

Dr. Squatch, LLC
v.
The Procter & Gamble Company

Case Nos. IPR2024-01104, -01105, -01173, -01174
Patent Nos. 11,540,999; 10,966,915; 10,905,647; 11,497,706

Patent Owner's Demonstratives
October 22, 2025



DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

The P&G Patents Address Issues With Natural Deodorants



'999, '915

'647, '706

- × Prior art non-natural antiperspirants (like Bianchi) contained large amounts of volatile silicones and mixed aluminum salts.
- × Prior art natural deodorants were too hard, gritty, sticky, and/or greasy.
- × Some prior art natural deodorants utilized ingredients that caused skin irritation.

(12) United States Patent
Sturgis et al.

(10) Patent No.: US 11,540,999 B2
(45) D

(54) DEODORANT COMPOSITIONS
(71) Applicant: The Procter & Gamble Company,
Cincinnati, OH (US)
(72) Inventors: David Arthur Sturgis, Montgomery,
OH (US); Lindsey Michelle Britt, West
Chester, OH (US)
(73) Assignee: The Procter & Gamble Company,
Cincinnati, OH (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 21 days.
This patent is subject to a terminal dis-
claimer.

(21) Appl. No.: 17/194,437
(22) Filed: Mar. 8, 2021
(65) Prior Publication Data
US 2021/0196617 A1 Jul. 1, 2021

Related U.S. Application Data
(63) Continuation of application No. 16/716,542, filed on
Dec. 17, 2019, now Pat. No. 10,966,915, which is a
continuation of application No. 16/021,965, filed on
Jun. 28, 2018, now Pat. No. 10,543,144.
(60) Provisional application No. 62/647,104, filed on Mar.
23, 2018, provisional application No. 62/527,180,
filed on Jun. 30, 2017.

(51) Int. Cl.
A61K 8/92 (2006.01)
A61Q 15/00 (2006.01)
A61K 8/19 (2006.01)
A61K 8/72 (2006.01)
A61K 8/17 (2006.01)
A61K 8/02 (2006.01)
A61K 8/49 (2006.01)
A61Q 17/00 (2006.01)
U.S. CL.
CPC: A61K 8/92 (2013.01); A61K 8/0229
(2013.01); A61K 8/0241 (2013.01); A61K 8/19
(2013.01); A61K 8/17 (2013.01); A61K 8/75
(2013.01); A61K 8/4926 (2013.01); A61K
8/72 (2013.01); A61K 8/922 (2013.01); A61Q
15/00 (2013.01); A61K 2500/30 (2013.01);
A61K 2600/34 (2013.01); A61K 2800/74
(2013.01); A61Q 17/000 (2013.01)

(58) Field of Classification Search
None
See application file for complete search history.

(56) References Cited
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Acetylmou
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Primary E
(74) Attor

ABSTRACT
(57)
A deodorant stick comprising: at least about 25% of a liquid
triglyceride; at least one antimicrobial; a primary structure
with a melting point of at least about 50° C.; and less than
8% of secondary structures having a melting point of at
least about 60° C.; said stick being free of an aluminum salt;
and said stick having a hardness from about 80 mm*10 to
about 140 mm*10, as measured by penetration with ASTM
D-1321 needle.

18 Claims, No Drawings

(12) United States Patent
Sturgis et al.

(10) Patent No.: US 10,905,647 B2
(45) Date of Patent: Feb. 2, 2021

(58) Field of Classification Search
None
See application file for complete search history.

(56) References Cited
U.S. PATENT DOCUMENTS
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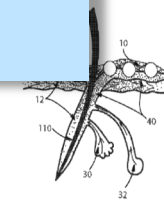
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Iron Sequestration on Skin: A New Route to Improved Deodorancy
(Continued)

Primary Examiner — Melissa S. Mancier
(74) Attorney, Agent, or Firm — Kathleen Y. Carter

(57) ABSTRACT
A deodorant stick comprising at least 25% by weight liquid
triglyceride; a primary antimicrobial having a water solu-
bility of at most about 10 g/L at 25° C.; a fragrance
composition comprising at least about 50% natural oils,
essential oils, or a combination thereof; and a primary
structure with a melting point of at least 50° C.; and
deodorant stick being free of an aluminum salt; and said
deodorant stick having a hardness from about 70 mm*10 to
about 140 mm*10, as measured by penetration with ASTM
D-1321 needle.

19 Claims, 3 Drawing Sheets



'999 Patent at 1:21-34; '915 Patent at 1:19-33; '647 Patent at 1:20-43; '706 Patent at 1:21-44; '999 POR at 6-8; '915 POR at 5-7; '647 POR at 5-8; '706 POR at 5-7

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

2

The P&G Patents Address Issues With Natural Deodorants



'999, '915

'647, '706

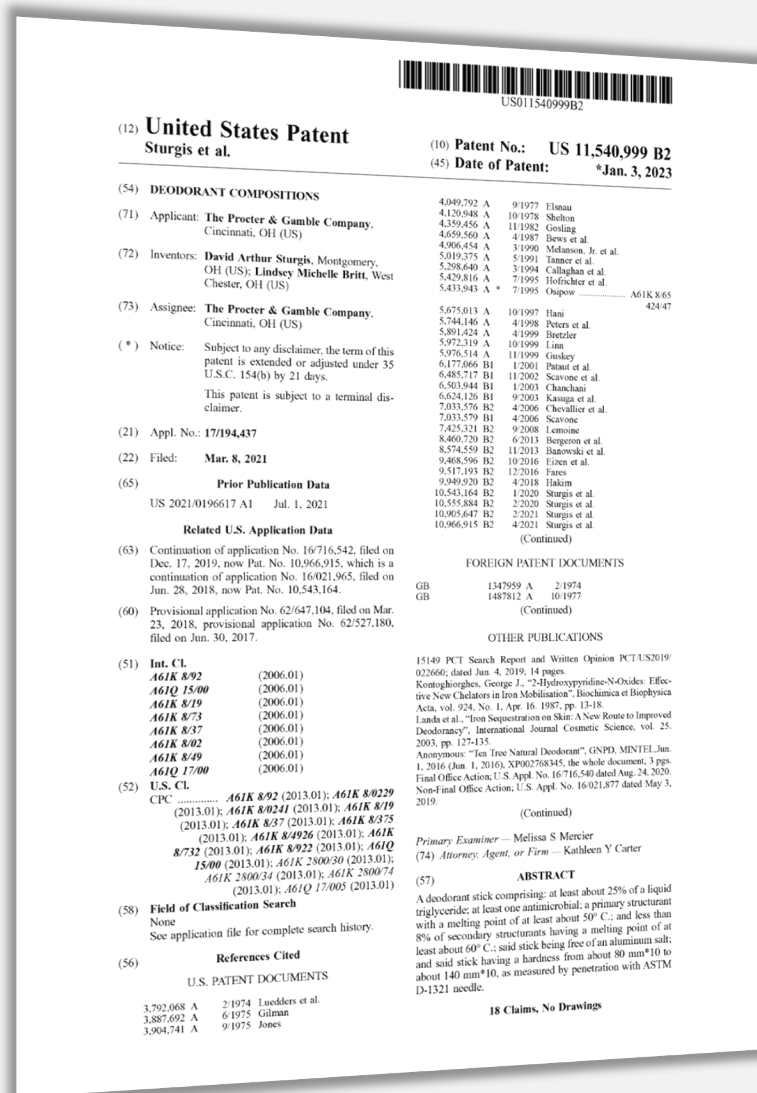
✓ P&G's deodorant sticks can "comprise consumer-perceived natural ingredients, while offering a pleasant consumer experience in terms of its hardness."

'999 Patent at 3:57-60; '915 Patent at 3:57-60; '647 Patent at 15:10-13; '706 Patent at 14:51-54; '999 POR at 6-8; '915 POR at 5-7; '647 POR at 5-8; '706 POR at 5-7

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

3

'999 Patent



What is claimed is:

1. A deodorant stick comprising:
 - a. at least one antimicrobial comprising magnesium hydroxide; and
 - b. a primary structurant with a melting point of at least about 50° C.; and
 said stick being free of an aluminum salt; and
 said stick having a hardness from about 80 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

'915 Patent



US010966915B2

(12) **United States Patent**
Sturgis et al.

(10) **Patent No.:** US 10,966,915 B2
(45) **Date of Patent:** *Apr. 6, 2021

(54) **DEODORANT COMPOSITIONS**

(71) **Applicant:** The Procter & Gamble Company,
Cincinnati, OH (US)

(72) **Inventors:** David Arthur Sturgis, Montgomery,
OH (US); Lindsey Michelle Britt, West
Chester, OH (US)

(73) **Assignee:** The Procter & Gamble Company,
Cincinnati, OH (US)

(*) **Notice:** Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.
This patent is subject to a terminal dis-
claimer.

(21) **Appl. No.:** 16/716,542

(22) **Filed:** Dec. 17, 2019

(65) **Prior Publication Data**
US 2020/0129415 A1 Apr. 30, 2020

Related U.S. Application Data

(63) Continuation of application No. 16/021,965, filed on
Jun. 28, 2018, now Pat. No. 10,543,164.

(60) Provisional application No. 62/647,104, filed on Mar.
23, 2018, provisional application No. 62/527,180,
filed on Jun. 30, 2017.

(51) **Int. Cl.**
A61K 8/92 (2006.01)
A61Q 15/00 (2006.01)
A61K 8/19 (2006.01)
A61K 8/02 (2006.01)
A61Q 17/00 (2006.01)
A61K 8/73 (2006.01)
A61K 8/37 (2006.01)
A61K 8/49 (2006.01)

(52) **U.S. Cl.**
CPC *A61K 8/92* (2013.01); *A61K 8/0229*
(2013.01); *A61K 8/0241* (2013.01); *A61K 8/19*
(2013.01); *A61K 8/37* (2013.01); *A61K 8/375*
(2013.01); *A61K 8/4926* (2013.01); *A61K*
8/732 (2013.01); *A61K 8/922* (2013.01); *A61Q*
15/00 (2013.01); *A61K 2800/30* (2013.01);
A61K 2800/34 (2013.01); *A61K 2800/74*
(2013.01); *A61Q 17/005* (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**
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Nivea Fresh Natural Deodorant, pulled from the Internet (www.
GNPD.com) 3 pages.
International Search Report; International Application No. PCT/
US2018/039972, dated Mar. 25, 2019, 10 pages.
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ABSTRACT

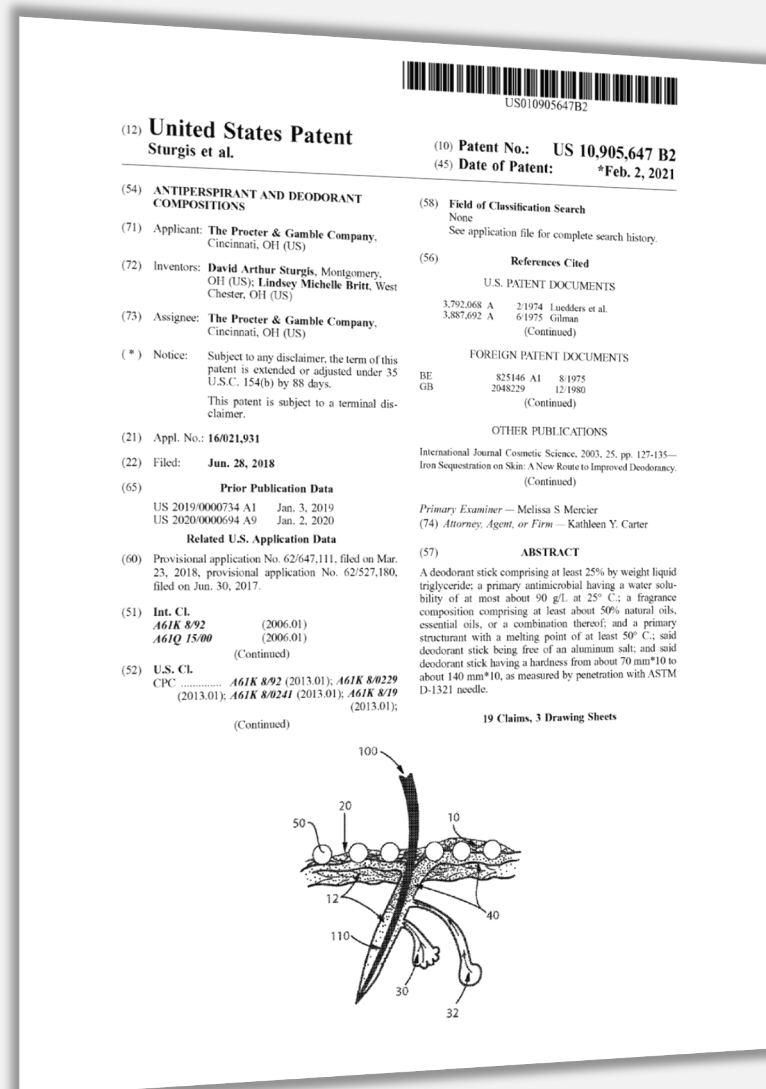
(57) A deodorant stick comprising: at least about 25% of a liquid
triglyceride; at least one antimicrobial; a primary structurant
with a melting point of at least about 50° C.; and less than
8% of secondary structurants having a melting point of at
least about 60° C.; said stick being free of an aluminum salt;
and said stick having a hardness from about 80 mm*10 to
about 140 mm*10, as measured by penetration with ASTM
D-1321 needle.

15 Claims, No Drawings

What is claimed is:

1. A deodorant stick comprising:
 - a. at least about 25% of a liquid triglyceride;
 - b. at least one antimicrobial; and
 - c. a primary structurant with a melting point of at least about 50° Celsius; and
 wherein said stick is free of an aluminum salt.

'647 Patent



What is claimed is:

1. A deodorant stick comprising:
 - a. at least 25% by weight liquid triglyceride;
 - b. a primary antimicrobial having a water solubility of at most about 90 g/L at 25° C.;
 - c. a fragrance composition comprising at least about 50% by weight of natural oils, essential oils, or a combination thereof; and
 - d. a primary structurant with a melting point of at least 50° C.;
 said deodorant stick being free of an aluminum salt; and said deodorant stick having a hardness from about 70 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

16. A deodorant stick comprising:
 - a. at least 60% by weight liquid triglyceride;
 - b. at least one antimicrobial;
 - c. a fragrance composition comprising at least about 50% by weight of natural oils, essential oils, or a combination thereof; and
 said deodorant stick being free of an aluminum salt.

18. A deodorant stick comprising:
 - a. at least 50% by weight of a liquid triglyceride;
 - b. a primary antimicrobial having a water solubility of at most about 90 g/L at 25° C.; and
 said deodorant stick having a hardness from about 70 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

'706 Patent



United States Patent Sturgis et al.



US011497706B2

(10) Patent No.: US 11,497,706 B2
(45) Date of Patent: *Nov. 15, 2022

(54) ANTIPERSPIRANT AND DEODORANT COMPOSITIONS

(71) Applicant: **The Procter & Gamble Company**,
Cincinnati, OH (US)

(72) Inventors: **David Arthur Sturgis**, Montgomery,
OH (US); **Lindsey Michelle Britt**, West
Chester, OH (US)

(73) Assignee: **The Procter & Gamble Company**,
Cincinnati, OH (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.
This patent is subject to a terminal dis-
claimer.

