date

By *Mansour Samadpour*
Mansour Samadpour

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

VY T BUI
NOTARY PUBLIC
STATE OF WASHINGTON
MY COMM. EXP. 02/24/2017

I certify that I know or have satisfactory evidence that Mansour Samadpour is the person who appeared before me, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

Dated 6/18/14

Signature of Notary Public *Vy T Bui*

Printed Name Vy T. Bui

My appointment expires 2/24/17

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Title	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
Art Unit	1657
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	66090-008US3

SIGNATURE of Applicant or Patent Practitioner

Signature	/Barry L. Davison, Ph.D., J.D./	Date (Optional)	June 23, 2014
Name	Barry L. Davison, Ph.D., J.D.	Registration Number	47,309
Title (if Applicant is a juristic entity)	Attorney of Record		
Applicant Name (if Applicant is a juristic entity)	Institute for Environmental Health, Inc.		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.



*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)



I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:

22504

OR



I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:



The address associated with the above-mentioned Customer Number

OR



The address associated with Customer Number:

OR

Firm or Individual Name				
Address				
City	State	Zip		
Country				
Telephone	Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Institute for Environmental Health, Inc.



Inventor or Joint Inventor (title not required below)



Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)



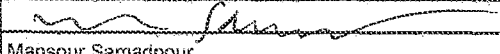
Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)



Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	04/22/2014
Name	Mansour Samadpour		
Title	Principal		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.



Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	19386880
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	23-JUN-2014
Filing Date:	04-MAR-2013
Time Stamp:	19:39:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	TransmittalForPowerOfAttorney_66090-008US3.pdf	121538 d6b888944ab5478725b89394ed4c618b0d ac0a1b	no	1

Warnings:

Information:

National Beef Ex. 1010

Page 148

2	Power of Attorney	PowerOfAttorney_66090-008US3.pdf	1948533 18822177e1884f66abab0ddc8e5017560ad cacfb	no	1
Warnings:					
Information:					
Total Files Size (in bytes):				2070071	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce	
Electronic Petition Request	TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT		
Application Number	13784606		
Filing Date	04-Mar-2013		
First Named Inventor	Mansour Samadpour		
Attorney Docket Number	66090-008US3		
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS		
☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action ☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.			
Owner	Percent Interest		
Institute for Environmental Health, Inc.	100%		
The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s) 7534584 as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns. In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later: - expires for failure to pay a maintenance fee; - is held unenforceable; - is found invalid by a court of competent jurisdiction; - is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; - has all claims canceled by a reexamination certificate; - is reissued; or - is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer. ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.			

☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

- ☒ Small Entity
- ☐ Micro Entity
- ☐ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

- ☒ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application
- Registration Number 47309
- ☐ A sole inventor
- ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application
- ☐ A joint inventor; all of whom are signing this request

Signature	/Barry L. Davison, Ph.D., J.D./
Name	Barry L. Davison, Ph.D., J.D.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	13784606			
Filing Date:	04-Mar-2013			
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Peachie Chan			
Attorney Docket Number:	66090-008US3			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Statutory or Terminal Disclaimer	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 13784606

Filing Date: 04-Mar-2013

Applicant/Patent under Reexamination: Samadpour et al.

Electronic Terminal Disclaimer filed on June 23, 2014

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

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Electronic Acknowledgement Receipt

EFS ID:	19386939
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	23-JUN-2014
Filing Date:	04-MAR-2013
Time Stamp:	19:50:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 160
RAM confirmation Number	6273
Deposit Account	040258
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part / Zip (if appl.)	Pages (if appl.)
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1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	33439 15f909c343f8652499d2fec0fab40add5a1a254	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30208 e56dad7013193494c17a93e0d3af8b641e7c6feb	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			63647		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed		PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	TERMINAL DISCLAIMER TO OBIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	
Application Number	13784606	
Filing Date	04-Mar-2013	
First Named Inventor	Mansour Samadpour	
Attorney Docket Number	66090-008US3	
Title of Invention	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS	
☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action ☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.		
Owner	Percent Interest	
Institute for Environmental Health, Inc.	100%	
The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s) 8389233 as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns. In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later: - expires for failure to pay a maintenance fee; - is held unenforceable; - is found invalid by a court of competent jurisdiction; - is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321; - has all claims canceled by a reexamination certificate; - is reissued; or - is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer. ☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.		

☐ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: ☒ Small Entity ☐ Micro Entity ☐ Regular Undiscounted	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ☒ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number <u>47309</u> ☐ A sole inventor ☐ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ☐ A joint inventor; all of whom are signing this request	
Signature	/Barry L. Davison, Ph.D., J.D./
Name	Barry L. Davison, Ph.D., J.D.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
 Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	13784606			
Filing Date:	04-Mar-2013			
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Peachie Chan			
Attorney Docket Number:	66090-008US3			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Statutory or Terminal Disclaimer	1814	1	160	160
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				160

Doc Code: DISQ.E.FILE

Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 13784606

Filing Date: 04-Mar-2013

Applicant/Patent under Reexamination: Samadpour et al.

Electronic Terminal Disclaimer filed on June 23, 2014

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	19387027
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	23-JUN-2014
Filing Date:	04-MAR-2013
Time Stamp:	19:56:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 160
RAM confirmation Number	6330
Deposit Account	040258
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part / Zip (if appl.)	Pages (if appl.)
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1	Electronic Terminal Disclaimer-Filed	eTerminal-Disclaimer.pdf	33357 b8d1aedb69c40b7d972e1de7eee9a896bc839e1e	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30208 7f30c0aa02c20a4b7db5689c8c23d53faff70b83	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			63565		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3

CONFIRMATION NO. 3227

POA ACCEPTANCE LETTER

22504
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045



Date Mailed: 06/27/2014

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/23/2014.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/ddinh/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227
22504 7590 06/30/2014 DAVIS WRIGHT TREMAINE, LLP/Seattle IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 SEATTLE, WA 98101-3045			EXAMINER SRIVASTAVA, KAILASH C	
			ART UNIT 1657	PAPER NUMBER
			NOTIFICATION DATE 06/30/2014	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@dwt.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 13/784,606	Applicant(s) SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	

All participants (applicant, applicant's representative, PTO personnel):

(1) KAILASH C. SRIVASTAVA, Examiner. (3) ____.

(2) Dr. Davison, Applicants' Representative. (4) ____.

Date of Interview: 19 June 2014.

Type: ☒ Telephonic ☐ Video Conference
 ☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☒ Yes ☐ No.
 If Yes, brief description: Response filed 08/17/2014.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
 (For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: Those of record.

Identification of prior art discussed: That of record.

Substance of Interview
 (For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See Continuation Sheet.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/KAILASH C. SRIVASTAVA/ Examiner, Art Unit 1657	
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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The Representative informed the Examiner that in addition to the response already of record, Representative will be filing an IDS for Examiner's consideration. Examiner advised the Representative to ensure that the appropriate fees have been paid with the IDS because the IDS will be filed after a Non-Final Rejection.

The Representative also discussed with the Examiner a co-pending application 11107458. The Representative mentioned that the Representative is still looking for the slides that were presented to the Examiner and Examiner's SPE by the Inventor in a personal interview conducted on 11/04/2010. Said slides are imperative to establishing that the process claimed in said application is different than the art-recognized process and might lead to allowance of the pending Claims in said 11107458 application provided there is no prior art found on subsequent search that need to be performed per the USPTO policy to examine any claim amendments. The Representative and the Examiner discussed the subject matter presented in said slides that were presented at said interview. The Representative requested the Examiner that the Representative would send a set of slides for the Examiner to look at and advise the Representative if the slides presented at the interview on 11/04/2010 are present in said set. Subsequently, the Representative e-mailed a set of slides for Examiner's consideration and followed-up with a telephone call. The slides were not a part of said set. However, the Representative and the Examiner were together able to identify that said slides are of record in USSN 11199871. The Examiner will ascertain with the SPE if the slides are same that were discussed in the interview on 11/04/2010 and inform the Representative to enable the Representative to respond to the pending Office Action (OA) in 11107458. Said OA was mailed on 03/13/2014 .