(21) Appl. No.: 17/124,565

(22) Filed: Dec. 17, 2020

(65) **Prior Publication Data**
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(63) Continuation of application No. 16/021,931, filed on
Jun. 28, 2018, now Pat. No. 10,905,647.
(Continued)

(51) **Int. Cl.**
A61K 8/92 (2006.01)
A61K 8/02 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **A61K 8/92** (2013.01); **A61K 8/0229**
(2013.01); **A61K 8/0241** (2013.01); **A61K 8/19**
(2013.01);
(Continued)

(58) Field of Classification Search

None

See application file for complete search history.

(56) References Cited

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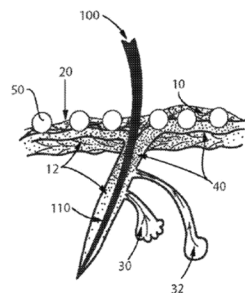
15150 PCT Search Report and Written Opinion for PCT/US2019/
022661 dated Jun. 28, 2019, 13 pages.
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Primary Examiner—Melissa S. Mercier
(74) **Attorney, Agent, or Firm**—Kathleen Y. Carter

(57) ABSTRACT

A deodorant stick comprising at least 25% by weight liquid triglyceride; a primary antimicrobial having a water solubility of at most about 90 g/L at 25° C.; a fragrance composition comprising at least about 50% natural oils, essential oils, or a combination thereof; and a primary structurant with a melting point of at least 50° C.; said deodorant stick being free of an aluminum salt; and said deodorant stick having a hardness from about 70 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

23 Claims, 3 Drawing Sheets



What is claimed is:

1. A deodorant stick comprising:
at least about 25% by weight liquid triglyceride and a
primary antimicrobial;
said deodorant stick being free of an aluminum salt.

16. A deodorant stick comprising:
a. at least about 25% by weight liquid triglyceride;
b. a starch;
c. stearyl alcohol;
d. magnesium hydroxide;
e. beeswax;
f. shea butter;
g. coconut oil;
h. triethyl citrate;
i. jojoba seed oil; and
j. sunflower seed oil;
said deodorant stick being free of an aluminum salt.

20. A deodorant stick comprising:
a. at least about 25% by weight liquid triglyceride;
b. stearyl alcohol;
c. magnesium hydroxide;
d. beeswax;
e. shea butter;
f. coconut oil;
g. triethyl citrate;
h. jojoba seed oil; and
i. sunflower seed oil;
said deodorant stick being free of an aluminum salt.

Key Limitations Across All Patents



Limitation	Examples
No aluminum salt	"said stick being free of an aluminum salt" ('999 cl. 1) "said deodorant stick being free of an aluminum salt" ('706 cls. 1, 16, 20; '647 cls. 1, 16) "said stick is free of an aluminum salt" ('915 cl. 1)
At least one antimicrobial	"at least one antimicrobial comprising magnesium hydroxide" ('999 cl. 1) "at least one antimicrobial" ('915 cl. 1; '647 cl. 16) "a primary antimicrobial" ('706 cl. 1) "a primary antimicrobial having a water solubility of at most about 90 g/L at 25° C" ('647 cls. 1, 18)
Hardness range	"said stick having a hardness from about 80 mm*10 to about 140 mm*10" ('999 cl. 1; '915 cl. 15) "said deodorant stick having a hardness from about 70 mm*10 to about 140 mm*10" ('647 cls. 1, 18; '706 cl. 8) "wherein the deodorant stick has a hardness from about 90 mm*10 to about 110 mm*10" ('647 cl. 7)



Lesniak Grounds

'999 Grounds 1-3; '915 Grounds 1-4; '647 Grounds 1-4; '706 Grounds 1-5

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

9

Lesniak Grounds Lack Merit: Failings Across All IPRs



X	Lesniak does not disclose or enable aluminum-free deodorant sticks.
X	A POSA would have had no reason to modify Lesniak.
X	No reference or combination teaches the claimed hardness ranges.
X	A POSA would not have added Phinney's magnesium hydroxide to Lesniak.



Lesniak Grounds: No “Deodorant Stick”

X	Lesniak does not disclose or enable aluminum-free deodorant sticks.
	A POSA would have had no reason to modify Lesniak.
	No reference or combination teaches the claimed hardness ranges.
	A POSA would not have added Phinney’s magnesium hydroxide to Lesniak.

The Claims Require A “Deodorant Stick” That Is Aluminum-Free



'999

1. A **deodorant stick** comprising:
 - a. at least one antimicrobial comprising magnesium hydroxide; and
 - b. a primary structurant with a melting point of at least about 50° C.; andsaid stick being **free of an aluminum salt**; and said stick having a hardness from about 80 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

'915

1. A **deodorant stick** comprising:
 - a. at least about 25% of a liquid triglyceride;
 - b. at least one antimicrobial; and
 - c. a primary structurant with a melting point of at least about 50° Celsius; andwherein said stick is **free of an aluminum salt**.

'647

1. A **deodorant stick** comprising:
 - a. at least 25% by weight liquid triglyceride;
 - b. a primary antimicrobial having a water solubility of at most about 90 g/L at 25° C.;
 - c. a fragrance composition comprising at least about 50% by weight of natural oils, essential oils, or a combination thereof; and
 - d. a primary structurant with a melting point of at least 50° C.;said deodorant stick being **free of an aluminum salt**; and said deodorant stick having a hardness from about 70 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

'706

1. A **deodorant stick** comprising:
at least about 25% by weight liquid triglyceride and a primary antimicrobial;
said deodorant stick being **free of an aluminum salt**.

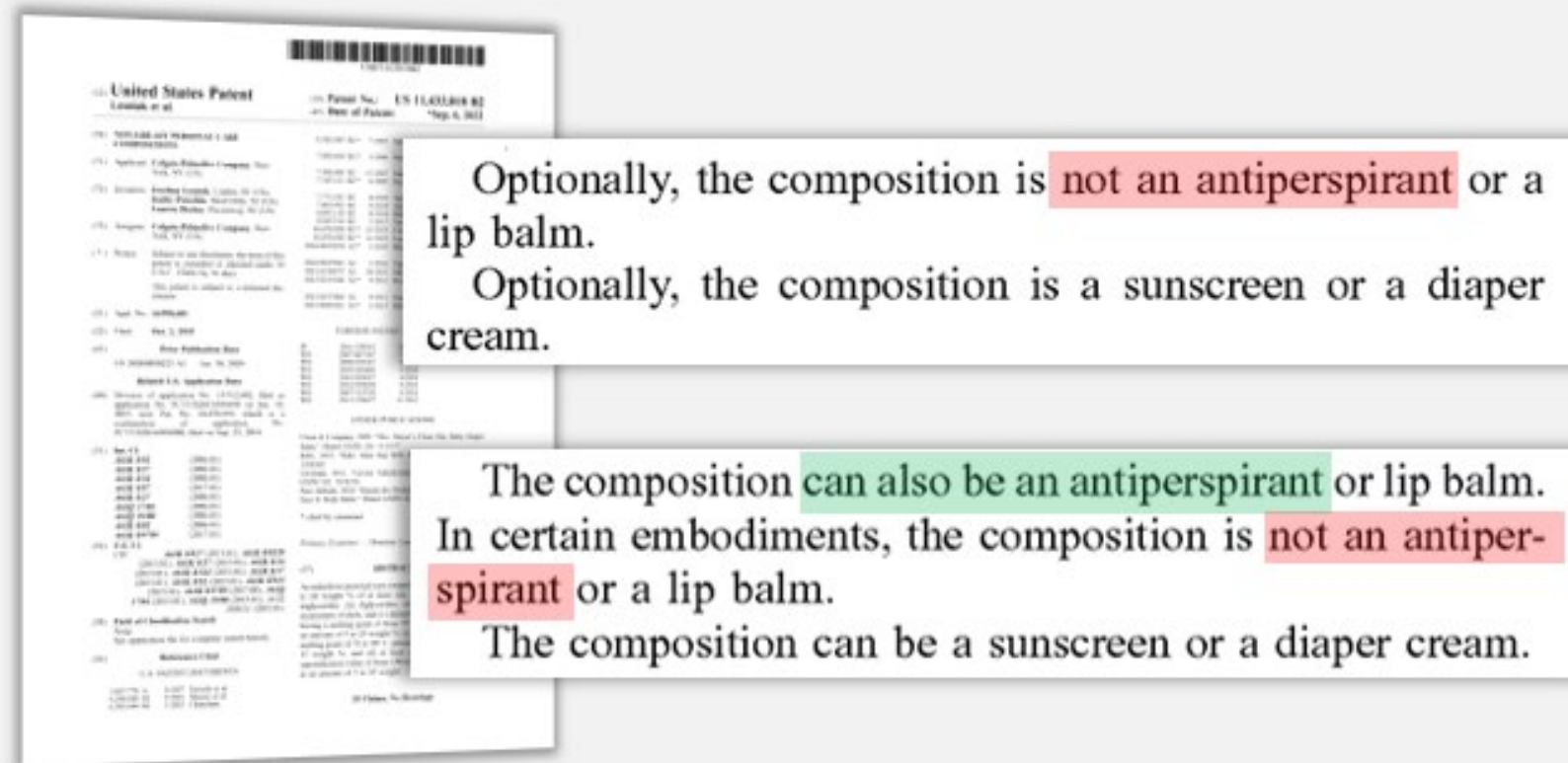
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

12

Lesniak Does Not Disclose An Aluminum-Free “Deodorant Stick”



Lesniak merely posits an “antiperspirant” in a single passing phrase . . .



Lesniak Does Not Disclose An Aluminum-Free “Deodorant Stick”



...and a POSA would have understood an “antiperspirant” contains aluminum.

1 FDA Approved Antiperspirant Actives

- (a) Aluminum chloride up to 15 percent, calculated on the hexahydrate form, in an aqueous solution nonaerosol dosage form.
- (b) Aluminum chlorohydrate up to 25 percent.
- (c) Aluminum chlorohydrate polyethylene glycol up to 25 percent.
- (d) Aluminum chlorohydrate propylene glycol up to 25 percent.
- (e) Aluminum dichlorohydrate up to 25 percent.
- (f) Aluminum dichlorohydrate polyethylene glycol up to 25 percent.
- (g) Aluminum dichlorohydrate propylene glycol up to 25 percent.
- (h) Aluminum sesquichlorohydrate up to 25 percent.
- (i) Aluminum sesquichlorohydrate polyethylene glycol up to 25 percent.
- (j) Aluminum sesquichlorohydrate propylene glycol up to 25 percent.
- (k) Aluminum zirconium octachlorohydrate up to 20 percent.
- (l) Aluminum zirconium octachlorohydrate gly up to 20 percent.
- (m) Aluminum zirconium pentachlorohydrate up to 20 percent.
- (n) Aluminum zirconium pentachlorohydrate gly up to 20 percent.
- (o) Aluminum zirconium tetrachlorohydrate up to 20 percent.
- (p) Aluminum zirconium tetrachlorohydrate gly up to 20 percent.
- (q) Aluminum zirconium trichlorohydrate up to 20 percent.
- (r) Aluminum zirconium trichlorohydrate gly up to 20 percent.

2 Dr. Robert Lochhead



“To a POSA, the term ‘antiperspirant’ would have referenced a composition containing aluminum salts or complexes—the only antiperspirant actives approved by the FDA at the relevant time.”

3 Dr. Squatch Website



Furthermore, the most important difference between antiperspirant is actually one specific ingredient, aluminum. If that stink stick contains aluminum, the product is an antiperspirant. Aluminum is the sweat blocking active ingredient in antiperspirant products, which aims to control or prevent sweat entirely. Metallic salts and aluminum chloride are the active ingredients in antiperspirants. The aluminum in your antiperspirant is activated when you start to sweat. It then gets absorbed into your sweat glands, and forms a plug that blocks sweat from leaving your body. So even though your body is producing sweat it isn't able to reach the surface of the skin.

Lesniak Does Not Enable A “Deodorant Stick”



Dr. Robert Lochhead



- Slight differences in a composition can cause instability
- Lesniak’s **only stick formula** is a sunscreen, and Lesniak is silent on its stability

Lesniak

TABLE 2											
Sunscreens.											
	Composition#										
	1*	2*	3*	4*	5*	6*	7*	8	9*	10*	11
	Weight %										
Zinc Oxide	20	20	20	20	20	20	20	20	20	20	20
Sunflower oil	57	30	10	10	10	10	10	10	10	10	12.5
Caprylic/Capric Triglyceride	5	35	55	53	53	54	54	53	53	50	52
Beeswax	13	15	15	17	17	15	15	15	15	15	13.5
Shea butter	5	0	0	0	0	0	0	0	0	0	0
CastorWax MP80 hydrogenated castor oil	0	0	0	0	0	0	0	2	0	0	2
Tapioca starch	0	0	0	0	0	0	1	0	0	0	0
Cetyl Alcohol	0	0	0	0	0	0	0	0	2	0	0
Thickener silica	0	0	0	0	0	1	0	0	0	0	0
Natural jelly SP511	0	0	0	0	0	0	0	0	0	5	0
Total	100	100	100	100	100	100	100	100	100	100	100
Freeze/thaw stability	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass
High temp. stability (49° C.)	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Pass
“popping” acceptability	No	No	Yes	Yes	Yes	No	No	Yes	No	No	Yes
Dispensing acceptability	No	No	No	No	No	No	No	Yes	No	No	Yes
Greasiness/after-feel acceptability	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

*denotes comparative composition.

9 out of 11 Lesniak Example Compositions failed stability testing



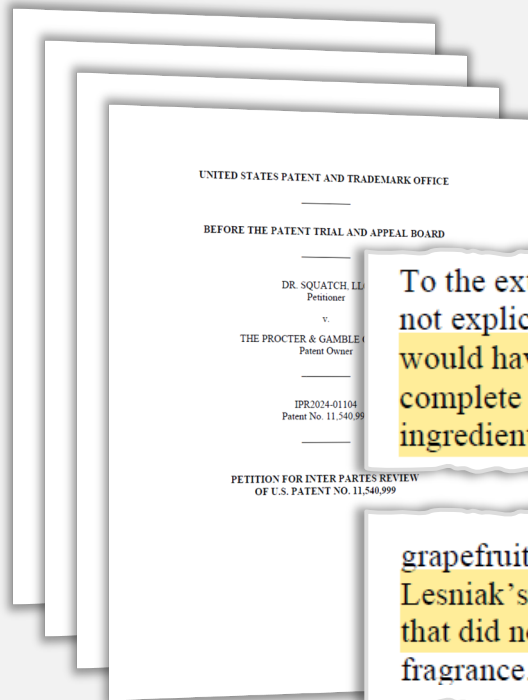
Lesniak Grounds: No Reason to Modify Lesniak

x	Lesniak does not disclose or enable aluminum-free deodorant sticks.
x	A POSA would have had no reason to modify Lesniak.
	No reference or combination teaches the claimed hardness ranges.
	A POSA would not have added Phinney's magnesium hydroxide to Lesniak.

A POSA Would Have Had No Reason To Modify Lesniak



Petitions



To the extent that Patent Owner argues that Lesniak does not explicitly articulate the negative limitation, a POSA would have understood Lesniak's formulations to be complete deodorant sticks that did not require additional ingredients such as an aluminum salt. *Id.* Indeed,

grapefruit oil.”). A POSA would have understood Lesniak's formulations to be complete deodorant sticks that did not require additional ingredients such as synthetic fragrance. *Id.*, 1:39-2:30, 3:43-4:21, 5:32-6:23, 8:31-9:59.

9:59. A POSA would have understood Lesniak's formulations to be complete deodorant sticks that did not require additional ingredients such as silicones. *Id.*

Petitioner's Expert: Dr. Bozena Michniak-Kohn

76. Moreover, in my opinion, a POSA would have understood Lesniak's formulations to be complete deodorant sticks that did not require additional ingredients such as an aluminum salt. *See id.* Indeed, Lesniak's formulations include

Q It's not your opinion that the formulations in Lesniak require a modification in order to be turned into a deodorant, right?

A No. They are deodorants.

Ex. 2012 at 59:4-7; '999 Pet. at 32-34; '915 Pet. at 31-32; '647 Pet. at 29, 35; '706 Pet. at 20-21; '999 POR at 31-32; '915 POR at 31-32; '647 POR at 32-33; '706 POR at 30-31

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

17



Lesniak Grounds: No Reference Or Combination Teaches Claimed Hardness

X	Lesniak does not disclose or enable aluminum-free deodorant sticks.
X	A POSA would have had no reason to modify Lesniak.
X	No reference or combination teaches the claimed hardness ranges.
	A POSA would not have added Phinney's magnesium hydroxide to Lesniak.

Each P&G Patent Claims A Hardness Range Measured Using A 50g Load



E.g., '999 Claim 1

1. A deodorant stick comprising:
 - a. at least one antimicrobial comprising magnesium hydroxide; and
 - b. a primary structurant with a melting point of at least about 50° C.; andsaid stick being free of an aluminum salt; and
said stick having a hardness from about 80 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

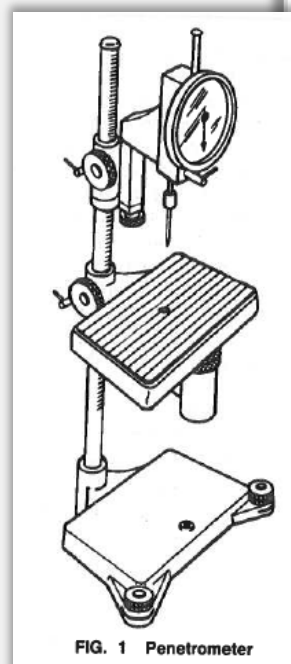


FIG. 1 Penetrometer

All P&G Patents' Hardness Testing Procedure

Periodic calibration should confirm:

Electronic Timer is correctly set. Verify against an independent stopwatch if unsure.

Shaft falls without visible signs of frictional resistance.

Ensure the total weight of the shaft and needle is 50±0.2 grams when the shaft is in free fall.

A needle or polished cone of precisely specified dimensions and weight is mounted on the bottom of a vertical rod in the test apparatus. The sample is prepared as specified in the method and positioned under the rod. The apparatus is adjusted so that the point of the needle or cone is just touching the top surface of the sample. Consistent positioning of the rod is critical to the measured penetration value. The rod is then released and allowed to travel downward, driven only by the weight of the needle (or cone) and the rod. Penetration is the tenths of a millimeter travelled following release.

No Reference Teaches the Claimed Hardness Ranges



Total Load
of 50g

P&G Patents' Hardness Testing Procedure

Ensure the total weight of the shaft and needle is ~~50~~±0.2 grams when the shaft is in free fall. Note: for modern, automated or digital systems this may be performed automatically and confirmed through annual calibration.

Total Load of
100g

Bianchi-518

Specifications:

Melting Point—USP Class II—Open capillary tube
136–142 F Penetration—ASTM D-1321 @ ~~100~~ 77/5 10–16.
Antiperspirant Material

ASTM D-1321 Standard

8.3 Place a 50-g weight above the penetrometer needle, making a total load of ~~100~~ ± 0.15 g for the needle and all

Ex. 1006 at 2:57-58; Ex. 2018 at 5-6; '999 Patent at 12:24-25; '915 Patent at 12:25-26; '647 Patent at 23:25-26; '706 Patent at 23:1-2; '999 POR at 39-42; '915 POR at 39-42; '647 POR at 34-37; '706 POR at 38-41

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

21

No Reference Teaches the Claimed Hardness Ranges



Dr. Robert Lochhead



"A POSA would have understood that Bianchi-518 required a 100-g weight needle assembly in order to penetrate the same or similar distance as a 50-g weight needle assembly."

"While there are no formulas to convert the results of one of these methods to the other, a POSA would have understood that the hardness range values disclosed in **Bianchi-518 indicates significantly harder sticks than [those] claimed in the [P&G patents].**"

Even If Bianchi-518 Teaches Hardness Range (It Does Not), It Achieves That Hardness Using Prohibited Ingredients



Bianchi-518

Ingredient	A	B	C	D	E	F	G	H
Cyclomethicone DC245	40.3	38.0	37	41.32	41.57	36.49	39	36
Phenyl Trimethicone DC556			4			2.0		2
Paraffin wax	16.92	9.25	18	16.05	16.05	9.37	17	12.08
SF1642		7.75		1		3.22		
Silicone wax								
Castorwax	6.85	10.0	3	5.98	5.98	10.13	7	10.98
PEG-8	2.85			4.5	4.2	4.63		4.94
Distearate								
Hydrogenated Vegetable oil							1	
Finsolv TN	1.55				1			2
PPG-14	10.03	12.5	12.5	10.4	10.4	12.66	10	12.5
Butyl ether								
AZG-370	20.00	22.0	22.0	20.0	20	20	22	20
Talc			1.5					
Fragrance	1.50	0.5	2.0	0.75	0.8	1.5	2	1.5

Ingredient	I	J	K	L	M	N
Cyclomethicone DC245	41.05	41.32	38.85	36.8	39.10	37.07
Paraffin wax	16.92	16.05	16.01	16.92	15.19	16.05
Castorwax	6.85	5.98	6.48	6.85	5.66	5.98
PPG-14 Butyl ether	10.03	10.40	9.49	10.03	9.84	10.40
Finsolv TN	1.55	—	1.47	1.55	—	—
PEG-8 Distearate	2.85	4.50	2.70	2.85	4.26	4.50
SF 1642	—	1.00	—	—	0.95	1.00
AZG-370	20.00	20.0	—	—	—	—
Q 5-7167	—	—	24.00	24.00	24.00	24.00
Fragrance	0.75	0.75	1.00	1.00	1.00	1.00

Ingredient	O	P	Q	R
DC 345	38.85	36.80	39.10	37.07
Paraffin wax	16.01	16.92	15.19	16.05
Castorwax	6.48	6.85	5.66	5.98
Fluid AP	9.49	10.03	9.84	10.40
Finsolv TN	1.47	1.55	—	—
Estol EO4DS3724	2.70	2.85	4.26	4.50
SF 1642	—	—	0.95	1.00
AZG-370	—	—	—	—
Q 5-7167	12.00	12.00	12.00	12.00
AZG 6313-15	12.00	12.00	12.00	12.00
Fragrance	1.00	1.00	1.00	1.00

Ingredient	S	T	U
CYCLOMETHICONE DC 245	34.8	37.8	36.7
PHENYL TRIMETHICONE DC556	—	—	—
Paraffin wax	8.5	9.25	9.05
SF 1642 Silicone Wax	1.5	1.5	1
Castor wax	10.5	6.85	8
PEG-8 Distearate	5.5	9.25	5
Hydrogenated Vegetable Oil	—	—	—
Finsolv TN	—	—	—
PPG-14 Butyl Ether	18.5	16	16.5
AZG-370	20	20	—
W ZR3OB DM CP5**	—	—	23
Talc	—	—	—
Fragrance	0.7	0.7	0.75

**Aluminum Zirconium Trichlorohydrate-Gly



Contains silicones
Contains aluminum
Hardness under 100g Test

Knowing The Hardness Goal Does Not Render Achieving It Obvious



Abbott Laby's v. Sandoz, Inc., 544 F.3d 1341, 1352 (Fed. Cir. 2008)



"[K]nowledge of the goal does not render its achievement obvious."

Dr. Robert Lochhead



- Instability of Lesniak's compositions would have prevented POSA from arriving at claimed hardness through routine optimization

'999 Ex. 2011 at ¶¶ 96-102; '915 Ex. 2011 at ¶¶ 90-96; '647 Ex. 2011 at ¶¶ 86-92 ; '706 Ex. 2011 at ¶¶ 94-100;
'999 POR at 45-46; '915 POR at 44-45; '647 POR at 39-40; '706 POR at 43-44

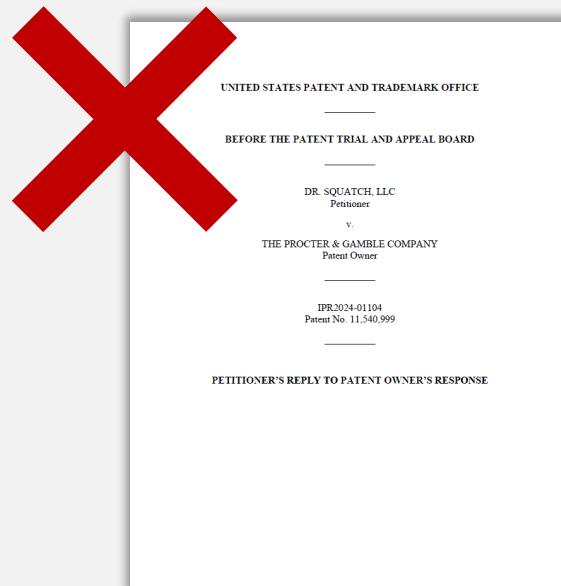
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

24

Dr. Squatch's Belated Testing Data Is Improper And Highly Suspect



1 *It belonged in the Petition and should not be considered on Reply.*



Dr. Squatch's expert even anticipated P&G's argument, yet Petitioner failed to substantively address the different testing methodologies in its *prima facie* case

¹³ While claim 1 refers to an ASTM-D 1321 needle, it does not expressly recite a particular hardness test. To the extent Patent Owner alleges that the claim requires a specific test, in my opinion, based on the references to ASTM D-1321 in the claims and specification of the '999 Patent, a POSA would understand that test to be the ASTM D-1321 test known in the art and referred to in Bianchi '518.

2 *It is unreliable, for many, independent problems and reasons...*

E.g., '999 Paper 22 at 4-5 (citing Ex. 1002 at n.13)

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

25

Problem #1: The Data Suffers From Outcome-Determinative Bias



- Highly Selective Set of Deodorant Sticks
- Undisclosed Ingredients / Formulations
- Not Representative of Prior Art

Problem #2: The Data Fails To Show A Scientifically Valid Correlation

1 Just a scattering of disparate data points

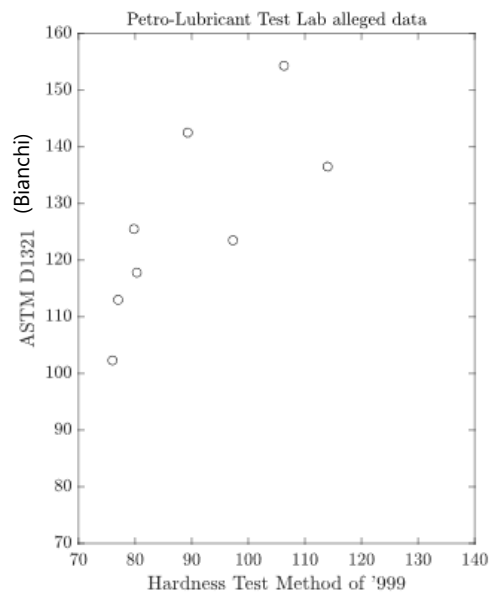


Figure 1. Alleged data provided by Petro-Lubricant for the '999 Hardness Test Method (horizontal axis) vs. those for ASTM D1321 (vertical axis).

2 Ordering from Hardest → Softest under each method is unpredictable and not linear

P&G Method		ASTM D1321
Toms	→	Toms
Native	→	Native
Papatui	→	Sephora
Sephora	→	Old Spice
Billie	→	Papatui
Old Spice	→	Lume
Dove	→	Billie
Lume	→	Dove

3 Sticks of similar hardness under one test have vastly different hardnesses under the other

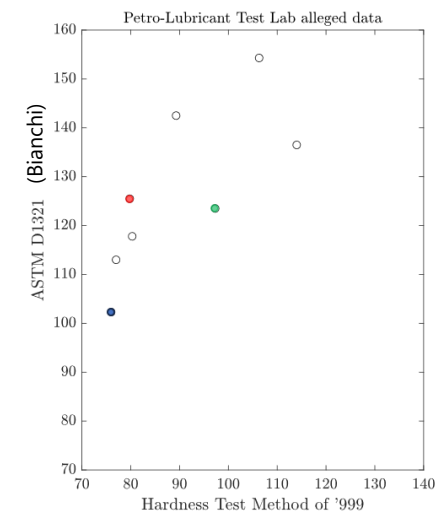


Figure 2. Toms (blue), Papatui (red), and Old Spice (green) points highlight one of several inconsistencies.

Problem #3: The Testing Methodology Is Suspect



Dr. Michniak-Kohn's Instructions for P&G Method:

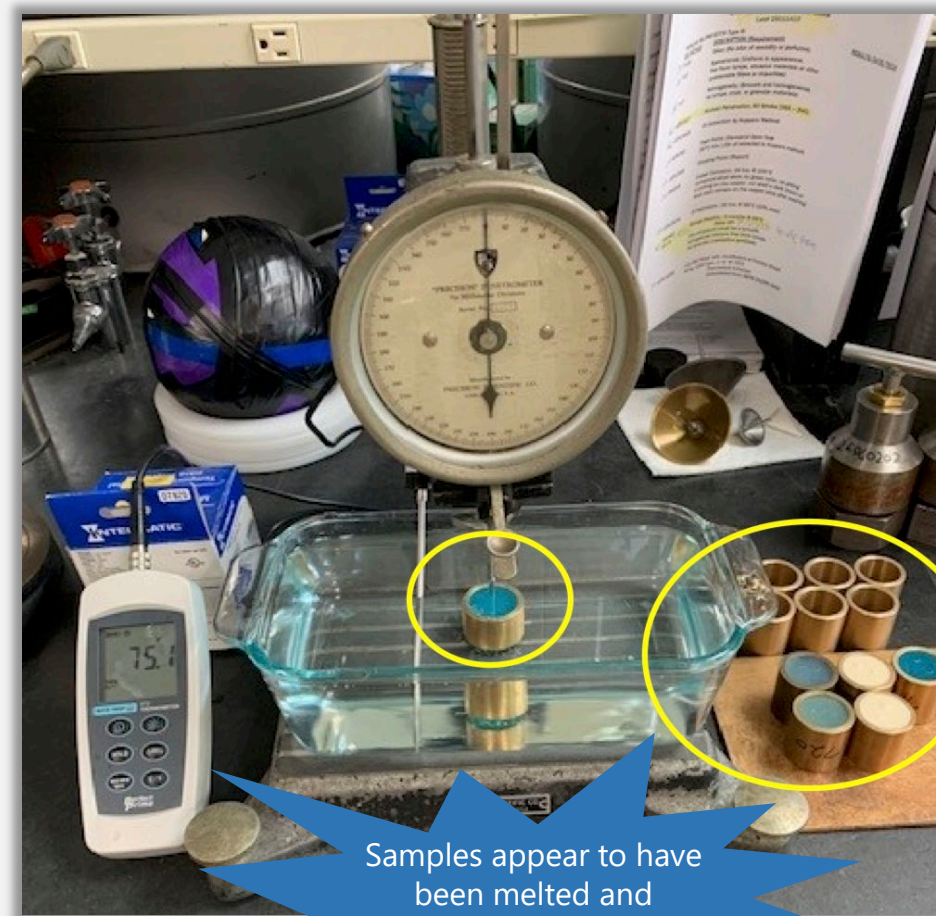
¹ The instructions for this test were taken from the specification of the '706 Patent (see Ex. 1001, 21:49-23:63) and put in a format that could be easily followed by the

¹ The instructions for this test were taken from the specification of the '647 Patent (see Ex. 1001, 22:8-23:16) and put in a format that could be easily followed by the

¹ The instructions for this test were taken from the specification of the '915 Patent (see Ex. 1001, 11:43-13:5) and put in a format that could be easily followed by the test

¹ The instructions for this test were taken from the specification of the '999 Patent (see Ex. 1001, 11:43-13:5) and put in a format that could be easily followed by the testing lab.