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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NOTICE OF ALLOWANCE AND FEE(S) DUE

22504 7590 07/09/2014
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

EXAMINER

SRIVASTAVA, KAILASH C

ART UNIT

PAPER NUMBER

1657

DATE MAILED: 07/09/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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13/784,606

03/04/2013

Mansour Samadpour

66090-008US3

3227

TITLE OF INVENTION: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	10/09/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

22504 7590 07/09/2014
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227

TITLE OF INVENTION: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	10/09/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
SRIVASTAVA, KAILASH C	1657	435-004000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.	2. For printing on the patent front page, list (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 1 _____ 2 _____ 3 _____
---	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted: ☐ Issue Fee ☐ Publication Fee (No small entity discount permitted) ☐ Advance Order - # of Copies _____	4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above) ☐ A check is enclosed. ☐ Payment by credit card. Form PTO-2038 is attached. ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).
---	---

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227

22504 7590 07/09/2014
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

EXAMINER

SRIVASTAVA, KAILASH C

ART UNIT	PAPER NUMBER
----------	--------------

1657

DATE MAILED: 07/09/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/784,606	Applicant(s) SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 06/17/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-38. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. ☒ Notice of References Cited (PTO-892) | 5. ☒ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>06/19/2014</u> | 6. ☐ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☒ Interview Summary (PTO-413),
Paper No./Mail Date <u>06/23/2014</u> . | |

The present application is being examined under the pre-AIA first to invent provisions.

EXAMINER'S AMENDMENT AND COMMENTS

Acknowledgement

The response, amendment and remarks filed 17 June 2014 to the Office Action with Non-Final Rejection mailed 17 December 2013 is acknowledged and entered.

Also acknowledged and entered are the two Terminal Disclaimer (TD) filed 17 June 2014 to obviate a Double Patenting (DP) rejection in U.S. Patent Number (USPTN) 7534584B2 and 8389233B2 respectively. Said TDs were disapproved on 18 June 2014 because the signer did not state on the power of Attorney (PA) that he is authorized to act on behalf of assignee.

Also acknowledged and entered are the two e-TDs filed 23 June 2014 to obviate a Double Patenting (DP) rejection in U.S. Patent Number (USPTN) 7534584B2 and 8389233B2 respectively. Said e-TDs were approved on 23 June 2014.

Claims Status

According to the amendments filed 17 June 2014, in the instant application following is the current status of Claims:

35-38 have been added;

1-3, 5-13, 15-27 and 32-34 are amended;

1-34 and newly added 35-38 are pending and are examined on merits.

Information Declaration Statement (IDS)

IDS filed 19 June 2014 is acknowledged, entered, considered and duly signed 3 sheets of PTO/SB/08A are enclosed with the instant Office Action.

Withdrawals

Considering remarks and amendment filed 17 June 2014 and e-TDs filed 23 June 2014 all the rejections in the Office Action with Non-Final Rejection mailed 17 December 2013 are hereby withdrawn.

Relevant Art

U.S. 20030226477A1 published 04 December 2003, inventors Gilman et al.

Publication referenced *supra* describes the concept of production lot sample assays for high throughput cell based assays (Page 1, Column 2, Paragraph 008, Lines 1- 13) to reduce sample numbers (Page 1, Column 2, Paragraph 008, Lines 39- 41) to be analyzed to screen for potential drug compounds derived from natural sources. Said method is for increasing test confidence for the positive individual analyses (Page 1, Column 2, Paragraph 008, Lines 39).

The scope of said concept does not compromise the instantly claimed food Quality control method for microbial infestation because said method is not an analogous art reference.

Conclusion

Claims 1-38 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (571) 272-0923. The examiner can normally be reached on Monday to Thursday from 7:00 A.M. to 5:30 P.M. (U.S., Eastern Standard or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached at (571)-272-0925 Monday through Thursday and every other Friday between 7:30 A.M. to 6:00 P.M. (U.S., Eastern Standard or Daylight Savings Time). The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding may be obtained from the Patent Application Information Retrieval (i.e., PAIR) system. Status information for the published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (i.e., EBC) at: (866)-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kailash C Srivastava/

Patent Examiner

Art Unit 1657

☎: (571) 272-0923

/JON P WEBER/

Supervisory Patent Examiner, Art Unit 1657

<i>Applicant-Initiated Interview Summary</i>	Application No. 13/784,606	Applicant(s) SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	

All participants (applicant, applicant's representative, PTO personnel):

(1) KAILASH C. SRIVASTAVA, Examiner. (3) ____.

(2) Dr. B. Davison, Applicant's Representative. (4) ____.

Date of Interview: 23 June 2014.

Type: ☒ Telephonic ☐ Video Conference
 ☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
 If Yes, brief description: NONE.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
 (For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: Those of Record.

Identification of prior art discussed: That of Record.

Substance of Interview
 (For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant's Representative and the Examiner discussed the most recently filed papers to advance the prosecution in the instant application. The Examiner advised the Representative to update the power of attorney and to file the e-TD to overcome the ODP rejection of record. Subsequently, the Representative informed the Examiner that the Representative would update the record.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Notice of References Cited	Application/Control No. 13/784,606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2003/0225477 A1	12-2003	Gilman et al.	700/214
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Issue Classification 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR	
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657	

CPC					
Symbol				Type	Version
G01N	1	28		F	2013-01-01
C12Q	1	18		I	2013-01-01
Y10S	435	849		A	2013-01-01
C12Q	1	04		I	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657 (Assistant Examiner)	06/25/2014 (Date)	Total Claims Allowed: 38	
/JON P WEBER/ Supervisory Patent Examiner.Art Unit 1657 (Primary Examiner)	06/27/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	15	33	35										
2	2	18	16	34	36										
3	3	19	17	35	20										
4	4	20	18	36	22										
5	5	21	19	37	37										
6	6	22	21	38	38										
7	34	23	23												
8	7	24	24												
9	28	25	25												
10	8	26	26												
11	9	27	27												
12	10	28	29												
13	11	29	30												
14	12	30	31												
15	13	31	32												
16	14	32	32												

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657 (Assistant Examiner)	06/25/2014 (Date)	Total Claims Allowed: 38	
/JON P WEBER/ Supervisory Patent Examiner.Art Unit 1657 (Primary Examiner)	06/27/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

Complete if Known

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1857
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Document Number Number - Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figures Appear
	1.	US- 6080437	06-27-2000	Mauer et al.	
	2.	US- 7534584	05-19-2009	Institute for Environmental Health, Inc. (Samadpour)	
	3.	US- 7919282	04-05-2011	Institute for Environmental Health, Inc. (Samadpour)	
	4.	US- 8389233	03-05-2013	Institute for Environmental Health, Inc. (Samadpour)	
	5.	US- 95/001,294	04-05-2010	US- 7534584 B2	
	6.	US- 2004/0241773	02-12-2004	Institute for Environmental Health, Inc. (Samadpour)	
	7.	US- 2009/0258359	10-15-2009	Institute for Environmental Health, Inc. (Samadpour)	

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Paragraphs or Relevant Figures Appear	T ⁶
	8.	WO 2006/017832	02-16-2006	Institute For Environmental Health, Inc. (Samadpour)		

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁷
	9.	ANDREWS et al., "BAM: Food Sampling/Preparation of Sample Homogenate," Bacteriological Analytical Manual, 2003, Chapter 1.	
	10.	Andrews, et al., "Salmonella," Compendium of Methods for the Microbiological Examination of Foods, 4 th Ed., 2001, Ch. 37, American Public Health Association, pp. 367-380.	

Examiner
Signature

/Kailash Srivastava/

Date
Considered

06/19/2014

DWT 24309709v1 0066090-008US3

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2 of 3

Complete if Known

Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1857
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

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13.	COUSIN, et al., "Psychotropic Microorganisms," <i>Compendium of Methods for the Microbiological Examination of Foods</i> , 4 th Ed., 2001, Ch. 13, American Public Health Association, pp. 159-166.
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20.	JARVIS, B., "Errors Associated with Quantal Response Methods," <i>Statistical Aspects of the Microbiological Examination of Foods</i> , 2008, Ch. 8:143-176, Academic Press, Amsterdam, London, and San Diego.
21.	JARVIS, B., "On the Compositing of Samples for Qualitative Microbiological Testing," <i>Letters in Applied Microbiology</i> , 2007, 45:592-598.
22.	JARVIS, B., "Statistical Aspects of the Microbiological Analysis of Foods, <i>Progress in Industrial Microbiology</i> ," 1989, 21: 117-142, Elsevier Science Publishers B.V.
23.	KUO, et al., "Sample Pooling to Expedite Bioanalysis and Pharmacokinetic Research," <i>Journal of Pharmaceutical and Biomedical Analysis</i> , Volume 16, 1998, pp. 837-846.
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Examiner
Signature

/Kailash Srivastava/

Date
Considered

06/23/2014

DWT 24,309,709v1 0066090-008US3

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 3

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Application Number	13/784,606
Filing Date	March 4, 2013
First Named Inventor	Mansour Samadpour
Art Unit	1857
Examiner Name	Kailash C. Srivastava
Attorney Docket Number	0066090-008US3

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26.	MIDURA, et al. "Sampling Plans, Sample Collection, Shipment and Preparation for Analysis," Compendium of Methods for the Microbiological Examination of Foods, 4 th Edition, 2001, Ch. 2, American Public Health Association, pp. 13-23.
27.	PRICE et al., "Salmonella Testing of Pooled Pre-Enrichment Broth Cultures for Screening Multiple Food Samples," Applied Microbiology, April 1972, Vol. 23, No. 4: 679-682.
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29.	ROHLF, F.J., et al. "Optimizing Composite Sampling Protocols," Environmental Science and Technology, 1996, Vol. 30, No. 10:2899-2905.
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31.	SILLIKER et al., "ICMSF Methods Studies. I. Comparison of Analytical Schemes for Detection of Salmonella in Dried Foods," Canadian Journal of Microbiology, 1973, 19: 475-479.
32.	SILLIKER et al., "Laboratory Methods," Food-Borne Infections and Intoxicants, 1969, Ch. XI: 455-474, Academic Press, New York and London.
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36.	THOMAS et al., "Examination of Stockfeeds for Salmonella," Australian Veterinary Journal, February 1981, 57:69-71.

Examiner
Signature

/Kailash Srivastava/

Date
Considered

06/24/2014

DWI 24309709v1 0066090-008US3

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Search Notes 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

CPC- SEARCHED		
Symbol	Date	Examiner
Please see the search strategy in WEST Search History appended hereto	06/24/2014	KCS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
Partial Search in WEST	Partial Search in WEST	12/11/2013	KCS
NONE	NONE	12/11/2013	KCS
Updated Partial Search in WEST	Updated Partial Search in WEST	6/24/2014	KCS
435	4, 6.15, 7.1, 30	6/24/2014	KCS

SEARCH NOTES		
Search Notes	Date	Examiner
Discussed Claims 1-34 with Dr. Weber and decided to make an ODP rejection based on 7534584 B2 & 8389,233B2	11/26/2013	KCS
Performed Inventor Name Search in e-DAN	12/11/2013	KCS
Performed Assignee Name Search in e-DAN	12/11/2013	KCS
Verified Application Priority data (e.g., CON of 12/360,796 filed 01/27/2009, now USPAT 8389233 which is a CON of 11/199,871 filed 08/08/2005, now US PAT 7534584 which claims benefit of 60/599,473 filed 08/06/2004) in e-DAN	12/11/2013	KCS
WEST Search in DWPI, EPAB, FPRS, JPAB, PGPB, USOC AND USPT According to the Search Strategy in hereto attached Search History.	12/11/2013	KCS

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657	
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SEARCH NOTES

Search Notes	Date	Examiner
Discussed Claims 1-38 with Dr. Weber and decided to withdraw ODP rejection based on applicant's amendment to Claims filed 06/17/2014, e-TDs filed 06/23/2014 and ODP being the only outstanding rejection in the application.	6/24/2014	KCS
Updated Inventor Name Search in e-DAN	6/24/2014	KCS
Updated Assignee Name Search in e-DAN	6/24/2014	KCS
Re-verified Application Priority data (e.g., CON of 12/360,796 filed 01/27/2009, now USPAT 8389233 which is a CON of 11/199,871 filed 08/08/2005, now US PAT 7534584 which claims benefit of 60/599,473 filed 08/06/2004) in e-DAN	6/24/2014	KCS
Updated partial search in WEST in: DWPI, EPAB, FPRS, JPAB, PGPB, USOC, USPT according to the search strategy in the Search History appended hereto.	6/24/2014	KCS

INTERFERENCE SEARCH

US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Updated Partial Search in WEST	Updated Partial Search in WEST	6/24/2014	KCS
435	4, 6.15, 7.1, 30	6/24/2014	KCS

/KAILASH C SRIVASTAVA/
Examiner, Art Unit 1657

WEST Search History for Application 13784606

Creation Date: 2014062414:30

Prior Art Searches

Query	DB	Op.	Plur.	Thes.	Date
quality control	USPT	ADJ	YES		12-11-2013
composite sample	USPT	ADJ	YES		12-11-2013
Intermediate sample	USPT	ADJ	YES		12-11-2013
ladder sampl\$5	USPT	ADJ	YES		12-11-2013
(mixed lot) same (sample)	USPT	ADJ	YES		12-11-2013
(composite sample) same (Intermediate sample)	USPT	ADJ	YES		12-11-2013
(quality control) same (composite sample)	USPT	ADJ	YES		12-11-2013
(quality control) and (Intermediate sample)	USPT	ADJ	YES		12-11-2013
(stepwise)same (sample analysis)	USPT	ADJ	YES		12-11-2013
discriminat\$8 same sampl\$5	USPT	ADJ	YES		12-11-2013
(stepwise) same (sample analysis)	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and ((stepwise) same (sample analysis))	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and (composite sample)	USPT	ADJ	YES		12-11-2013
(Pharmaceutical sample)	USPT	ADJ	YES		12-11-2013
(quality control) and ((Pharmaceutical sample))	USPT	ADJ	YES		12-11-2013
(Intermediate sample) and ((Pharmaceutical sample))	USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	USPT	ADJ	YES		12-11-2013
(quality control) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
(discriminat\$8 same sampl\$5) and (quality control and (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
(composite sample) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		12-11-2013
		ADJ	YES		12-11-2013