Do not remove deodorants from original containers or melt them. On a deodorant stick that has been at an ambient temperature of between 22° C. and 26° C. for at least 24 hours, slice off top ½ inch of product to achieve a flat surface with a wire cutter drawn across the upper lip of the canister.



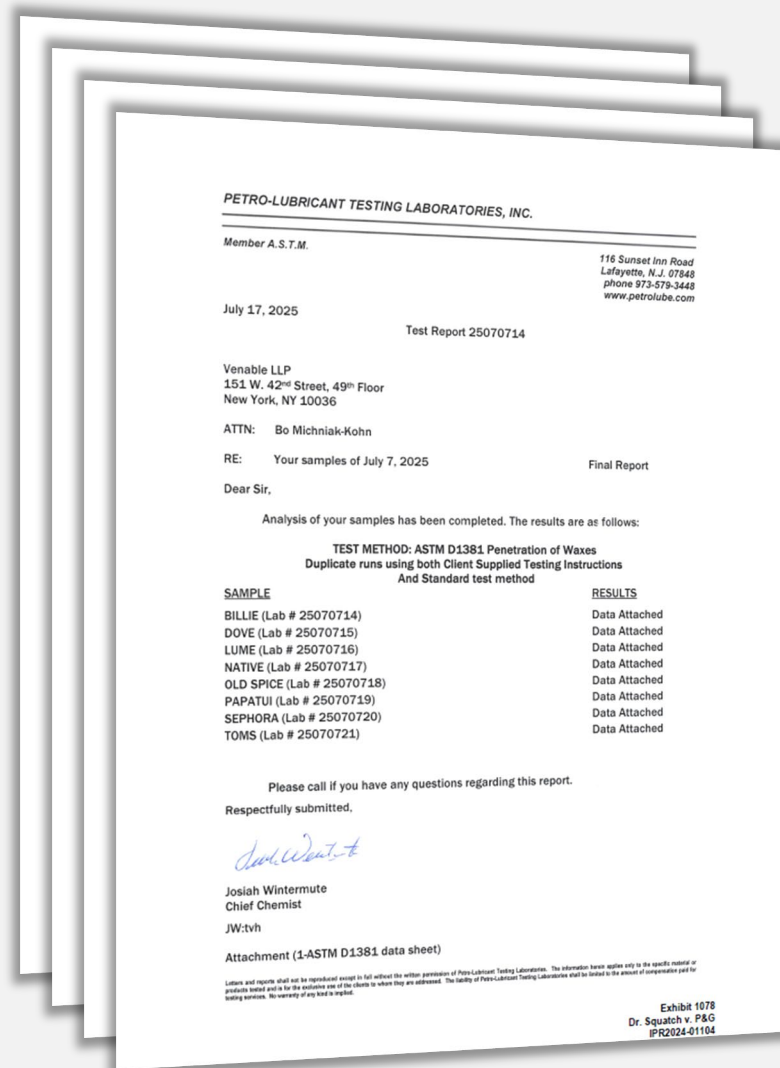
Samples appear to have been melted and poured into metal cups

Ex. 1086 at 3 n.1, Ex. A; Ex. 1079 at 4; '999 Sur-Reply at 13-14;
'915 Sur-Reply at 13-14; '647 Sur-Reply at 13-14; '706 Sur-Reply at 13-14

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Hardness Depends On Specific Product Formulations



Petitioner's belated testing shows that hardness varies depending upon the formulation



Lesniak Grounds: No Addition of $\text{Mg}(\text{OH})_2$

X	Lesniak does not disclose or enable aluminum-free deodorant sticks.
X	A POSA would have had no reason to modify Lesniak.
X	No reference or combination teaches the claimed hardness ranges.
X	A POSA would not have added Phinney's magnesium hydroxide to Lesniak.

All P&G Patents Have Magnesium Hydroxide Claims



'999

What is claimed is:

1. A deodorant stick comprising:

- a. at least one antimicrobial comprising magnesium hydroxide; and

'915

10. The deodorant stick of claim 1, wherein the antimicrobial comprises magnesium hydroxide.

'647

2. The deodorant stick of claim 1, wherein the primary antimicrobial is selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium carbonate hydroxide, magnesium hydroxide and magnesium carbonate hydroxide, partially carbonated magnesium hydroxide, and piroctone olamine.

'706

3. The deodorant stick of claim 1, wherein the primary antimicrobial is selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium carbonate hydroxide,

Problem #1: Lesniak & Phinney Describe Entirely Different Uses For Metal Oxides



Petitioner argues...

Ex. 1003, 3:39-4:21, 8:31-9:59). Lesniak teaches using zinc oxide (a known antimicrobial), while Phinney teaches that combining magnesium hydroxide with zinc oxide improves antimicrobial properties. Thus, a POSA would have been motivated to incorporate magnesium hydroxide into Lesniak's composition following Phinney's guidance, as this combination would improve odor protection while maintaining the "natural" composition intended by Lesniak.

Lesniak

13. The composition of claim 12, wherein the composition comprises a sun-protective level of zinc oxide particles.

VS.

Phinney

Deodorant formulations are provided. The formulations all commonly include magnesium oxide, zinc oxide and as a disinfecting agent, potassium chloride and/or potassium sulphate. The combination provides long lasting odor protection since the disinfectant destroys odor causing microorganisms.

Ex. 1003 at cl. 13; Ex. 1004 at Abstract; '999 Pet. at 27; '915 Pet. at 35; '647 Pet. at 38; '706 Pet. at 24; '999 POR at 33-34; '915 POR at 33-34; '647 POR at 42-43; '706 POR at 32

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Problem #2: Phinney's Magnesium Hydroxide is Part of a Multi-Ingredient Combination



Phinney

Deodorant formulations are provided. The formulations all commonly include magnesium oxide, zinc oxide and as a disinfecting agent, potassium chloride and/or potassium sulphate. The combination provides long lasting odor protection since the disinfectant destroys odor causing microorganisms.

It has now surprisingly been found that incorporation of a disinfectant with the platform of magnesium oxide and zinc oxide base has particular efficacy in destroying the microorganisms causing the odour. It is believed that the previously

Dr. Bozena Michniak-Kohn



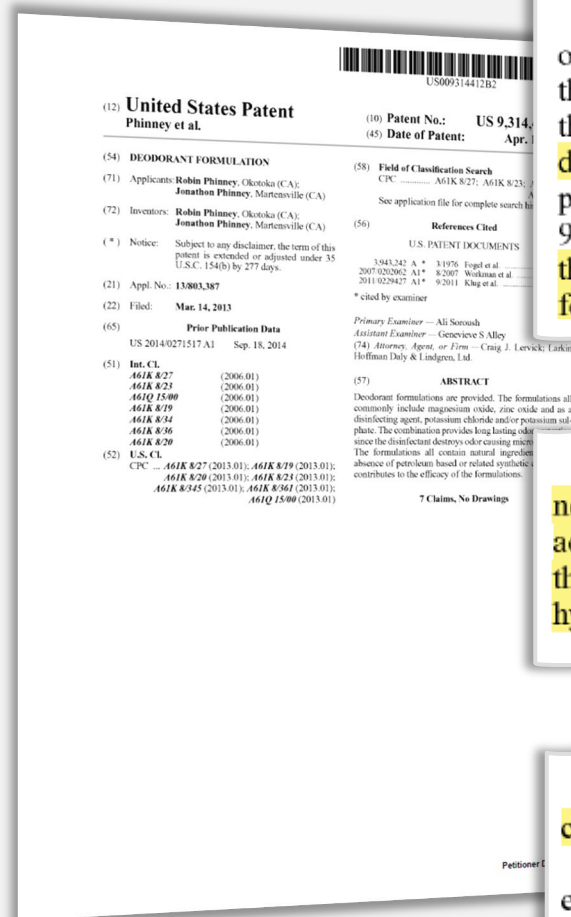
Q: And so none of these compositions that are disclosed in Phinney contain magnesium hydroxide alone without the other two elements that we've discussed, right?

A: No, because I guess his invention was the -- the actual combination that he was looking at.

Problem #3: Phinney Combines Magnesium Hydroxide With Zinc Hydroxide, Not Zinc Oxide



Phinney



The **magnesium hydroxide** incorporated in a formulation of the invention for controlling perspiration odour such that the formulation has a pH of about 9 to about 10.5. Preferably, the pH of the formulation is about 10. The **formulations discussed herein include zinc hydroxide**. This combination provides for a pH of about 7.5 to about 10.5, preferably about 9 to about 10. **The zinc hydroxide typically lowers the pH of the magnesium hydroxide-perspiration odour-controlling formulation of the invention.**

In respect of greater detail regarding the formulation, **magnesium oxide and zinc oxide must have high reactivity and are added to water along with potassium sulfate and mixed until the magnesium oxide and zinc oxide are converted to their hydroxides.** This generally occurs within an hour. The polyols

The magnesium oxide and zinc oxide must be completely converted to their hydroxides or skin irritation will occur.

The magnesium oxide and zinc oxide ratio has been found effective at 3:1 molar.

Ex. 1004 at 5:52-60, 8:22-26, 8:40-41; '999 POR at 34-36;
'915 POR at 33-36; '647 POR at 43-45; '706 POR at 32-34

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Problem #3: Phinney Combines Magnesium Hydroxide With Zinc Hydroxide, Not Zinc Oxide



Dr. Robert Lochhead



- A POSA would have needed to add significant water to Lesniak to convert zinc oxide to zinc hydroxide, which would fundamentally alter Lesniak's composition
- Lesniak may not form a stick at all under such conditions

Phinney

In respect of greater detail regarding the formulation, magnesium oxide and zinc oxide must have high reactivity and are added to water along with potassium sulfate and mixed until the magnesium oxide and zinc oxide are converted to their hydroxides. This generally occurs within an hour. The polyols ...

The magnesium oxide and zinc oxide must be completely converted to their hydroxides or skin irritation will occur.

amount between 4% and 8% by weight of said formulation; water in an amount between 18% and 22% by weight; and a balance of a cosmetically acceptable filler.

VS.

Lesniak

(57)

ABSTRACT

An anhydrous personal care composition, comprising: (a) 45 to 60 weight % of at least one ester, selected from (i) triglycerides, (ii) diglycerides, (iii) monoglycerides, (iv) monoesters of diols, and (v) diesters of diols; (b) a first wax having a melting point of from 35° C. to 72° C. present in an amount of 5 to 25 weight %; (c) a second wax having a melting point of 73 to 90° C. present in an amount of 0.5 to 15 weight %; and (d) at least one plant oil having a saponification value of from 150 to 275 mg KOH/g present in an amount of 5 to 35 weight.

Problem #4: Lesniak Uses Far More Zinc Oxide Than Phinney's Zinc Hydroxide



Lesniak

(e) zinc oxide, which is present in a concentration of 11 to 15 weight % for the diaper cream or 15 to 22 weight % for the sunscreen, based on the total weight of the composition.

Phinney

zinc hydroxide in an amount from 0.5% to 1.5% by weight of said formulation;
magnesium hydroxide in an amount from 1.0% to 2.5% by weight of said formulation;

Dr. Bozena Michniak-Kohn



Q: And Phinney teaches you that you should have **more** magnesium hydroxide than zinc hydroxide, right?

A: Yes, I believe there was more effect if you did a mix, yes. . . .

Q: And I think in column 8, line 42 they say it should be a ratio of 3 to 1, right?

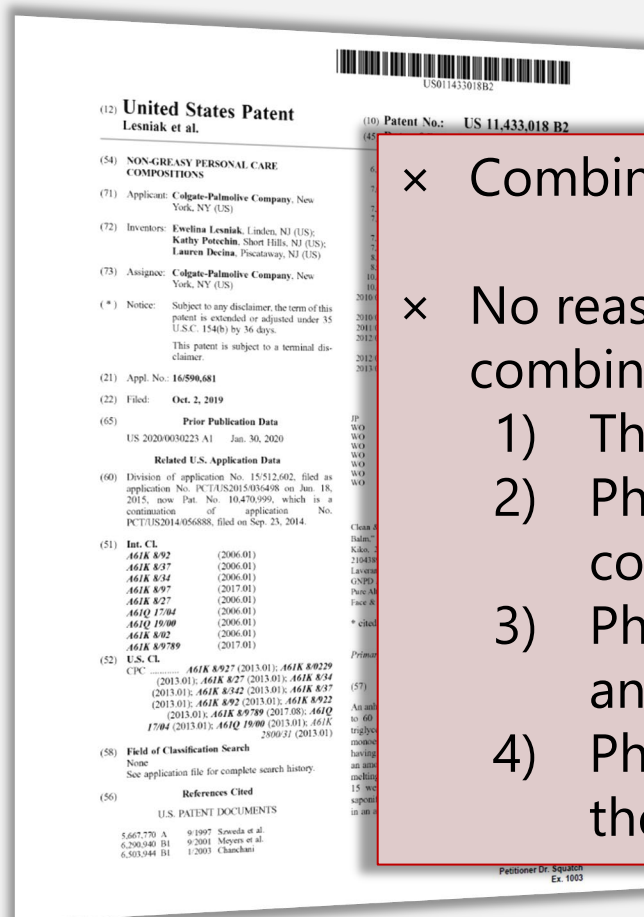
A: Yes, correct.

In Summary... A POSA Would Not Have Combined Lesniak And Phinney

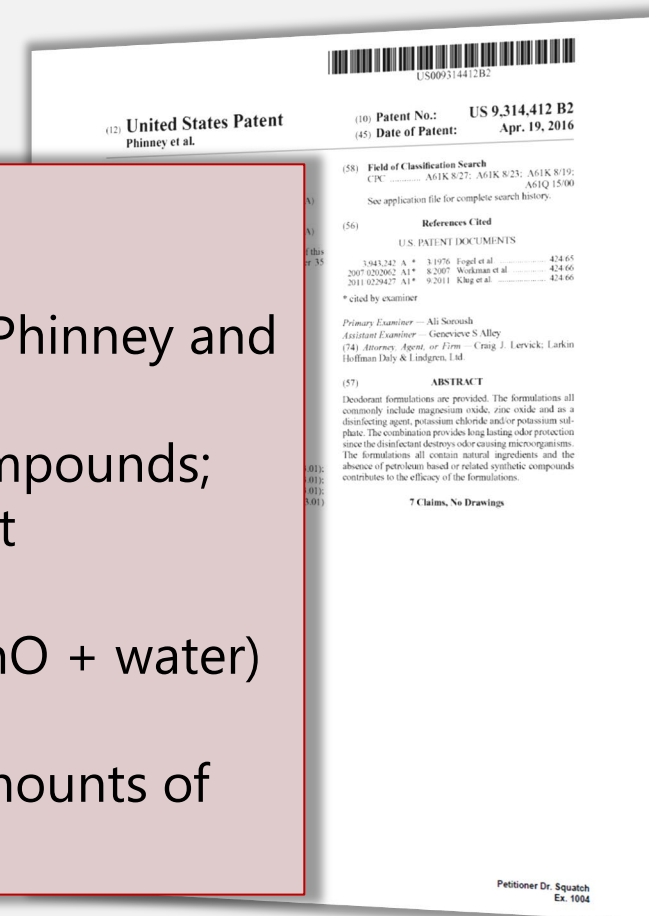


Lesniak

Phinney



- × Combination based entirely on hindsight.
- × No reason to pluck **magnesium hydroxide** out of Phinney and combine with Lesniak's **zinc oxide** where:
 - 1) The references teach different uses for the compounds;
 - 2) Phinney teaches $Mg(OH)_2$ in a multi-ingredient combination;
 - 3) Phinney's combination uses zinc hydroxide (ZnO + water) and Lesniak is anhydrous;
 - 4) Phinney and Lesniak call for vastly different amounts of their metal oxides/hydroxides.



Common Issues with Lesniak – Summary



These Failures Of Petitioner's Lesniak Grounds Apply Across All Four IPRs . . .

- Petitioner's Lesniak Grounds fail across the board for each of the reasons just shown:

X	Lesniak does not disclose or enable aluminum-free deodorant sticks.
X	A POSA would have had no reason to modify Lesniak.
X	No reference or combination teaches the claimed hardness ranges.
X	A POSA would not have added Phinney's magnesium hydroxide to Lesniak.

. . . And The Grounds Fall Short For Even More IPR-Specific Reasons

Additional IPR-Specific Failures Of Lesniak Grounds



X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
X	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
X	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706



Lesniak Grounds: No Silicone-Free Stick of Claimed Hardness

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
	Lesniak does not disclose a stable starch-containing stick.	'999 '706
	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

Petitioner's Combination Fails To Teach A Deodorant Stick Substantially Free of Silicones With The Proper Hardness ('999)



'999 Patent

What is claimed is:

1. A deodorant stick comprising:
 - a. at least one antimicrobial comprising magnesium hydroxide; and
 - b. a primary structurant with a melting point of at least about 50° C.; andsaid stick being free of an aluminum salt; and said stick having a hardness from about 80 mm*10 to about 140 mm*10, as measured by penetration with ASTM D-1321 needle.

5. The deodorant stick of any claim 1, wherein the deodorant stick is substantially free of silicones.

6. The deodorant stick of claim 1, wherein the deodorant stick comprises from 0% to 5% silicones.



No silicones
No aluminum
Hardness under 50g Test

Bianchi-518

The present invention is directed to a low residue antiperspirant composition substantially free of water and long chain fatty alcohols which comprises:

- (a) from about 30% to about 50% of a volatile silicone;
- (b) from about 5% to about 30% of a particulate antiperspirant active;
- (c) from about 2% to about 12% of hydrogenated castor oil;
- (d) from about 8% to about 28% of paraffin; and
- (e) from about 10% to about 25% of an emollient;



Contains silicones
Contains aluminum
Hardness under 100g Test



Lesniak Grounds: No Stable Starch- Containing Stick

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

Lesniak Does Not Disclose A Stable Starch-Containing Stick ('999, '706)



'999 Patent

16. The deodorant stick of claim 1, further comprising tapioca starch.

'706 Patent

16. A deodorant stick comprising:
a. at least about 25% by weight liquid triglyceride;
b. a starch;
c. stearyl alcohol;
d. magnesium hydroxide;
e. beeswax;
f. shea butter;
g. coconut oil;
h. triethyl citrate;
i. jojoba seed oil; and
j. sunflower seed oil;
said deodorant stick being free of an aluminum salt.



- Lesniak's only starch composition failed across the board on **stability**, "whitening" acceptability, and dispensing acceptability

Lesniak

TABLE 2

Sunscreens.											
	Composition#										
	1*	2*	3*	4*	5*	6*	7*	8	9*	10*	11
	Weight %										
Zinc Oxide	20	20	20	20	20	20	20	20	20	20	20
Sunflower oil	57	30	10	10	10	10	10	10	10	10	12.5
Caprylic/Capric Triglyceride	5	35	55	53	53	54	54	53	53	50	52
Beeswax	13	15	15	17	17	15	15	15	15	15	13.5
Shea butter	5	0	0	0	0	0	0	0	0	0	0
CastorWax MP80 hydrogenated castor oil	0	0	0	0	0	0	0	2	0	0	2
Tapioca starch	0	0	0	0	0	0	1	0	0	0	0
Cetyl Alcohol	0	0	0	0	0	0	0	0	2	0	0
Thickener silica	0	0	0	0	0	1	0	0	0	0	0
Natural jelly SP511	0	0	0	0	0	0	0	0	0	5	0
Total	100	100	100	100	100	100	100	100	100	100	100
Freeze/thaw stability	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass	F/T 3 Pass
High temp. stability (49° C.)	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Pass
“Whitening” acceptability	No	No	Yes	Yes	Yes	No	No	Yes	No	No	Yes
Dispensing acceptability	No	No	No	No	No	No	No	Yes	No	No	Yes
Greasiness/after-feel acceptability	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

*denotes comparative composition.

*denotes comparative composition.



Lesniak Grounds: No Addition of Baking Soda As An Antimicrobial

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
X	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

A POSA Would Not Have Added Baking Soda As An Antimicrobial ('999, '915, '706)



'999 Claim 8

8. The deodorant stick of claim 1, further comprising **an additional antimicrobial comprising baking soda**.

'915 Claim 9

9. The deodorant stick of claim 1, wherein **the antimicrobial comprises baking soda**.

'706 Claim 4

4. The deodorant stick of claim 1, **further comprising at least one additional antimicrobial** different from the primary antimicrobial, selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium hydroxide and magnesium carbonate hydroxide, partially carbonated magnesium hydroxide, piroctone olamine, potassium carbonate, potassium bicarbonate, sodium carbonate, sodium sesquicarbonate, **baking soda**, hexamidine, zinc carbonate, thymol, polyvinyl formate, salicylic acid, niacinamide, magnesium carbonate hydroxide, cinnamon essential oil, cinnamon bark essential oil, cinnamic aldehyde, and combinations thereof.

Dr. Bozena Michniak-Kohn



"In my opinion, a POSA would have understood Lesniak's formulations to be complete deodorant sticks that **did not require additional ingredients such as baking soda**."

Petitions

1:39-2:30, 3:43-4:21, 5:32-6:23, 8:31-9:59. A POSA would have understood Lesniak's formulations to be complete deodorant sticks that **did not require additional ingredients such as baking soda**. *Id.* Moreover, a POSA

A POSA would have understood Lesniak's formulations as modified by Phinney to be complete deodorant sticks that **did not require additional ingredients such as baking soda**. *Id.* Moreover, a POSA would have understood that

'999 Pet. at 33; '915 Pet. at 31; '706 Pet. at 21; '999 Ex. 1002 at ¶ 80; '915 Ex. 1002 at ¶ 71; '706 Ex. 1002 at ¶ 69; '999 POR at 50-51; '915 POR at 45-47; '706 POR at 44-46

A POSA Would Not Have Added Baking Soda As An Antimicrobial ('999, '915, '706)



'999 Petition at 37

33. Accordingly, it would be obvious to add baking soda to the composition of Lesniak in view of Phinney and Bianchi '518 to provide additional odor protection,

'999 Petition at 47

Native's deodorant stick composition. While Native teaches a deodorant stick composition comprising an antimicrobial (baking soda), a POSA would have known that deodorants containing baking soda could cause skin irritation for some users. A POSA would have looked to publications in the field of deodorants describing natural antimicrobials that were not known to cause skin irritation, and would seek

***Petitioner's contradictions
are rooted in hindsight***



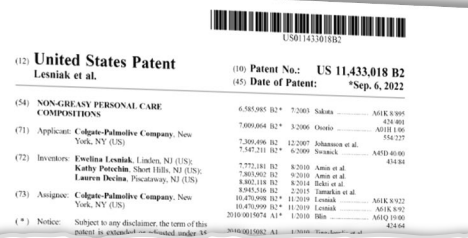
Lesniak Grounds: No Reformulation of Primary Structurant

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
X	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

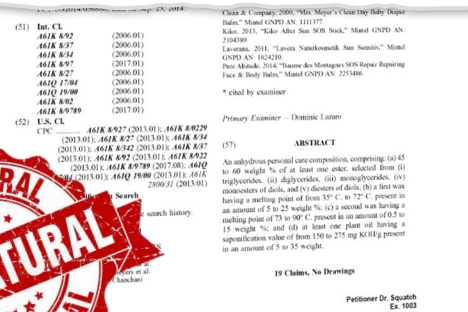
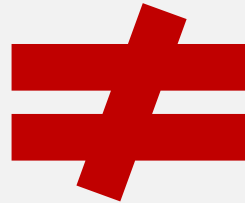
No Motivation To Combine Bianchi-254's Volatile Silicone Sticks with Lesniak



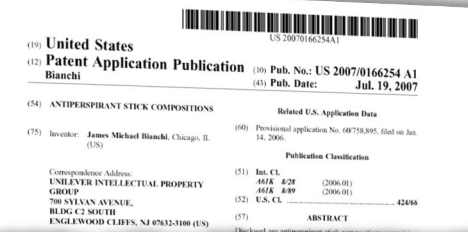
Lesniak



temperatures). It would also be desirable to formulate such compositions from all-natural ingredients (i.e. “100% natural” compositions).



Bianchi-254



[0042] In the practice of this invention, the volatile silicone oil is present in the stick composition in an amount of from 20 to 40 wt. %, preferably 25 to 35 wt. %. In at least

A POSA Would Not Have Reformulated Lesniak To Include Bianchi-254's Primary Structurant ('999, '706)



'999 Claim 14

14. The deodorant stick of claim 1, wherein the **primary structurant is stearyl alcohol**.

'706 Claims 16 & 20

16. A deodorant stick comprising:
a. at least about 25% by weight liquid triglyceride;
b. a starch;
c. **stearyl alcohol**;
d. magnesium hydroxide;
e. beeswax;
f. shea butter;
g. coconut oil;
h. triethyl citrate;
i. jojoba seed oil; and
j. sunflower seed oil;
said deodorant stick being free of an aluminum salt.

20. A deodorant stick comprising:
a. at least about 25% by weight liquid triglyceride;
b. **stearyl alcohol**;
c. magnesium hydroxide;
d. beeswax;
e. shea butter;
f. coconut oil;
g. triethyl citrate;
h. jojoba seed oil; and
i. sunflower seed oil;
said deodorant stick being free of an aluminum salt.

Petitioner's complete overhaul of Lesniak yet again evidences hindsight.

Dr. Robert Lochhead



- Lesniak describes fragile compositions that can become unstable with even slight ingredient changes
- A POSA would not have reasonably expected success in completely reformulating Lesniak to make stearyl alcohol the structurant "present in the greatest amount" of the stick



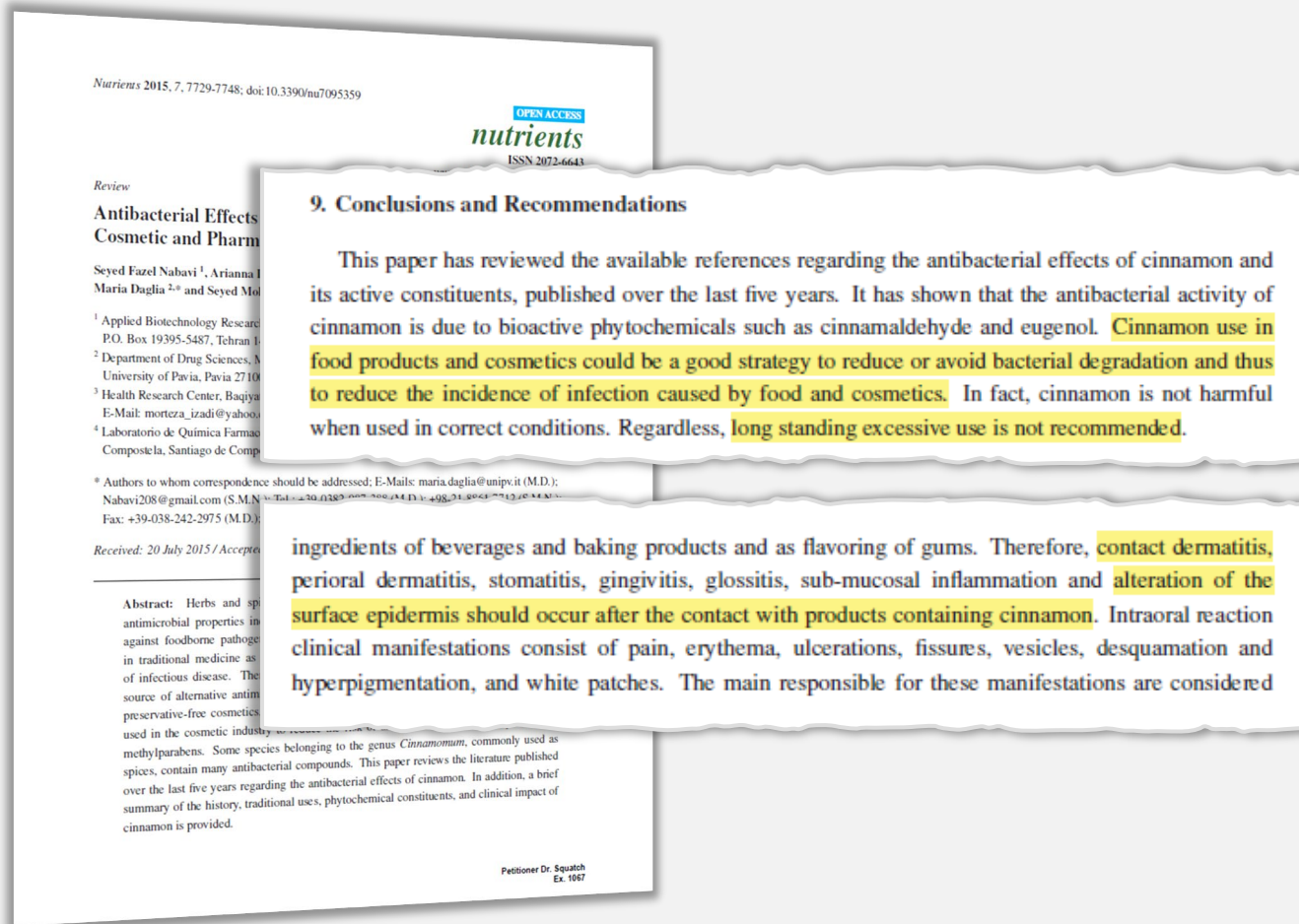
Lesniak Grounds: No Addition of Cinnamon

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
X	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
X	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

A POSA Would Not Have Modified Lesniak With Nabavi To Include Cinnamon ('647)



Nabavi



Teaches cinnamon use to prevent infection caused by food/product degradation, *not* to combat odor

Warns against using cinnamon in topicals due to contact dermatitis



Lesniak Grounds: No Addition of Triethyl Citrate

X	The Lesniak combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	Lesniak does not disclose a stable starch-containing stick.	'999 '706
X	A POSA would not have added baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have reformulated Lesniak to include Bianchi-254's primary structurant.	'999 '706
X	A POSA would not have modified Lesniak with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Lesniak for triethyl citrate.	'706

A POSA Would Not Have Been Motivated To Combine Lesniak With Anconi's Triethyl Citrate



1 Different stick technologies

Lesniak

An **anhydrous** personal care composition, comprising: (a) 45 to 60 weight % of at least **one ester**, selected from (i) **triglycerides**, (ii) **diglycerides**, (iii) **monoglycerides**, (iv) **monoesters of diols**, and (v) **diesters of diols**; (b) a **first wax** having a melting point of from 35° C. to 72° C. present in an amount of 5 to 25 weight %; (c) **a second wax** having a melting point of 73 to 90° C. present in an amount of 0.5 to 15 weight %; and (d) at least one plant oil having a saponification value of from 150 to 275 mg KOH/g present in an amount of 5 to 35 weight.