(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	EPAB, JPAB, DWPI				
quality control	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
composite sample	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(mixed lot)and (sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((mixed lot)and (sample))	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(mixed lot) and (sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(stepwise)and (sample analysis)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
discriminat\$8 and sampl\$5	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(Pharmaceutical sample)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(composite sample) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(discriminat\$8 and sampl\$5) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((Pharmaceutical sample)) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013

((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) same (sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))	PGPB, USPT	ADJ	YES		12-11-2013
(pooled same sample)	PGPB, USPT	ADJ	YES		12-11-2013
sample Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		12-11-2013
((pooled same sample)) same (sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella same sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
(sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		12-11-2013
sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(pooled and sample)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
sample and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((pooled and sample)) and (sample and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((pooled and sample) and sample and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot	PGPB, USPT	ADJ	YES		12-11-2013
(target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic	PGPB, USPT	ADJ	YES		12-11-2013

microb\$6))					
(composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)	PGPB, USPT	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))	PGPB, USPT	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		12-11-2013
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) same ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))	PGPB, USPT	ADJ	YES		12-11-2013
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		12-11-2013
quality control	PGPB, USPT	ADJ	YES		12-11-2013
composite sample	PGPB, USPT	ADJ	YES		12-11-2013
((mixed or combined) same lot) same (sample or specimen or material or portion)	PGPB, USPT	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)	PGPB, USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013
((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) same (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella	PGPB, USPT	ADJ	YES		12-11-2013

or(pathogenic microb\$6)))					
((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((composite sample) or ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))) or (((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)) or ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (quality control)	PGPB, USPT	ADJ	YES		12-11-2013
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	PGPB, USPT	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) or (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or	PGPB, USPT	ADJ	YES		12-11-2013

((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))					
(((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control)	PGPB, USPT	ADJ	YES		12-11-2013
(((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same (meat or pork or chicken or beef or bison or sandwich or cold cut) same	PGPB, USPT	ADJ	YES		12-11-2013

Salmonella)					
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))) or (((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013

(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion)) and (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot))))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion) and (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot))) and (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
Escherichia\$6	USOC, EPAB,	ADJ	YES		12-11-2013

	JPAB, DWPI				
Escherichia\$12 and Hemorrhage\$6	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(Escherichia\$12 and Hemorrhage\$6) and (Escherichia\$6)	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion))) and ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or	USOC, EPAB, JPAB, DWPI	ADJ	YES		12-11-2013

material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)) and (sampl\$5 or specimen or material or portion) and (pooled or composite or lot)) and (Escherichia\$12 and Hemorrhage\$6 and Escherichia\$6)					
Escherichia\$13	PGPB, USPT	ADJ	YES		12-11-2013
Escherichia\$12 and Hemorrhage\$6	PGPB, USPT	ADJ	YES		12-11-2013
((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((quality control) or (composite sample))) or ((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) or ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or (((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or (((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))))	PGPB, USPT	ADJ	YES		12-11-2013
Escherichia\$12 same Hemorrhage\$6	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6 same Escherichia\$13) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
(Escherichia\$12 same Hemorrhage\$6) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or	PGPB, USPT	ADJ	YES		12-11-2013

(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)))					
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))	PGPB, USPT	ADJ	YES		12-11-2013
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		12-11-2013
(injured or dehydrated or damaged or non-culturable) same microorganism	PGPB, USPT	ADJ	YES		12-11-2013
((injured or dehydrated or damaged or non-culturable) same microorganism) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or	PGPB, USPT	ADJ	YES		12-11-2013

pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
((injured or dehydrated or damged ornon-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same ((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion))) or (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))))	PGPB, USPT	ADJ	YES		12-11-2013
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((injured or dehydrated or damged ornon-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or	PGPB, USPT	ADJ	YES		12-11-2013

specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)))	PGPB, USPT	ADJ	YES		12-11-2013
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or	PGPB, USPT	ADJ	YES		12-11-2013

(Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
20090291086.pn.	PGPB, USPT	ADJ	YES		12-11-2013
20050197295.pn.	PGPB, USPT	ADJ	YES		12-11-2013
7407475.pn.	PGPB, USPT	ADJ	YES		12-11-2013
6962903.pn.	PGPB, USPT	ADJ	YES		12-11-2013
3097141.pn.	PGPB, USPT	ADJ	YES		12-11-2013
(435/7.2).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/7.32).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/31).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/32).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/33).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/34).ccls.	PGPB, USPT	ADJ	YES		12-11-2013

(435/36).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/38).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/39).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/40).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/308.1).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/849).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
(435/973).ccls.	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls.) and ((435/7.32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls.) and ((435/39).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls.) and ((435/849).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/849).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls.) and ((435/32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls.) and ((435/33).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls. and (435/33).ccls.) and ((435/34).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/849).ccls. and (435/32).ccls. and (435/33).ccls. and (435/34).ccls.) and ((435/38).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls.) and ((435/973).ccls. and (435/7.32).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013
((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls. and (435/973).ccls. and (435/7.32).ccls.) and ((435/849).ccls. and (435/32).ccls. and (435/33).ccls. and (435/34).ccls. and (435/38).ccls.)	PGPB, USPT	ADJ	YES		12-11-2013

((435/973).ccls. and (435/7.32).ccls. and (435/34).ccls. and (435/973).ccls. and (435/7.32).ccls.) and ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))))	PGPB, USPT	ADJ	YES		12-11-2013
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
quality control	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot	USOC, EPAB, JPAB, DWPI,	ADJ	YES		12-11-2013

	FPRS				
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)) ((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion)) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB,	ADJ	YES		12-11-2013

)	DWPI, FPRS				
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) and ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot) and (quality control)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI,	ADJ	YES		12-11-2013

	FPRS				
(slaughter house) and hygiene	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(quality control) or (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (carcass\$8 or meat\$7 or food or pharmaceutical\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or ((injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (injured or dehydrated or damaged or non-culturable or resuscitated\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (quality control or ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013

Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)					
Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6)) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)) or (injured or dehydrated or damged or non-culturable or resuscittat\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and quality control or ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((slaughter house) and hygiene)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013

(microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)					
(Escherichia\$12 and (((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) and (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		12-11-2013
quality control	USPT	ADJ	YES		06-24-2014
composite sample	USPT	ADJ	YES		06-24-2014
Intermediate sample	USPT	ADJ	YES		06-24-2014
ladder sampl\$5	USPT	ADJ	YES		06-24-2014
(mixed lot) same (sample)	USPT	ADJ	YES		06-24-2014
(composite sample) same (Intermediate sample)	USPT	ADJ	YES		06-24-2014
(quality control) same (composite sample)	USPT	ADJ	YES		06-24-2014
(quality control) and (Intermediate sample)	USPT	ADJ	YES		06-24-2014
(stepwise)same (sample analysis)	USPT	ADJ	YES		06-24-2014
discriminat\$8 same sampl\$5	USPT	ADJ	YES		06-24-2014
(stepwise) same (sample analysis)	USPT	ADJ	YES		06-24-2014
(discriminat\$8 same sampl\$5) and ((stepwise) same (sample analysis))	USPT	ADJ	YES		06-24-2014
(discriminat\$8 same sampl\$5) and (composite sample)	USPT	ADJ	YES		06-24-2014
(Pharmaceutical sample)	USPT	ADJ	YES		06-24-2014
(quality control) and ((Pharmaceutical sample))	USPT	ADJ	YES		06-24-2014
(Intermediate sample) and ((Pharmaceutical sample))	USPT	ADJ	YES		06-24-2014
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	USPT	ADJ	YES		06-24-2014
(quality control) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		06-24-2014