Anconi

Accordingly, the composition may comprise for example mixtures of waxes and oils and solutions based on **aqueous, propylene glycol and/or alcohol mixtures solidified for example by sodium stearate**. Preferably, the solidifying agent is selected from the group consisting of a wax and sodium stearate.

2 Complex balancing act

Lesniak

TABLE 2

Sunscreens.

	Composition#										
	1*	2*	3*	4*	5*	6*	7*	8	9*	10*	11
	Weight %										
Zinc Oxide	20	20	20	20	20	20	20	20	20	20	20
Sunflower oil	57	30	10	10	10	10	10	10	10	10	12.5
Caprylic/Capric Triglyceride	5	35	55	53	53	54	54	53	53	50	52
Beeswax	13	15	15	17	17	15	15	15	15	15	13.5
Shea butter	5	0	0	0	0	0	0	0	0	0	0
CastorWax MP80 hydrogenated castor oil	0	0	0	0	0	0	0	2	0	0	2
Tapioca starch	0	0	0	0	0	0	1	0	0	0	0
Cetyl Alcohol	0	0	0	0	0	0	0	0	2	0	0
Thickener silica	0	0	0	0	0	1	0	0	0	0	0
Natural jelly SP511	0	0	0	0	0	0	0	0	0	5	0
Total	100	100	100	100	100	100	100	100	100	100	100
Freeze/thaw stability	F/T	F/T	F/T	F/T	F/T	F/T	F/T	F/T	F/T	F/T	F/T
	3	3	3	3	3	3	3	3	3	3	3
High temp. stability (49° C.)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Pass

Anconi

[0052] Sticks and solids are really complex chemical systems requiring a balance of ingredients designed to make the most of several performance factors including payout, slip or lubricity, chemical stability, softening temperature, and of course, efficacy.



Native Grounds

'999 Grounds 4-5; '915 Grounds 5-6; '647 Grounds 5-7; '706 Grounds 6-8

Native Grounds Lack Merit: Failings Across All IPRs



X	A POSA would have had no reason to modify Native.
X	A POSA would have had no reason to combine Bianchi-254 with Native.
X	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
X	Petitioner's hardness argument is again wholly deficient.
X	A POSA would not have combined Easy Homemade and Native.



Native Grounds: No Reason to Modify Native

X	A POSA would have had no reason to modify Native.
	A POSA would have had no reason to combine Bianchi-254 with Native.
	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
	Petitioner's hardness argument is again wholly deficient.
	A POSA would not have combined Easy Homemade and Native.

A POSA Would Have Had No Reason to Modify Native



Native



★★★★★

"Finally! A natural deodorant that works like it's supposed to! I put it on in the morning and never think about it again. It lasts all day and it feels so clean."



★★★★★

"I never thought about natural deodorant until I got pregnant. I didn't want to put all the toxins that ordinary deodorants have on my body, so I looked around and found Native. It's wonderful! I love it so much."



★★★★★

"I really didn't like the sticky feel of my Degree deodorant, but I didn't know what to do. I finally found Native about a month ago. It took about a week for my body to detox from Degree. After that, it was smooth sailing! I love it!"



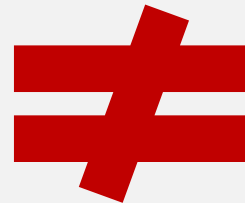
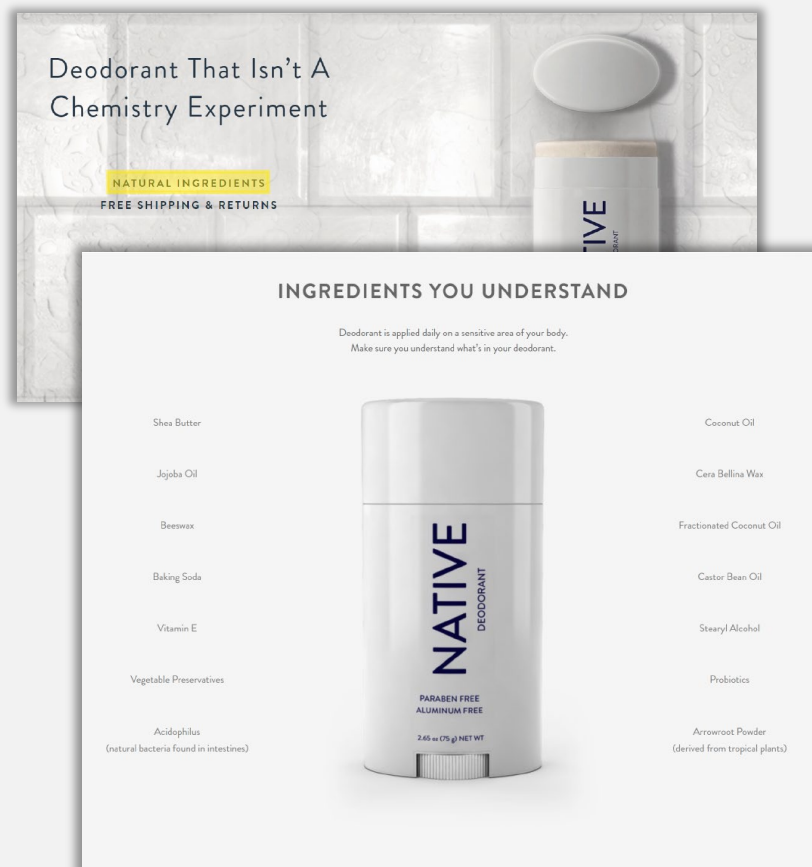
Native Grounds: No Reason to Combine Bianchi- 254 with Native

X	A POSA would have had no reason to modify Native.
X	A POSA would have had no reason to combine Bianchi-254 with Native.
	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
	Petitioner's hardness argument is again wholly deficient.
	A POSA would not have combined Easy Homemade and Native.

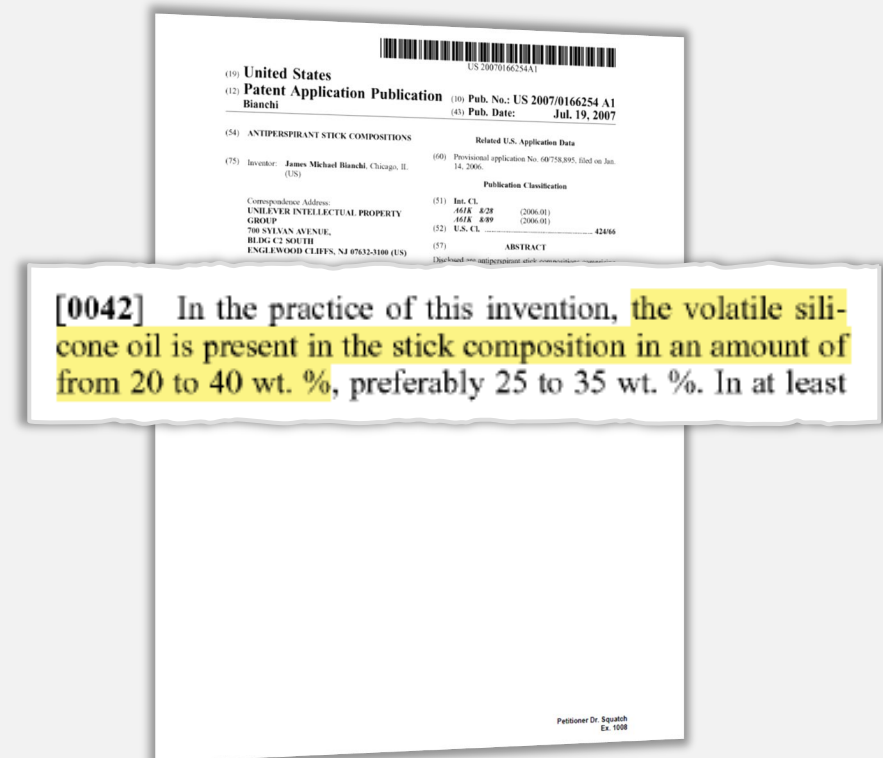
No Motivation To Combine Bianchi-254's Volatile Silicone Sticks with Native



Native



Bianchi-254





Native Grounds: No Expectation of Success with Bianchi-254's Weight Percentages

X	A POSA would have had no reason to modify Native.
X	A POSA would have had no reason to combine Bianchi-254 with Native.
X	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
	Petitioner's hardness argument is again wholly deficient.
	A POSA would not have combined Easy Homemade and Native.

No Motivation Or Expectation Of Success Implementing Bianchi-254's Weight Percentages



(19) United States
(12) Patent Application Publication
Bianchi
(10) Pub. No.: US 2007/0166254 A1
(45) Pub. Date: Jul. 19, 2007
(54) ANTIPERSPIRANT STICK COMPOSITIONS
Related U.S. Application Data

Bianchi-254

COMPONENT (wt. %)	FORMULATION NO.										
	1	2	3	4	5	6	7	8	9	10	11
Talc				3.5	2						2.5
AAZG (17.8%)	24	20	20	20	20	20	24	24	24	24	24
Fragrance	1	1	1	1	1	1	1	1	1	1	1

What is claimed is:

1. An antiperspirant stick composition comprising:

a) from 15 to 30 wt. % antiperspirant active;

b) carrier oil comprising:

i) volatile silicone oil, the volatile silicone oil being present in the stick composition in an amount of from 20 to 40 wt. %;

Requires large
amounts of aluminum
+ volatile silicones

Petitioner Dr. Squatch
Ex. 1008



Native Grounds: No Disclosure of Claimed Hardness

X	A POSA would have had no reason to modify Native.
X	A POSA would have had no reason to combine Bianchi-254 with Native.
X	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
X	Petitioner's hardness argument is again wholly deficient.
	A POSA would not have combined Easy Homemade and Native.

No Reference Teaches the Claimed Hardness Ranges



Total Load
of 50g

P&G Patents' Hardness Testing Procedure

Ensure the total weight of the shaft and needle is ~~50~~0.2 grams when the shaft is in free fall. Note: for modern, automated or digital systems this may be performed automatically and confirmed through annual calibration.

Total Load of
100g

Bianchi-254

Hardness Method

[0117] Stick hardness is measured using a penetrometer (model HPT 7138 from Precision) equipped with a 2.5 gm brass/steel tapered needle (DIN 51-579) on sticks that have been allowed to equilibrate for approximately 8-24 hours at a temperature of 26.7° C. Measurements are taken from 6

DIN 51-579 Standard

The weight of the test needle should be 2.5 g ± 0.05 g and that of the guide rod 97.5 g ± 0.1 g.

Ex. 1008 at [0117]; Ex. 2019 at 2; '999 Patent at 12:24-25; '915 Patent at 12:25-26; '647 Patent at 23:25-26; '706 Patent at 21:1-2; '999 POR at 55-57; '915 POR at 51-52; '647 POR at 54-55; '706 POR at 54-56

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

63

No Reference Teaches the Claimed Hardness Ranges



Dr. Robert Lochhead



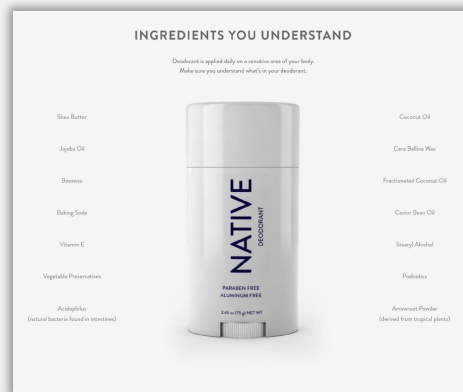
"[I]f the Bianchi compositions were tested using the method of the [P&G patents] (i.e., with a 50-g total needle assembly, as opposed to a 100-g one), the hardness values would be much lower than the values as disclosed. Thus, a POSA would have understood that Bianchi-254's desired range actually indicates *significantly harder* sticks than that claimed in the [P&G] patents."

Even If Bianchi-254 Teaches Hardness Range, Petitioner's Argument Still Fails



1

Native is silent on hardness and specific formulation



2

Bianchi-254's hardness comes from prohibited ingredients

Bianchi-254

TABLE 1

Antiperspirant Formulations

COMPONENT (wt. %)	1	2
Castor Wax (mp 80° C.)	3.5	4
Stearyl Alcohol (mp 60°)	18	18
Polyethylene (400 mw; mp 82-84° C.)	0.3	0.5
Silica	0.3	
PPG-14 Butyl Ether	20	5
C12-C15 Alkyl Benzoate (Finsolv TN)	5	20
Dimethicone, 50 cst; (Dow Corning 200)	1	1
Sunflower Oil	0.5	0.5
Talc		
AAZG (17.8%)	24	20
Fragrance	1	1
BHT (butylated hydroxytoluene)	0.05	0.05
Cyclomethicone (Silicone 245; Dow Corning)	26.35	29.95

TABLE 5

Antiperspirant Stick Formulations

COMPONENT (wt. %)	FORMULATION NO.							
	12	13	14	15	16	17	18	19
Castor Wax (mp 80° C.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Stearyl Alcohol (mp 60°)	18	18	18	18	18	18	18	18
Polyethylene (400 mw; mp 82-84° C.)	1	1	1	1	1	1	1	1
Stearth 100	0.5	0.5	0.5	0.5	—	—	0.5	—
PPG-14 Butyl Ether	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
C12-C15 Alkyl Benzoate (Finsolv TN)	15	15	15	15	15	15	15	15
Dimethicone, 50 cst (Dow Corning 200)	1	1	1	1	1	1	1	1
Sunflower Oil	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
AAZG (17.8%)	20	20	20	20	30	24	20	24
Fragrance	1.25	1.25	1.25	1.25	1	1	1.25	1
Fragrance Encapsulate							1.5	1.5
BHT (butylated hydroxytoluene)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Cyclomethicone (Silicone 245; Dow Corning)	28.7	27.7	28.2	29.7	20.45	26.45	28.2	24.95
Cyclodextrin					1.5			

3

POSA would not have expected success

Abbott Laby's v. Sandoz, Inc., 544 F.3d 1341, 1352 (Fed. Cir. 2008)



"[K]nowledge of the goal does not render its achievement obvious."