(discriminat\$8 same sampl\$5) and (quality control and (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		06-24-2014
(composite sample) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)	USPT	ADJ	YES		06-24-2014
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
quality control	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
composite sample	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(mixed lot)and (sample)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((mixed lot)and (sample))	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(mixed lot) and (sample)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(stepwise)and (sample analysis)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
discriminat\$8 and sampl\$5	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(Pharmaceutical sample)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(composite sample) and (quality control)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(discriminat\$8 and sampl\$5) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014

((Pharmaceutical sample)) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		06-24-2014
((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) same (sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))	PGPB, USPT	ADJ	YES		06-24-2014
(pooled same sample)	PGPB, USPT	ADJ	YES		06-24-2014
sample Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		06-24-2014
((pooled same sample)) same (sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		06-24-2014
((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella same sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		06-24-2014
(sample same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((pooled same sample) same sample Same (pooled or composite or lot))	PGPB, USPT	ADJ	YES		06-24-2014
sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(pooled and sample)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
sample and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((pooled and sample)) and (sample and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(sample and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((pooled and sample) and sample and (pooled or composite or lot))	USOC, EPAB, JPAB,	ADJ	YES		06-24-2014

	DWPI				
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot	PGPB, USPT	ADJ	YES		06-24-2014
(target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	PGPB, USPT	ADJ	YES		06-24-2014
(composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)	PGPB, USPT	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))	PGPB, USPT	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		06-24-2014
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) same ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))	PGPB, USPT	ADJ	YES		06-24-2014
((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) same ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	PGPB, USPT	ADJ	YES		06-24-2014
quality control	PGPB, USPT	ADJ	YES		06-24-2014
composite sample	PGPB, USPT	ADJ	YES		06-24-2014
((mixed or combined) same lot) same (sample or specimen or material or portion)	PGPB, USPT	ADJ	YES		06-24-2014
(discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)	PGPB, USPT	ADJ	YES		06-24-2014
(meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella	PGPB, USPT	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)	PGPB, USPT	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		06-24-2014
		ADJ	YES		06-24-2014

((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) same ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) same (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))))	PGPB, USPT				
((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((composite sample) or ((caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)))	PGPB, USPT	ADJ	YES		06-24-2014
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion))) or (((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot)) or ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))	PGPB, USPT	ADJ	YES		06-24-2014
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (quality control)	PGPB, USPT	ADJ	YES		06-24-2014
(((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutical\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or	PGPB, USPT	ADJ	YES		06-24-2014

Salmonella or Listeria\$9))) same ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)					
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) or (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or ((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))))	PGPB, USPT	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control)	PGPB, USPT	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)))) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot same (composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same quality control) same (((mixed or combined) same lot) same (sample or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (composite sample or (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot	PGPB, USPT	ADJ	YES		06-24-2014

same (composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion)) or ((sampl\$5 or specimen or material or portion) Same (pooled or composite or lot) or (sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)					
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) and (pooled or composite or lot)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014

(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))) or ((((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))) and ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)) and (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9)) and (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion) and ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((mixed or combined) and lot) and(sample or specimen or material	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014

or portion) or (sampl\$5 or specimen or material or portion) and (pooled or composite or lot))) and (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))					
Escherichia\$6	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
Escherichia\$12 and Hemorrhage\$6	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(Escherichia\$12 and Hemorrhage\$6) and (Escherichia\$6)	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot) or ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))) or ((((mixed or combined) and lot) and(sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion))) and ((sampl\$5 or specimen or material or portion) and (pooled or composite or lot))	USOC, EPAB, JPAB, DWPI	ADJ	YES		06-24-2014
((((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot or (target or test) and (microb6 or	USOC, EPAB,	ADJ	YES		06-24-2014

microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or (((mixed or combined) and lot) and(sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5or specimen or material or portion)) and (sampl\$5 or specimen or material or portion) and (pooled or composite or lot)) and (Escherichia\$12 and Hemorrhage\$6 and Escherichia\$6)	JPAB, DWPI				
Escherichia\$13	PGPB, USPT	ADJ	YES		06-24-2014
Escherichia\$12 and Hemorrhage\$6	PGPB, USPT	ADJ	YES		06-24-2014
((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) or ((meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella)) or ((quality control) or (composite sample))) or ((((mixed or combined) same lot) same (sample or specimen or material or portion)) or ((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		06-24-2014
(((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot) or ((target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))) or (((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion)) or (((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))))	PGPB, USPT	ADJ	YES		06-24-2014
Escherichia\$12 same Hemorrhage\$6	PGPB, USPT	ADJ	YES		06-24-2014
(Escherichia\$12 same Hemorrhage\$6) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		06-24-2014
(Escherichia\$12 same Hemorrhage\$6 same Escherichia\$13) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		06-24-2014
		ADJ	YES		06-24-2014

(Escherichia\$12 same Hemorrhage\$6) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT				
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))	PGPB, USPT	ADJ	YES		06-24-2014
(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (Escherichia\$13)	PGPB, USPT	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))	PGPB, USPT	ADJ	YES		06-24-2014
(injured or dehydrated or damged ornon-culturable) same microorganism	PGPB, USPT	ADJ	YES		06-24-2014
((injured or dehydrated or damged ornon-culturable) same microorganism) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or	PGPB, USPT	ADJ	YES		06-24-2014

material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))))					
((injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))) same ((((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion))) or (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))))	PGPB, USPT	ADJ	YES		06-24-2014
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9))) same ((injured or dehydrated or damaged or non-culturable) same microorganism same	PGPB, USPT	ADJ	YES		06-24-2014

(((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged ornon-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house)))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion)))	PGPB, USPT	ADJ	YES		06-24-2014
((sampl\$5 or specimen or material or portion) same (enrich\$5 same ((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged ornon-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5or specimen or material or portion))	PGPB, USPT	ADJ	YES		06-24-2014

same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion))) same (((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample)same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same(lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4)or(slaughter house))))					
20090291086.pn.	PGPB, USPT	ADJ	YES		06-24-2014
20050197295.pn.	PGPB, USPT	ADJ	YES		06-24-2014
7407475.pn.	PGPB, USPT	ADJ	YES		06-24-2014
6962903.pn.	PGPB, USPT	ADJ	YES		06-24-2014
3097141.pn.	PGPB, USPT	ADJ	YES		06-24-2014
(meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
quality control	USOC, EPAB, JPAB, DWPI,	ADJ	YES		06-24-2014

	FPRS				
(caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen or material or portion)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen or material or portion)) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and ((target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((mixed or combined) and lot) and(sample or specimen	USOC,	ADJ	YES		06-24-2014

or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6))) and ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	EPAB, JPAB, DWPI, FPRS				
(discriminat\$8 or separat\$7 or isolat\$8) and (sampl\$5 or specimen or material or portion) and ((meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(sampl\$5 or specimen or material or portion) and (enrich\$5 and ((pathogenic bacteria) or Salmonella or Listeria\$9))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(slaughter house) and hygiene	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(injured or dehydrated or damaged or non-culturable or resuscittat\$9) and microorganism	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((injured or dehydrated or damaged or non-culturable or resuscittat\$9) and microorganism) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(quality control) or (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((slaughter house) and hygiene) or (((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)))	USOC, EPAB, JPAB, DWPI,	ADJ	YES		06-24-2014

	FPRS				
((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house))) or ((injured or dehydrated or damaged or non-culturable or resuscittat\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((slaughter house) and hygiene or ((micro\$4 or microbiolo\$5) and (quality control)) and ((Meat and process\$4)or(slaughter house)) or (injured or dehydrated or damaged or non-culturable or resuscittat\$9) and microorganism and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (quality control or ((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
Escherichia\$12 and ((("O157") or ("H7")) or Hemorrhage\$6)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(Escherichia\$12 and ((("O157") or ("H7")) or Hemorrhage\$6)) and ((composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(Escherichia\$12 and ((("O157") or ("H7")) or Hemorrhage\$6) and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion)) and (((mixed or combined) and lot) and(sample or specimen or material or portion) and (meat or pork or chicken or beef or bison or sandwich or cold cut) and Salmonella and (composit\$5 or mixed or combine\$3 or enrich\$6) and (lot or sample or portion) and (target or test) and (microb6 or microorganism or (Escherichia coli) or salmonella or(pathogenic microb\$6)) and (caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) and lot)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
individual adj test	USOC, EPAB,	ADJ	YES		06-24-2014

	JPAB, DWPI, FPRS				
("production lot sample")	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
Separate and (composite adj test)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
enhance and ((confidence adj limit) or confidence)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
modular and (composite adj sample)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(pooled or individual or composite) and (lot or sample)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((pooled or individual or composite) and (lot or sample)) and (positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(modular and (composite adj sample)) and (positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(enhance and ((confidence adj limit) or confidence)) and	USOC,	ADJ	YES		06-24-2014

(positive or negative)	EPAB, JPAB, DWPI, FPRS				
(Separate and (composite adj test)) and (positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((("production lot sample"))) and (positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test) and (positive or negative)	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (positive or negative)) and ((pooled or individual or composite) and (lot or sample) and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (positive or negative) and (pooled or individual or composite) and (lot or sample) and (positive or negative)) and (enhance and ((confidence adj limit) or confidence) and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(enhance or increase or establish) and confidence	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
((enhance or increase or establish) and confidence) and (individual adj test and (positive or negative) and (pooled or individual or composite) and (lot or sample) and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (positive or negative) and (pooled or individual or composite) and (lot or sample) and (positive or negative)) and (Separate and (composite adj test) and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014

(individual adj test and (positive or negative) and (pooled or individual or composite) and (lot or sample) and (positive or negative) and Separate and (composite adj test) and (positive or negative)) and (modular and (composite adj sample) and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (positive or negative) and (pooled or individual or composite) and (lot or sample) and (positive or negative) and Separate and (composite adj test) and (positive or negative)) and ("production lot sample") and (positive or negative))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test) and ((pooled or individual or composite) and (lot or sample))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample)) and (enhance and ((confidence adj limit) or confidence))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample)) and (Separate and (composite adj test))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample)) and (modular and (composite adj sample))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample) and modular and (composite adj sample)) and (Separate and (composite adj test))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample) and modular and (composite adj sample)) and ("production lot sample")	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014
(individual adj test and (pooled or individual or composite) and (lot or sample) and modular and (composite adj sample)) and (individual adj test and (pooled or individual or composite) and (lot or sample) and Separate and (composite adj test))	USOC, EPAB, JPAB, DWPI, FPRS	ADJ	YES		06-24-2014

individual adj test	PGPB, USPT	ADJ	YES		06-24-2014
("production lot sample")	PGPB, USPT	ADJ	YES		06-24-2014
Separate same (composite adj test)	PGPB, USPT	ADJ	YES		06-24-2014
(enhance or increase or establish) same ((confidence adj limit) or confidence)	PGPB, USPT	ADJ	YES		06-24-2014
modular same (composite adj sample)	PGPB, USPT	ADJ	YES		06-24-2014
(pooled or individual or composite) same (lot or sample)	PGPB, USPT	ADJ	YES		06-24-2014
((pooled or individual or composite) same (lot or sample)) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
(modular same (composite adj sample)) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
((enhance or increase or establish) same ((confidence adj limit) or confidence)) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
(Separate same (composite adj test)) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
((("production lot sample")) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test) same (positive or negative)	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative)) same (individual adj test)	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test) same ((enhance or increase or establish) same ((confidence adj limit) or confidence))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence)) same ((pooled or individual or composite) same (lot or sample))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) same ((pooled or individual or composite) same (lot or sample) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014

(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative)) same (modular same (composite adj sample) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative)) same ((enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative)) same (Separate same (composite adj test) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative)) same ("production lot sample") same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative)) same (individual adj test same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or	PGPB, USPT	ADJ	YES		06-24-2014

sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative)) same (individual adj test same (positive or negative) same individual adj test)					
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and (modular same (composite adj sample) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and (Separate same (composite adj test) same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and (("production lot sample") same (positive or negative))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance	PGPB, USPT	ADJ	YES		06-24-2014

or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) same ("production lot sample"))					
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) same (Separate same (composite adj test))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) same (modular same (composite adj sample))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and (modular same (composite adj sample))	PGPB, USPT	ADJ	YES		06-24-2014
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)	PGPB, USPT	ADJ	YES		06-24-2014

and (Separate same (composite adj test))					
(individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and (("production lot sample")	PGPB, USPT	ADJ	YES		06-24-2014
(Separate or modular or composite or individual or ("production lot")) same (sample same test)	PGPB, USPT	ADJ	YES		06-24-2014
(Separate or modular or composite or individual or ("production lot")) same (test same sample)	PGPB, USPT	ADJ	YES		06-24-2014
((Separate or modular or composite or individual or ("production lot")) same (test same sample)) or ((Separate or modular or composite or individual or ("production lot")) same (sample same test))	PGPB, USPT	ADJ	YES		06-24-2014
((Separate or modular or composite or individual or ("production lot")) same (test same sample) or (Separate or modular or composite or individual or ("production lot")) same (sample same test)) same (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)	PGPB, USPT	ADJ	YES		06-24-2014
((Separate or modular or composite or individual or ("production lot")) same (test same sample) or (Separate or modular or composite or individual or ("production lot")) same (sample same test)) and (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual	PGPB, USPT	ADJ	YES		06-24-2014

adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)					
confidence same (negative same result)	PGPB, USPT	ADJ	YES		06-24-2014
(negative same result)	PGPB, USPT	ADJ	YES		06-24-2014
((negative same result)) same (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)	PGPB, USPT	ADJ	YES		06-24-2014
((negative same result)) and (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)	PGPB, USPT	ADJ	YES		06-24-2014
(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample))) or ((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or	PGPB, USPT	ADJ	YES		06-24-2014

negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test)					
(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) same ((Separate or modular or composite or individual or ("production lot"))) same (test same sample) or (Separate or modular or composite or individual or ("production lot"))) same (sample same test))	PGPB, USPT	ADJ	YES		06-24-2014
		ADJ	YES		06-24-2014

(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) same ((negative same result))	PGPB, USPT				
(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or	PGPB, USPT	ADJ	YES		06-24-2014

negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative)) same ((negative same result))					
(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or	PGPB, USPT	ADJ	YES		06-24-2014

negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative)) same ((Separate or modular or composite or individual or ("production lot")) same (test same sample) or (Separate or modular or composite or individual or ("production lot")) same (sample same test))					
(((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test same (positive or negative) same individual adj test) and ((G01N35/00 IG01N35/02 IG01N35/04).IPCR.)	PGPB, USPT	ADJ	YES		06-24-2014