Requires large amounts of aluminum + volatile silicones

Petitioner Appears to Admit Native is Too Hard



E.g., '999 Petition:

Celsius”; and (3) “a hardness from about 80 mm*10 to about 140 mm*10.” The '999 Patent expressly acknowledged the pre-existence of similar deodorant sticks. In fact, it admits that a then-“currently marketed” aluminum-free deodorant stick (described as a “comparative” example in the specification) contained many ingredients recited in claim 1. **This comparative example substantially matches the prior art published ingredient list for the Native deodorant applied below.**

'999 Patent:

TABLE 1

	Comparative Formula 1	Comparative Formula 2	Inventive Example 1	Inventive Example 2	Inventive Example 3	Inventive Example 4	Inventive Example 5
Hardness (Penetration mm * 10)	63	56	97	90	117	86	85
Caprylic/Capric Triglyceride	34.15	31.15	43.4	44.7	42.7	46.9	46.15
Arrowroot Powder	23	23	19	23	23	19	
Stearyl Alcohol	12	12	11.5	10.7	10.7		
Ozokerite					1.5	11	11.75
Castor Wax	3	4	3	3	3		
Baking Soda	12	12	12	12	6	6	
Magnesium Hydroxide							
Shea Butter	6						
Coconut Oil	4.75						
Polyglycerol-3	2.5						
Beeswax							
Jobba Esters	1						
70							
Glyceryl	1						
Caprylate (and)							
Glyceryl							
Undecylenate							
Perfumes	0.6						
Cyclodextrin							
Tapioca Starch							

may lead to deodorant sticks that are very hard. For example, a currently marketed product, **Comparative Formula 1** below, has 34.15% liquid triglyceride, along with a number of structurants, **resulting in a very hard stick, scoring 63 on a needle penetration test under ASTM D-1321 (as described herein).** So while Comparative Formula 1 uses consumer-preferred natural ingredients, it does not necessarily provide a good consumer experience when used, given its hardness. **Comparative Formula 2** contains even higher levels of structurants, **resulting in a harder stick with an even lower hardness score.** In comparison, Inventive Examples 1-5, while comprising consumer-preferred natural ingredients, have higher hardness scores, meaning they are softer products.



Native Grounds: No Addition of $\text{Mg}(\text{OH})_2$

X	A POSA would have had no reason to modify Native.
X	A POSA would have had no reason to combine Bianchi-254 with Native.
X	A POSA would not have implemented Bianchi-254's weight percentages nor had any expectation of success in doing so.
X	Petitioner's hardness argument is again wholly deficient.
X	A POSA would not have combined Easy Homemade and Native.

All Patents Have Magnesium Hydroxide Claims



'999

What is claimed is:

1. A deodorant stick comprising:

- a. at least one antimicrobial comprising magnesium hydroxide; and

'915

10. The deodorant stick of claim 1, wherein the antimicrobial comprises magnesium hydroxide.

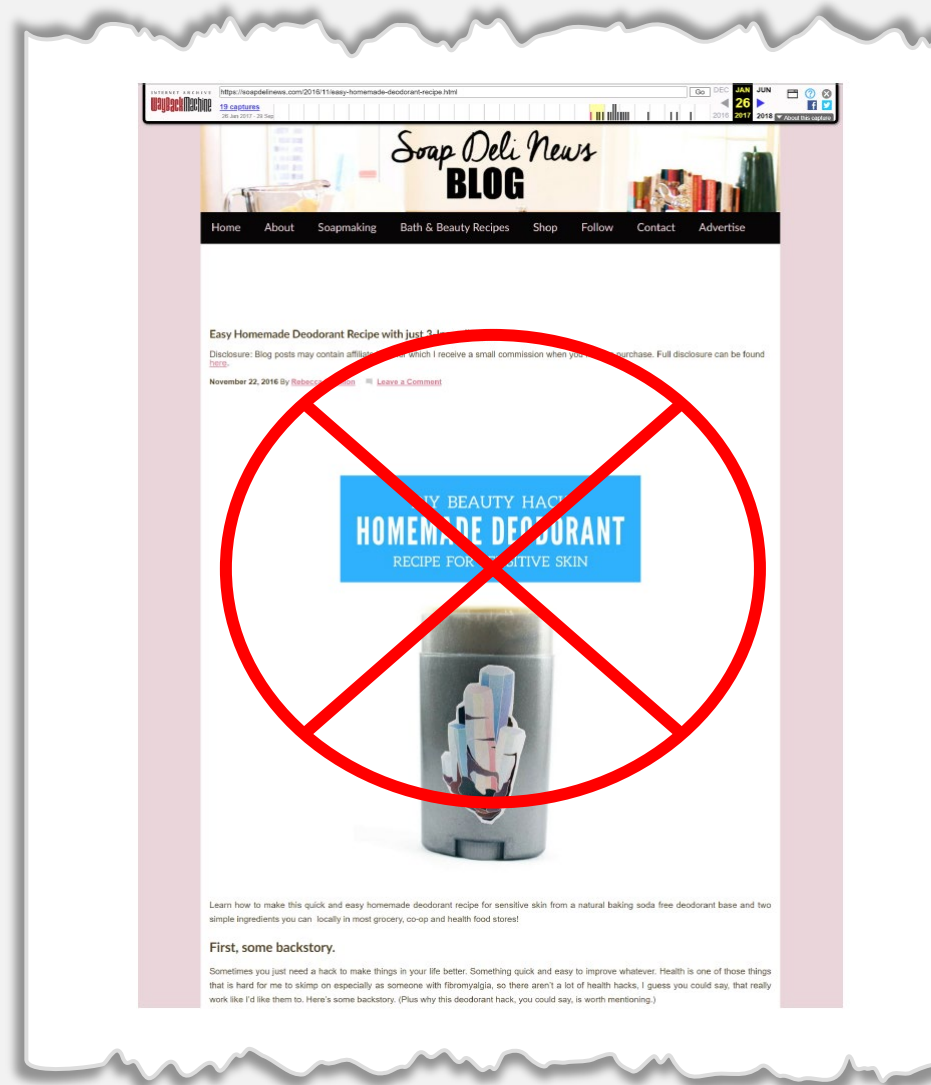
'647

2. The deodorant stick of claim 1, wherein the primary antimicrobial is selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium carbonate hydroxide, magnesium hydroxide and magnesium carbonate hydroxide, partially carbonated magnesium hydroxide, and piroctone olamine.

'706

3. The deodorant stick of claim 1, wherein the primary antimicrobial is selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium carbonate hydroxide,

Petitioner Has Not Shown Easy Homemade Was Publicly Accessible



Ex. 1009; '999 POR at 60-63; '915 POR at 55-59; '647 POR at 58-62; '706 POR at 58-62

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

69

Easy Homemade Does Not Teach Removal And Substitution of Baking Soda



Easy Homemade

(I was able to find a good baking soda free melt and pour deodorant base with shea

Dr. Bozena Michniak-Kohn



Q: Yes. Do you know what natural deodorant base [Easy Homemade]'s starting with?

A: At this stage I'm not sure.

...

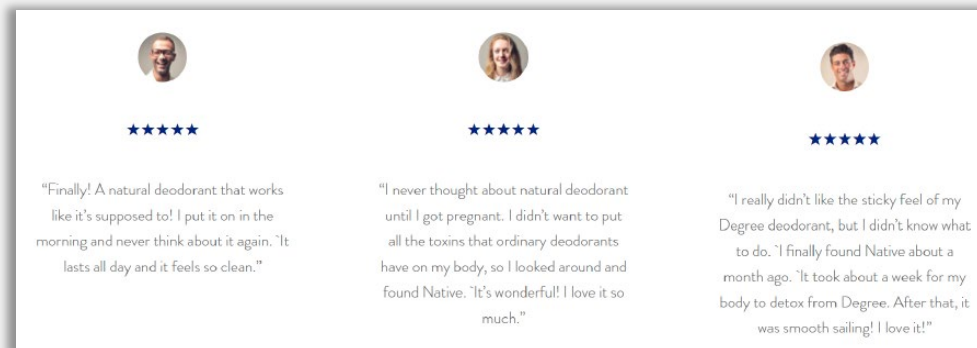
Q: And [Easy Homemade] doesn't talk about removing any ingredients from these sticks; she's talking about adding ingredients, right?

A: That is correct.

POSA Had No Need to Modify Native's Baking Soda



Native's reviews are positive, don't mention skin irritation . . .



. . . And Native already contains shea butter and coconut oil for irritation



Additional IPR-Specific Failures Of Native Grounds



X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
X	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
X	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

'999 POR at 50-64; '915 POR at 47-61; '647 POR at 50-64; '706 POR at 51-67

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

72



Native Grounds: No Silicone-free Stick with Claimed Hardness

X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
X	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
X	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

Petitioner's Combination Fails To Teach A Deodorant Stick Substantially Free of Silicones With The Proper Hardness ('999)



'999 Patent

5. The deodorant stick of any claim 1, wherein the deodorant stick is substantially free of silicones.

6. The deodorant stick of claim 1, wherein the deodorant stick comprises from 0% to 5% silicones.



No silicones
No aluminum
Hardness under 50g Test

Bianchi-254

TABLE 1

COMPONENT (wt. %)	Antiperspirant Stick Formulations	
	1	2
Castor Wax (mp 80° C.)	3.5	4
Stearyl Alcohol (mp 60°)	18	18
Polyethylene (400 mw; mp 82-84° C.)	0.3	0.5
Silica	0.3	
PPG-14 Butyl Ether (Finsolv TN)	20	5
Dimethicone, 50 cst; (Dow Corning 200)	1	1
Sunflower Oil	0.5	0.5
Talc		
AAZG (17.8%)	24	20
Fragrance	1	1
BHT (butylated hydroxytoluene)	0.05	0.05
Cyclomethicone; (Silicone 245; Dow Corning)	26.35	29.95

TABLE 5

COMPONENT (wt. %)	Antiperspirant Stick Formulations								
	FORMULATION NO.								
	12	13	14	15	16	17	18	19	
Castor Wax (mp 80° C.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Stearyl Alcohol (mp 60°)	18	18	18	18	18	18	18	18	18
Polyethylene (400 mw; mp 82-84° C.)	1	1	1	1	1	1	1	1	1
Stearth 100	0.5	0.5	0.5	0.5	—	—	0.5	—	—
PPG-14 Butyl Ether (Finsolv TN)	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
C12-C15 Alkyl Benzoate (Finsolv TN)	15	15	15	15	15	15	15	15	15
Dimethicone, 50 cst (Dow Corning 200)	1	1	1	1	1	1	1	1	1
Sunflower Oil	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
AAZG (17.8%)	20	20	20	20	30	24	20	24	24
Fragrance	1.25	1.25	1.25	1.25	1	1	1.25	1	1
Fragrance Encapsulate							1.5	1.5	
BHT (butylated hydroxytoluene)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Cyclomethicone; (Silicone 245; Dow Corning)	28.7	27.7	28.2	29.7	20.45	26.45	28.2	24.95	
Cyclodextrin	1	2	1.5						



Contains silicones
Contains aluminum
Hardness under 100g Test



Native Grounds: No Addition and Removal of Baking Soda

X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
	A POSA would not have added tapioca starch.	'999
	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

The '999, '915, and '706 Patents Contain Baking Soda Claims



'999

8. The deodorant stick of claim 1, further comprising an additional antimicrobial comprising baking soda.

'915

9. The deodorant stick of claim 1, wherein the antimicrobial comprises baking soda.

'706

4. The deodorant stick of claim 1, further comprising at least one additional antimicrobial different from the primary antimicrobial, selected from the group consisting of beryllium carbonate, magnesium carbonate, calcium carbonate, magnesium hydroxide, magnesium hydroxide and magnesium carbonate hydroxide, partially carbonated magnesium hydroxide, piroctone olamine, potassium carbonate, potassium bicarbonate, sodium carbonate, sodium sesquicarbonate, baking soda, hexamidine, zinc carbonate, thymol, polyvinyl formate, salicylic acid, niacinamide, magnesium carbonate hydroxide, cinnamon essential oil, cinnamon bark essential oil, cinnamic aldehyde, and combinations thereof.

A POSA Would Not Have Both Added and Removed Baking Soda ('999, '915, & '706)



E.g., '999 Petition: "Motivated to Remove Baking Soda"

It also would have been obvious to apply the teachings of Easy Homemade to Native's deodorant stick composition. While Native teaches a deodorant stick composition comprising an antimicrobial (baking soda), a POSA would have known that deodorants containing baking soda could cause skin irritation for some users. A

deodorant compositions, and it works just as well. *Id.*, 6, 9. Accordingly, it would be obvious to use magnesium hydroxide as a substitute to baking soda in the composition of Native, as taught by Easy Homemade.

E.g., '999 Petition: "Motivated to Use Baking Soda"

often use multiple antimicrobials. While baking soda was known to cause skin irritation for some users (*see claim 1(a) analysis, above*), a POSA would have been motivated to use baking soda as an additional antimicrobial to enhance odor protection. Ex. 1002, ¶¶146-147.



Native Grounds: No Addition of Tapioca Starch

X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

A POSA Would Not Have Added Tapioca Starch to Native Because It Already Contains Arrowroot Powder ('999)



'999 Petition

Id. It explains that starch can be used advantageously as a filler to absorb moisture and sweat in deodorants, and that ~~tapioca starch~~ is specifically preferred. *Id.*,

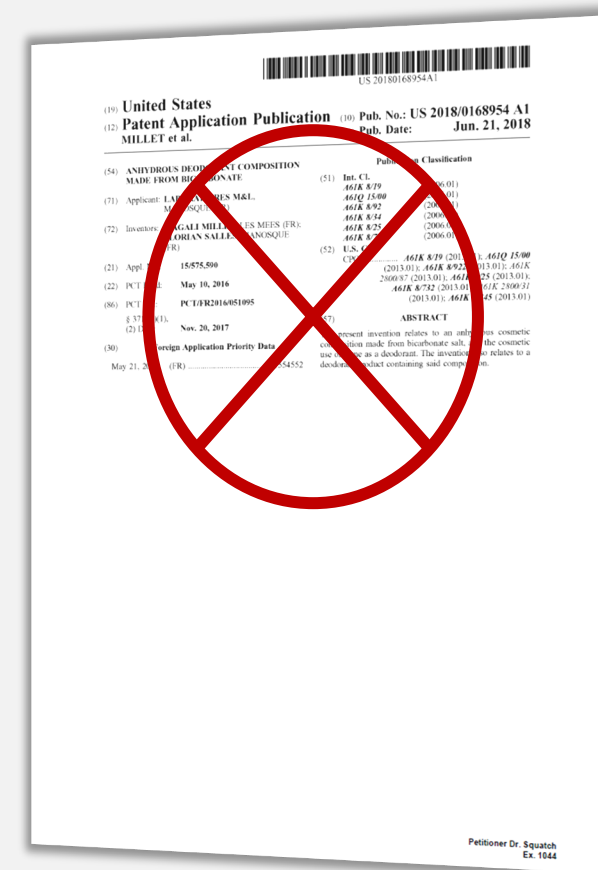
Native

Ingredients

Caprylic/capric triglyceride (which is a fancy way of saying fractionated coconut oil), arrowroot powder, stearyl alcohol, baking soda, shea butter, coconut oil, hydrogenated castor oil, polyglycerol-3 beeswax (which is a fancy way of saying cera bellina wax), jojoba esters, tocopherol (which is a fancy way of saying Vitamin E), *L. acidophilus* (which is a natural bacteria found in your body already), dextrose, glyceryl caprylate, glyceryl undecylenate.