435/6.15.ccls.	PGPB, USPT	ADJ	YES		06-24-2014
435/4.ccls.	PGPB, USPT	ADJ	YES		06-24-2014
435/7.1.ccls.	PGPB, USPT	ADJ	YES		06-24-2014
435/30.ccls.	PGPB, USPT	ADJ	YES		06-24-2014
(G01N1/28 C12Q1/04 C12Q1/18 Y10S435/849)CPC	PGPB, USPT	ADJ	YES		06-24-2014
(G01N1/28 C12Q1/04 C12Q1/18 Y10S435/849).CPC.	PGPB, USPT	ADJ	YES		06-24-2014
((G01N1/28 C12Q1/04 C12Q1/18 Y10S435/849).CPC.) AND (((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative))) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (positive or negative) same individual adj test same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or	PGPB, USPT	ADJ	YES		06-24-2014

increase or establish) same ((confidence adj limit) or
 confidence) same (pooled or individual or composite)
 same (lot or sample) same (pooled or individual or
 composite) same (lot or sample) same (positive or
 negative) same (enhance or increase or establish) same
 ((confidence adj limit) or confidence) same (positive or
 negative) same individual adj test same (positive or
 negative) same individual adj test same (positive or
 negative) same individual adj test) OR (((individual adj
 test same (positive or negative) same individual adj test
 same (enhance or increase or establish) same
 ((confidence adj limit) or confidence) or individual adj
 test same (positive or negative) same individual adj test
 same (enhance or increase or establish) same
 ((confidence adj limit) or confidence) same (pooled or
 individual or composite) same (lot or sample)) or
 (individual adj test same (positive or negative) same
 individual adj test same (enhance or increase or
 establish) same ((confidence adj limit) or confidence)
 same (pooled or individual or composite) same (lot or
 sample) same (pooled or individual or composite) same
 (lot or sample) same (positive or negative) or individual
 adj test same (positive or negative) same individual adj
 test same (enhance or increase or establish) same
 ((confidence adj limit) or confidence) same (pooled or
 individual or composite) same (lot or sample) same
 (pooled or individual or composite) same (lot or sample)
 same (positive or negative) same (enhance or increase or
 establish) same ((confidence adj limit) or confidence)
 same (positive or negative))) or individual adj test same
 (positive or negative) same individual adj test same
 (enhance or increase or establish) same ((confidence adj
 limit) or confidence) same (pooled or individual or
 composite) same (lot or sample) same (pooled or
 individual or composite) same (lot or sample) same
 (positive or negative) same (enhance or increase or
 establish) same ((confidence adj limit) or confidence)
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 (positive or negative) or individual adj test same (positive
 or negative) same individual adj test same (enhance or
 increase or establish) same ((confidence adj limit) or
 confidence) same (pooled or individual or composite)
 same (lot or sample) same (pooled or individual or
 composite) same (lot or sample) same (positive or
 negative) same (enhance or increase or establish) same
 ((confidence adj limit) or confidence) same (positive or
 negative) same individual adj test same (positive or
 negative) same individual adj test same (positive or
 negative) same individual adj test and ((G01N35/00
 |G01N35/02 |G01N35/04).IPCR.))) OR ((sampl\$5 or
 specimen or material or portion) same (enrich\$5 same

((pathogenic bacteria) or Salmonella or Listeria\$9)) same (injured or dehydrated or damaged or non-culturable) same microorganism same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))) same (((discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion) or (meat or pork or chicken or beef or bison or sandwich or cold cut) same Salmonella) or (quality control or composite sample)) or (((mixed or combined) same lot) same (sample or specimen or material or portion) or (discriminat\$8 or separat\$7 or isolat\$8) same (sampl\$5 or specimen or material or portion)) same ((caracass\$8 or meat\$7 or food or pharmaceutic\$5 or sample) same lot or (target or test) same (microb6 or microorganism or (Escherichia coli) or salmonella or (pathogenic microb\$6))) or ((composit\$5 or mixed or combine\$3 or enrich\$6) same (lot or sample or portion) or ((micro\$4 or microbiolo\$5) same (quality control)) same ((Meat same process\$4) or (slaughter house))))					
((435/6.15.ccls. AND 435/30.ccls. OR 435/6.15.ccls. AND 435/30.ccls. AND 435/4.ccls.) AND (((individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample)) or (individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite) same (lot or sample) same (pooled or individual or composite) same (lot or sample) same (positive or negative) or individual adj test same (positive or negative) same individual adj test same (enhance or increase or establish) same ((confidence adj limit) or confidence) same (pooled or individual or composite)	PGPB, USPT	ADJ	YES		06-24-2014

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227
22504 7590 07/15/2014 DAVIS WRIGHT TREMAINE, LLP/Seattle IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 SEATTLE, WA 98101-3045			EXAMINER SRIVASTAVA, KAILASH C	
			ART UNIT 1657	PAPER NUMBER
			NOTIFICATION DATE 07/15/2014	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@dwt.com

<i>Applicant-Initiated Interview Summary</i>	Application No. 13/784,606	Applicant(s) SAMADPOUR, MANSOUR	
	Examiner KAILASH C. SRIVASTAVA	Art Unit 1657	

All participants (applicant, applicant's representative, PTO personnel):

(1) KAILASH C. SRIVASTAVA, Examiner. (3) ____.

(2) Dr. B. Davison, Applicant's Representative. (4) ____.

Date of Interview: 10 July 2014.

Type: ☒ Telephonic ☐ Video Conference
 ☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☒ Yes ☐ No.
 If Yes, brief description: PAge 3 NOA document mailed 07/09/2014 already of record.

Issues Discussed ☐101 ☐112 ☐102 ☐103 ☒Others
 (For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: NONE.

Identification of prior art discussed: NONE.

Substance of Interview
 (For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Applicant's Representative clarified with the Examiner the document number US20030226477A1 mentioned at Page 3 in the NOA document mailed 07/09/2014. This is because the document number for the non-analogous art reference recited on the PTO 892 is US 20030225477A1. The Examiner apologized for the inadvertent typographical error and confirmed by verifying in the search history in WEST that the recited document number (i.e., US 20030225477A1) on the 892 is indeed the correct number. The Examiner and the Representative agreed that said numbering in the NOA document does not compromise the patentability of the invention and claims claimed in the instant application. Furthermore, the NOA document does not have to be corrected with a supplemental Notice of Allowance; and the Representative does not have to respond to the instant Interview Summary. .

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/KAILASH C. SRIVASTAVA/ Patent Examiner, Art Unit 1657	
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Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

22504 7590 07/09/2014
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Peachie S. Chan	(Depositor's name)
/Peachie S. Chan/ via EFS-Web	(Signature)
July 15, 2014	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	03/04/2013	Mansour Samadpour	66090-008US3	3227

TITLE OF INVENTION: MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	10/09/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
SRIVASTAVA, KAILASH C	1657	435-064000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Barry L. Davison, Ph.D., J.D.

2 Davis Wright Tremaine LLP

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Institute for Environmental Health, Inc. Lake Forest Park, Washington

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 940258 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Barry L. Davison, Ph.D., J.D./

Date July 15, 2014

Typed or printed name Barry L. Davison, Ph.D., J.D.