Our scented deodorants include oils. Lavender & Rose is made with Lavender Oil and Geranium Oil. Eucalyptus & Mint is made with Eucalyptus Oil and Spearmint Oil. Due to FDA recommendations, we use the term "fragrance" to refer to these oils.

Millet





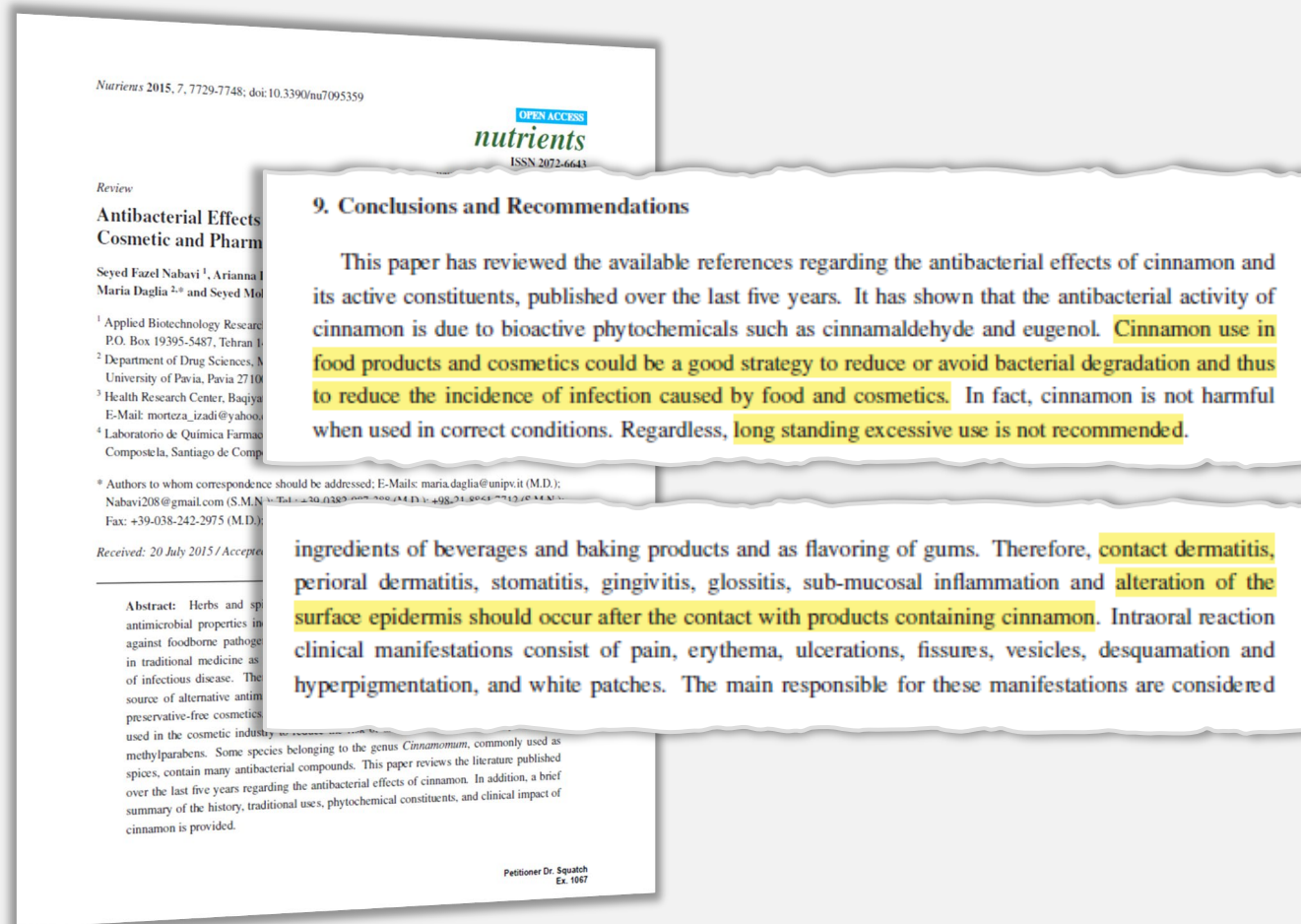
Native Grounds: No Addition of Cinnamon

X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
X	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

A POSA Would Not Have Modified Native With Nabavi To Include Cinnamon ('647)



Nabavi



Teaches cinnamon use to prevent infection caused by food/product degradation, *not* to combat odor

Warns against using cinnamon in topicals due to contact dermatitis



Native Grounds: No Addition of Triethyl Citrate

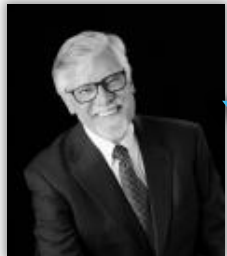
X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
X	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

A POSA Would Not Have Been Motivated To Combine Native With Anconi's Triethyl Citrate ('706)



1 Different stick technologies

Dr. Robert Lochhead



"[A] POSA would have understood that, based on **Native's** ingredient list, it is an anhydrous, wax-structured semisolid with a **triglyceride-based carrier system**, like Lesniak, **whereas Anconi is an aqueous propylene glycol- and/or alcohol-based mixture** solidified, for example, by sodium stearate."

Anconi

Accordingly, the composition may comprise for example mixtures of waxes and oils and solutions based on aqueous, propylene glycol and/or alcohol mixtures solidified for example by sodium stearate. Preferably, the solidifying agent is selected from the group consisting of a wax and sodium stearate.

2 Complex balancing act

Anconi

[0052] Sticks and solids are really complex chemical systems requiring a balance of ingredients designed to make the most of several performance factors including payout, slip or lubricity, chemical stability, softening temperature, and of course, efficacy.



Native Grounds: No Addition of Sunflower Seed Oil

X	The Native combinations do not teach a stick substantially free of silicones with the proper hardness.	'999
X	A POSA would not have both added and removed baking soda as an antimicrobial.	'999 '915 '706
X	A POSA would not have added tapioca starch.	'999
X	A POSA would not have modified Native with Nabavi to include cinnamon.	'647
X	A POSA would not have been motivated to combine Anconi and Native for triethyl citrate.	'706
X	A POSA would not have been motivated to combine Stoia with Native for sunflower seed oil.	'706

A POSA Would Not Have Modified Native with Stoia to Include Sunflower Seed Oil ('706)



'706 Petition

Native also discloses the use of tocopherol (Vitamin E) and various plant oils or plant oil-derived compounds in a deodorant stick. Stoia teaches that tocopherols are “abundant in sunflower seeds” and have antioxidant properties. Ex. 1058, 45. Stoia further describes the use of sunflower seed oil as an emollient in cosmetic compositions, characterizing it as “an effective, low-cost, and natural alternative”

✓ Native already contained tocopherols

Native’s deodorant stick based on Stoia because Native’s stick already contained plant oil or plant oil-derived emollients, such as coconut oil, which could simply be

✓ Native already contained emollients



Squatch-Sturgis Ground

'706 Ground 9

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE 86

Failures of Squatch-Sturgis Ground - Summary



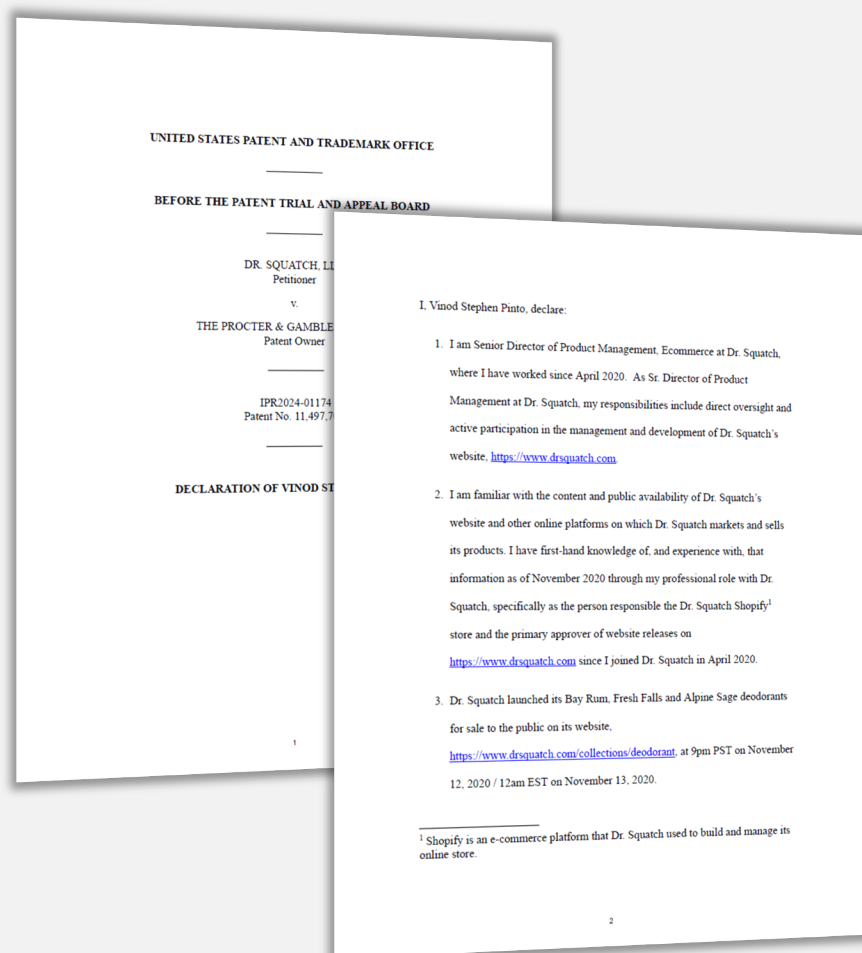
X	Squatch is not a publicly accessible "printed publication."
X	Sturgis is not prior art.
X	Petitioner's motivation to combine argument is based in hindsight.



Squatch-Sturgis Ground: Squatch Not “Printed Publication”

X	Squatch is not a publicly accessible “printed publication.”
	Sturgis is not prior art.
	Petitioner’s motivation to combine argument is based in hindsight.

Squatch Is Not A Publicly Accessible “Printed Publication”



Biased employee declaration



Does **NOT** show Squatch images on November 2020 webpage

Squatch Is Not A Publicly Accessible “Printed Publication”



Hulu, LLC v. Sound View Innovations, LLC, IPR2018-01039, Paper 29 at 16 (P.T.A.B. Dec. 20, 2019).



“[T]he burden is on the petitioner to identify with particularity evidence sufficient to establish that the reference was publicly accessible before the critical date of the challenged patent, and therefore that there is a reasonable likelihood that it qualifies as a printed publication.”



Squatch-Sturgis Ground: Sturgis Not Prior Art

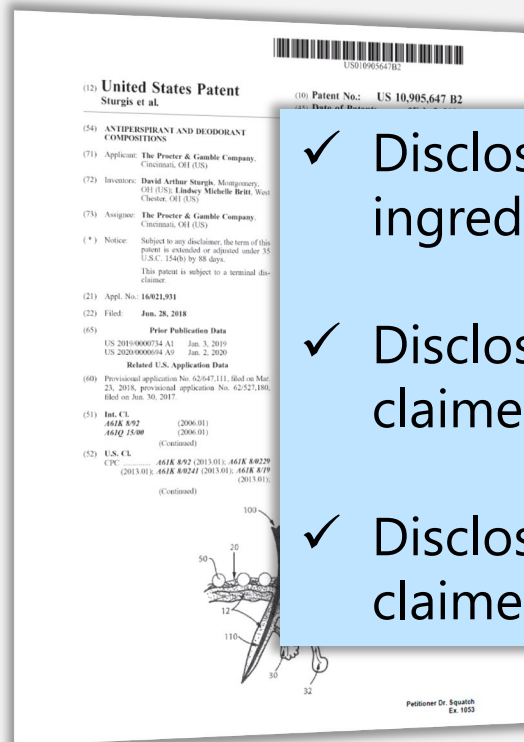
X	Squatch is not a “printed publication.”
X	Sturgis is not prior art.
	Petitioner’s motivation to combine argument is based in hindsight.

Sturgis Is Not Prior Art

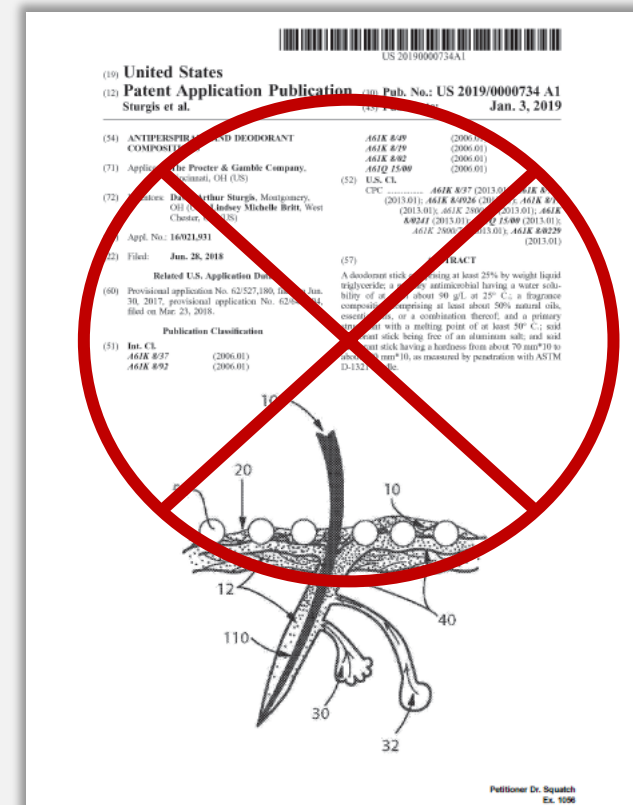
Claims 16-23 have written description support in the June 2017 priority application



Sturgis is not prior art



- ✓ Discloses every claimed ingredient
- ✓ Discloses method of making claimed deodorant sticks
- ✓ Discloses reasons for choosing claimed ingredients



'706 POR at 69-71; '706 Sur-Reply at 26-27; Ex. 1053 at 8:38-9:20, 9:21-52, 10:34-59, 11:1-22; 16:1-22, 18:40-51, 19:49-20:22, Tables 2-4, Fig. 3; Ex. 1081, 63:3-72:24; Ex. 1056

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

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Sturgis Is Not Prior Art



Union Oil Co. of California v. Atl. Richfield Co., 208 F.3d 989, 997 (Fed. Cir. 2000)

"[T]his court's case law require only sufficient description to show one of skill in the refining art that the inventor possessed the claimed invention at the time of filing."



Squatch-Sturgis Ground: No Motivation to Combine Showing

X	Squatch is not a “printed publication.”
X	Sturgis is not prior art.
X	Petitioner’s motivation to combine argument is based in hindsight.

Petitioner's Motivation To Combine Showing Is Conclusory And Hindsight-Based