Registration No. 47,309

Electronic Patent Application Fee Transmittal

Application Number:	13784606			
Filing Date:	04-Mar-2013			
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS			
First Named Inventor/Applicant Name:	Mansour Samadpour			
Filer:	Barry Davison/Peachie Chan			
Attorney Docket Number:	66090-008US3			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	480	480
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt

EFS ID:	19589503
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Peachie Chan
Filer Authorized By:	Barry Davison
Attorney Docket Number:	66090-008US3
Receipt Date:	15-JUL-2014
Filing Date:	04-MAR-2013
Time Stamp:	19:26:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$480
RAM confirmation Number	5159
Deposit Account	040258
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part / Zip (if appl.)	Pages (if appl.)
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1	Issue Fee Payment (PTO-85B)	IssueFeeTransmittalForm_66090-008US3.pdf	1642686 77e614f6ea61d16aabf3878b826e8ed33be0feeb	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30377 c715b4ec069cec7c33d38e3568ce6fd4872e8502	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1673063		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Issue Classification 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

CPC						
Symbol					Type	Version
Y10S		435	/	849	A	2013-01-01
C12Q		1	/	18	I	2013-01-01
C12Q		1	/	04	I	2013-01-01
G01N		1	/	28	F	2013-01-01
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CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657 (Assistant Examiner)	07/30/2014 (Date)	Total Claims Allowed: 38	
 (Primary Examiner)	 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION											
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED						
435			4			C	1	2	Q	1 / 24 (2006.0)		C	1	2	Q	1 / 00 (2006.0)	
CROSS REFERENCE(S)						C	1	2	Q	1 / 04 (2006.0)		C	1	2	Q	1 / 06 (2006.0)	
						C	1	2	Q	1 / 02 (2006.0)		C	1	2	Q	1 / 08 (2006.0)	
						C	1	2	Q	1 / 68 (2006.0)		G	0	1	N	33 / 53 (2006.0)	
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					C	1	2	Q	1 / 68 (2006.0)		G	0	1	N	33 / 53 (2006.0)	
435	6.15	7.1	30			G	0	1	N	33 / 533 (2006.0)		G	0	1	N	33 / 573 (2006.0)	
						G	0	1	N	33 / 535 (2006.0)							

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657 (Assistant Examiner)	07/30/2014 (Date)	Total Claims Allowed: 38	
 (Primary Examiner)	 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE

Issue Classification 	Application/Control No. 13784606	Applicant(s)/Patent Under Reexamination SAMADPOUR, MANSOUR
	Examiner KAILASH C SRIVASTAVA	Art Unit 1657

☐ Claims renumbered in the same order as presented by applicant								☐ CPA		☒ T.D.		☐ R.1.47			
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	17	19	33	30										
2	2	18	21	34	31										
3	3	19	23	35	20										
4	5	20	24	36	22										
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15	17	31	28												
16	18	32	9												

/KAILASH C SRIVASTAVA/ Examiner.Art Unit 1657 (Assistant Examiner)	07/30/2014 (Date)	Total Claims Allowed: 38	
 (Primary Examiner)	 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure NONE



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/784,606	09/02/2014	8822143	66090-008US3	3227

22504 7590 08/13/2014
DAVIS WRIGHT TREMAINE, LLP/Seattle
IP Docketing Dept.
Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE, WA 98101-3045

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Mansour Samadpour, Seattle, WA;
INSTITUTE FOR ENVIRONMENTAL HEALTH, INC, Lake Forest Park, WA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patentee: Mansour Samadpour Attorney Docket No.: 0066090-008US3
Patent No.: 8,822,143 Confirmation No.: 3227
Issued: September 2, 2014 Group Art Unit: 1657
Title: MODULAR COMPOSITING-MULTIPLE LOT SCREENING
PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL
CONTAMINANTS AND/OR CONSTITUENTS

REQUEST FOR CERTIFICATE OF CORRECTION

ATTN: CERTIFICATE OF CORRECTION BRANCH
COMMISSIONER FOR PATENTS

Enclosed is a Certificate of Correction, Form PTO/SB/44, for the above-identified U.S. Letters Patent. The errors in the printed patent listed on the enclosed form occurred at the corresponding locations in the application file listed below:

Claim 1, at page 10, Col. 15, line 19:

"c) enriching each of the separate composited test of samples"

Should read as:

"c) enriching each of the separate composited test lot samples"

Since the Certificate of Correction is necessitated by U.S. Patent and Trademark Office errors, no fee deemed due.

The Commissioner is hereby authorized to charge any fees associated with this paper, or credit any overpayment, to Deposit Account No. 04-0258.

Respectfully submitted,

/Barry L. Davison, Ph.D., J.D./
Barry L. Davison, Ph.D., J.D.
Attorney for Applicant
Registration No. 47,309

Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
Seattle, Washington 98101-1688
Telephone (206) 757-8023 | Facsimile (206) 757-7023

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 1 of 1

PATENT NO. : 8,822,143
APPLICATION NO.: 13/784,606
ISSUE DATE : September 2, 2014
INVENTOR(S) : Mansour Samadpour

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claim 1, at page 10, Col. 15, line 19:

"c) enriching each of the separate composited test of samples"

Should read as:

"c) enriching each of the separate composited test lot samples"

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Davis Wright Tremaine LLP
1201 Third Avenue, Suite 2200
SEATTLE WA 98101-3045

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Electronic Acknowledgement Receipt

EFS ID:	22433034
Application Number:	13784606
International Application Number:	
Confirmation Number:	3227
Title of Invention:	MODULAR COMPOSITING-MULTIPLE LOT SCREENING PROTOCOLS FOR DETECTION OF PATHOGENS, MICROBIAL CONTAMINANTS AND/OR CONSTITUENTS
First Named Inventor/Applicant Name:	Mansour Samadpour
Customer Number:	22504
Filer:	Barry Davison/Janet Berdine
Filer Authorized By:	Barry Davison
Attorney Docket Number:	0066090-008US3
Receipt Date:	22-MAY-2015
Filing Date:	04-MAR-2013
Time Stamp:	20:46:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	2015-05-22_0066090-008US3_ Request_for_Certificate_of_Cor rection.pdf	179842 ec920714210d83c9d5ebcd18147c8622374 8bffb	no	2

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 8,822,143 B2
APPLICATION NO. : 13/784606
DATED : September 2, 2014
INVENTOR(S) : Mansour Samadpour

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

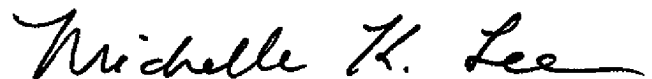
Claim 1, Col. 15, line 19:

“c) enriching each of the separate composited test of samples”

Should read as:

“c) enriching each of the separate composited test lot samples”

Signed and Sealed this
Twenty-fifth Day of August, 2015



Michelle K. Lee
Director of the United States Patent and Trademark Office



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
13/784,606	03/04/2013	Mansour Samadpour	0066090-008US3	54675

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 01/08/2018 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

✕ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Barry L. Davison/
Name:	Barry L. Davison, Ph.D., J.D.
Registration Number:	47309

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
 filed in the U.S. District Court Western District of Texas on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO. 6:21-cv-176	DATE FILED 2/25/2021	U.S. DISTRICT COURT Western District of Texas
PLAINTIFF Institute for Environmental Health, Inc.		DEFENDANT Food Safety Net Services, Ltd
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,534,584	5/2/2021	Institute for Environmental Health, Inc.
2 8,822,143	9/2/2014	Institute for Environmental Health, Inc.
3 9,637,771	5/2/2017	Institute for Environmental Health, Inc.
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
---	---

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been
 filed in the U.S. District Court Western District of Texas on the following

☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.);

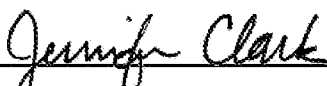
DOCKET NO. 6:21-cv-176	DATE FILED 2/25/2021	U.S. DISTRICT COURT Western District of Texas
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT 02/15/2022 - Voluntary Dismissal
--

CLERK Jeannette J. Clack	(BY) DEPUTY CLERK 	DATE 02/15/2022
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy