

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DR. SQUATCH, LLC
Petitioner

v.

THE PROCTER & GAMBLE COMPANY
Patent Owner

IPR2024-01105
Patent No. 10,966,915

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

TABLE OF CONTENTS

	Page(s)
I. INTRODUCTION	1
II. LESNIAK RENDERS UNPATENTABLE ALL CHALLENGED CLAIMS	1
A. Lesniak Discloses a Deodorant Stick (Grounds 1-4).....	3
1. Antiperspirants Are Deodorants and—According to P&G Itself—Do Not Require Aluminum.	3
2. Lesniak’s Other Applications Are Irrelevant.....	5
3. P&G’s Enablement Arguments Fail Because Lesniak Overcame Stability Issues and the Challenged Claims Have No Stability Limitations.	6
B. A POSA Would Have Been Motivated to Improve/Modify Lesniak’s Deodorant Sticks Despite Their Completeness (Grounds 1-4).....	10
C. A POSA Would Have Been Motivated to Add Magnesium Hydroxide to Lesniak’s Compositions with a Reasonable Expectation of Success Because Phinney Teaches the Benefits of Magnesium Hydroxide in Deodorants (Ground 2).....	10
D. Bianchi-518 Teaches the Claimed Hardness Range and Renders Obvious the Challenged Claims in Combination with Lesniak (Ground 4).	12
E. A POSA Would Have Been Motivated to Add Baking Soda to Lesniak’s Compositions, as a Combination Does Not Need to Be the Best Possible Option (Ground 3).	19
III. NATIVE RENDERS OBVIOUS THE CHALLENGED CLAIMS	20
A. A POSA Would Have Been Motivated to Modify Native, and P&G’s Arguments to the Contrary Contravene Supreme Court Precedent and P&G’s Own Actions (Ground 5-6).	20

B.	Bianchi-254 Teaches the Claimed Hardness Range and Renders Obvious the Challenged Claims in Combination with Native (Ground 5).....	21
C.	A POSA Would Have Been Motivated to Follow Bianchi-254’s Guidance on the Quantitative Amounts of Ingredients in Deodorants with a Reasonable Expectation of Success (Ground 5).	21
D.	A POSA Would Have Been Motivated to Add Magnesium Hydroxide to Native with a Reasonable Expectation of Success Based on Easy Homemade’s Teaching of the Substitution of Magnesium Hydroxide for Baking Soda (Ground 6).....	23
E.	A POSA Did Not Need a Motivation to “Add” Baking Soda to Native Because Native Already Contained Baking Soda (Grounds 5-6).....	25
IV.	CONCLUSION.....	26

TABLE OF AUTHORITIES

Page(s)

Cases

<i>Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC</i> , 825 F.3d 1373 (Fed. Cir. 2016)	17, 21
<i>Almirall, LLC v. Amneal Pharms. LLC</i> , 28 F.4th 265 (Fed. Cir. 2022)	4, 10
<i>In re Antor Media Corp.</i> , 689 F.3d 1282 (Fed. Cir. 2012)	6, 8, 9
<i>In re Boesch</i> , 617 F.2d 272 (C.C.P.A. 1980)	16
<i>Conopco Inc. v. The Procter & Gamble Co.</i> , IPR2013-00505, Paper No. 69 (PTAB Feb. 10, 2015), <i>aff'd</i> , No. 2015-1680 (Fed. Cir. Aug. 8, 2016)	3, 10, 14, 17
<i>DyStar Testilfarben GmbH v. C.H. Patrick Co.</i> , 464 F.3d 1356 (Fed. Cir. 2006)	18
<i>EI DuPont de Nemours & Co. v. Synvina CV</i> , 904 F.3d 996 (Fed. Cir. 2018)	15
<i>In re Etter</i> , 756 F.2d 852 (Fed. Cir. 1985) (en banc)	21
<i>First Solar Inc. v. Rovshan Sade</i> , IPR2023-00827, Paper 13 (Nov. 16, 2023)	23, 24
<i>In re Fulton</i> , 391 F.3d 1195 (Fed. Cir. 2004)	10, 17
<i>In re Geisler</i> , 116 F.3d 1465 (Fed. Cir. 1997)	16
<i>Intel Corp. v. PACT XPP Schweiz AG</i> , 61 F.4th 1373 (Fed. Cir. 2023)	22

<i>IQRIS Techs. LLC v. Point Blank Enters.,</i> 130 F.4th 998 (Fed. Cir. 2025)	12
<i>KSR Int’l Co. v. Teleflex Inc.,</i> 550 U.S. 398 (2007).....	18, 22
<i>In re Kulling,</i> 897 F.2d 1147 (Fed. Cir. 1990)	16
<i>LG Elecs., Inc. v. Multimedia Techs. Pte. Ltd.,</i> IPR2024-00353, Paper No. 28 (P.T.A.B. May 12, 2025)	23
<i>Persion Pharms. LLC v. Alvogen Malta Ops. Ltd.,</i> 945 F.3d 1184 (Fed. Cir. 2019)	4
<i>Phillips v. AWH Corp.,</i> 415 F.3d 1303 (Fed. Cir. 2005) (en banc)	12
<i>Raytheon Techs. Corp. v. General Elec. Co.,</i> 993 F.3d 1374 (Fed. Cir. 2021)	8
<i>Voter Verified, Inc. v. Premier Election Soln’s,</i> 698 F.3d 1374 (Fed. Cir. 2012)	23

PETITIONER’S EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 10,966,915 (“the ’915 Patent”)
1002	Declaration of Bozena B. Michniak-Kohn, Ph.D.
1003	U.S. Patent No. 11,433,018 (“Lesniak”)
1004	U.S. Patent No. 9,314,412 (“Phinney”)
1005	John H. Lamb, Sodium Bicarbonate: An Excellent Deodorant, 7(3) J. INVESTIGATIVE DERMATOLOGY 131-33 (1946) (“Lamb”)
1006	U.S. Patent No. 6,048,518 (“Bianchi-518”)
1007	Native Wayback Machine archives, captured May 26, 2016, November 23, 2016, November 1, 2015 respectively for: https://www.nativecos.com https://www.nativecos.com/product/deodorant/ https://www.nativecos.com (“Native”)
1008	U.S. Patent App. Pub. No. 2007/0166254 (“Bianchi-254”)
1009	Wayback Machine archive, captured January 26, 2017, for http://soapdelinews.com/2016/11/easy-homemade-deodorant-recipe.html (“Easy Homemade”)

1010	Angelica Peebles, <i>P&G Has Acquired Native Natural Deodorant Brand</i> , CNBC (Nov. 15, 2017, 5:34 P.M.), https://www.cnbc.com/2017/11/15/pg-has-acquired-native-natural-deodorant-brand.html (last visited May 28, 2024)
1011	Rachel Lapidos, <i>P&G Has Acquired Cult-Fave Deodorant Brand Native</i> , WELL+GOOD (Nov. 17, 2017), https://www.wellandgood.com/pg-acquired-natural-deodorant-brand-native/ (last visited May 29, 2024)
1012	Alex Bitter, <i>P&G Buys Deodorant Brand Native for Undisclosed Sum</i> , S&P GLOBAL (Nov. 15, 2017, 5:31 PM) https://www.spglobal.com/marketintelligence/en/news-insights/trending/DWXgoreaSsTDRfJ0RDSMEg2 (last visited May 29, 2024)
1013	KARL LADEN ET AL., ANTIPERSPIRANTS AND DEODORANTS (Karl Laden ed., 2nd ed. 1999)
1014	U.S. Patent App. Pub. No. 2005/0142085
1015	English Translation of Int’l Patent App. Pub. No. WO 2012/098189
1016	SoapDeliNews Wayback Machine archive, captured April 17, 2013, for https://soapdelinews.com/2013/03/natural-handmade-lavender-patchouli-deodorant-recipe-with-printable-labels.html
1017	SoapDeliNews Wayback Machine archive, captured July 23, 2016, for http://soapdelinews.com/2016/07/natural-neem-oil-deodorant-recipe.html
1018	SoapDeliNews Wayback Machine archive, captured October 19, 2012, for http://soapdelinews.com/2012/10/diy-natural-homemade-deodorant-recipe.html
1019	LORRAINE WHITE, HOMEMADE DEODORANT 32 EASY TO MAKE ALL NATURAL & ORGANIC DEODORANT & BODY SPRAY RECIPES (2014)

1020	<i>Homemade Deodorant</i> , THE CRUNCHY URBANITE (Nov. 24, 2013) https://thecrunchyurbanite.com/2013/11/24/homemade-deodorant/ (last visited May 29, 2024)
1021	Piyatip Khuntayaporn & Jiraphong Suksiriworapong, <i>Efficacy of Essential Oil Formulations Against Malodor Causing Bacteria</i> , 44(4) PHARM. SCIS. ASIA 209-16 (2017)
1022	Laura G. Corral, et al., <i>A Research Note Antimicrobial Activity of Sodium Bicarbonate</i> , 53(3) J. FOOD SCI. 981-82 (1988)
1023	Pamela Emanoil, <i>Customers Itching for Personal Care Alternatives</i> , Apr. 2006 NAT. FOODS MERCHANDISER 40-42 (2006)
1024	Mohammed A. Shahtalebi et al., <i>Deodorant Effects of a Sage Extract Stick: Antibacterial Activity and Sensory Evaluation of Axillary Deodorancy</i> , 18(10) J. RSCH. MED. SCI. 833-39 (2013)
1025	U.S. Patent No. 5,585,092
1026	U.S. Patent No. 9,610,237
1027	U.S. Patent App. Pub. No. 2014/0199252
1028	James Lambert, <i>Silicone Safety and the Cosmetic Industry</i> , 126(11) <i>Cosms. & Toiletries</i> 810-15 (2011)
1029	Julia Pasquet et al., <i>The Contribution of Zinc Ions to the Antimicrobial Activity of Zinc Oxide</i> , 457 COLLOIDS & SURFACES: PHYSICOCHEMICAL & ENG'G ASPECTS 263-74 (2014)
1030	Rodrigo Carvalho, <i>Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde (Lyrall®) as Allergen: Experience from a Contact Dermatitis Unit</i> , 30(3) CUTANEOUS & OCULAR TOXICOLOGY 249-50 (2011)
1031	Maria V. Heisterberg, et al., <i>Deodorants are the Leading Cause of Allergic Contact Dermatitis to Fragrance Ingredients</i> , 64 CONTACT DERMATITIS 258-64 (2011)

1032	J. Handley & D. Burrows, <i>Allergic Contact Dermatitis from the Synthetic Fragrances Lyrall and Acetyl Cedrene in Separate Underarm Deodorant Preparations</i> , 31 CONTACT DERMATITIS 288-90 (1994)
1033	Prosecution History Excerpts of U.S. Patent Application No. 16/716,542 ('915 file history)
1034	Prosecution History Excerpts of U.S. Patent Application No. 17/961,089
1035	Prosecution History Excerpts of U.S. Provisional Patent Application No. 62/527,180
1036	Schueller, R., & Romanowski, P., Multifunctional cosmetics (2003)
1037	Siquet, F., & Devleeschouwer, M. J., Antibacterial agents and preservatives, <i>Handbook of Cosmetic Science and Technology</i> (2009)
1038	Fed. Reg. Vol. 60, No. 176 (Sept. 12, 1995)
1039	Compendium of Food Additive Specifications, FNP 52 Add 13 (2005)
1040	Complaint For Patent Infringement (ECF No.1) from The Procter & Gamble Co. v. Dr. Squatch, LLC, Case No. 2:24-cv-04711 (C.D. Cal.)
1041	U.S. Patent No. 4,049,792
1042	JOHN A. DEAN, <i>LANGE'S HANDBOOK OF CHEMISTRY</i> (John A. Dean ed., 15th ed. 1999)
1043	U.S. Patent No. 4,919,934
1044	Reserved

1045	U.S. Patent No. 11,497,706
1046	21 C.F.R. § 720.4(d) (1992)
1047	U.S. Patent No. 6,123,932
1048	Curriculum Vitae of Bozena B. Michniak-Kohn, Ph.D.
1049	Int'l Patent App. Pub. No. WO 2012/098189
1050	SAMUEL P. SADTLER ET AL., A TEXT-BOOK OF CHEMISTRY INTENDED FOR THE USE OF PHARMACEUTICAL AND MEDICAL STUDENTS (5th ed. 1918)
1051	Reserved
1052	Reserved
1053	Reserved
1054	Reserved
1055	Reserved
1056	Reserved
1057	Reserved
1058	Reserved

1059	Reserved
1060	Reserved
1061	Reserved
1062	Reserved
1063	Reserved
1064	Reserved
1065	Reserved
1066	Reserved
1067	Reserved
1068	Reserved
1069	Reserved
1070	Reserved
1071	Reserved
1072	EP0471392

1073	Reserved
1074	Reserved
1075	Reserved
1076	Reserved
1077	U.S. Patent App. No 17/961089 Excerpt
1078	Petro Lubricant Test Report
1079	Petro Lubricant Deodorant & Equipment Pictures
1080	Native Patent Marking Statement
1081	Dr. Robert Lochhead Transcript
1082	U.S. Pat. No. 11,540,999
1083	U.S. Pat. No. 5,019,375
1084	Cosmetic Science and Technology (2017) (excerpt)
1085	USPTO Brief in No. 2015-1680 (Fed. Cir.)
1086	Reply Declaration of Bozena B. Michniak-Kohn, PhD

I. INTRODUCTION

Patent Owner (“P&G”) relies on previously-rejected arguments, phantom limitations, and red herring attacks—none of which should prevent a finding of unpatentability.

To start, both the Board at the institution stage and an examiner have already rejected P&G’s rehashed argument that Lesniak’s “antiperspirants” do not include deodorants. P&G’s ’915 Patent itself makes clear that antiperspirants are deodorants.

P&G relies heavily on an argument that the prior art does not disclose the claimed hardness range, because the ’915 Patent supposedly requires hardness to be measured by a unique test rather than the admittedly standard hardness test (ASTM D-1321) recited in the claims. This misreads the specification, which merely describes periodic equipment calibration, not a new test method. But, even if P&G’s interpretation were accepted, it would not change the outcome. P&G relies only on the unverified *ipse dixit* of its expert that hardness ranges for the two testing methodologies do not overlap—but he admittedly did not perform any tests to substantiate this assertion. Petitioner’s test results confirm that P&G’s expert is wrong; a deodorant can be within the claimed hardness range using either testing methodology. Thus, P&G’s hardness argument misinterprets the patent, lacks evidentiary support, and is disproved by the record.

P&G's remaining arguments, centered on supposed stability issues and far-strained reasons to resist combining prior art, fare no better. Stability is not recited in the claims, and prior art does not need to be enabled beyond the scope of the claims at issue. And regardless, Lesniak discloses stable compositions. P&G raises stability only as a distraction from the straightforward reality: the challenged claims recite nothing more than well-known deodorant ingredients performing their conventional functions.

Finally, P&G's motivation-to-combine challenge hinges on generic and irrelevant prior art distinctions that do nothing to alter a POSA's ability or incentive to combine. For example, P&G discusses the inclusion of silicone oil in Bianchi-254's compositions. But Native establishes that silicone-free deodorant formulations were common, and Bianchi-254 itself expressly allowed the use of both silicone and silicone-free oils. A POSA would have understood exactly how to use Bianchi-254's guidance to formulate a silicone-free deodorant based on Native.

In sum, P&G's case consists of recycled arguments, conjecture without evidence, and positions flatly contradicted by the record.

II. LESNIAK RENDERS UNPATENTABLE ALL CHALLENGED CLAIMS

A. Lesniak Discloses a Deodorant Stick (Grounds 1-4).

1. Antiperspirants Are Deodorants and—According to P&G Itself—Do Not Require Aluminum.

P&G insists that Lesniak does not disclose a deodorant stick, urging the Board to disregard Lesniak’s express disclosure that its compositions can be “antiperspirants” and formed into “sticks.”¹ As an initial matter, P&G cannot dispute that antiperspirants are deodorants. See Ex. 1036, 2 (“[A]ll antiperspirants are deodorants”); Ex. 1037, 246 (same).² Indeed, the ’915 Patent forecloses any such argument by incorporating references that expressly include antiperspirants in the deodorant genus. Ex. 1001, 10:57-64; Ex. 1083, 2:3-31, 5:46-47 (discussing

¹ The Board previously rejected an analogous attempt by P&G to use Dr. Lochhead’s testimony to erase prior art disclosures. See *Conopco Inc. v. The Procter & Gamble Co.*, IPR2013-00505, Paper No. 69, at 22 (PTAB Feb. 10, 2015) (finding “the clear disclosure on the face of the reference is more credible than Dr. Lochhead’s contradictory testimony”), *aff’d*, No. 2015-1680 (Fed. Cir. Aug. 8, 2016).

² P&G’s website submissions do not controvert the point that antiperspirants fall within the deodorant genus.

“deodorant sticks containing an antiperspirant active” and “the antiperspirant active in the deodorant”).³

P&G nevertheless contends that Lesniak’s antiperspirants must contain aluminum, unlike P&G’s claimed aluminum-free deodorants. Tellingly, P&G does not (and cannot) identify any composition in Lesniak with aluminum. *See Almirall, LLC v. Amneal Pharms. LLC*, 28 F.4th 265, 273 (Fed. Cir. 2022) (“[A] reference need not state a feature’s absence in order to disclose a negative limitation.”). While P&G emphasizes that the FDA requires antiperspirants marketed in the U.S. to contain aluminum, anticipation and obviousness are distinct from FDA regulatory requirements. *See Persion Pharms. LLC v. Alvogen Malta Ops. Ltd.*, 945 F.3d 1184, 1193 (Fed. Cir. 2019) (“FDA’s approval requirements do not undermine the force of the evidence as to obviousness”).

³ So does a book edited by Dr. Lochhead, which was intended “to review the state of the art” shortly before the priority date of the ’647 Patent. Ex. 1081, 92:21-94:18; Ex. 1084, 33 (“[T]he main mechanisms through which deodorant products intended to combat body odors ... were the usage of antiperspirants that prevent perspiration[.]”). Dr. Lochhead’s attempt to evade his own book during his deposition undercuts his credibility.

P&G's argument concerning Lesniak's supposed necessity of aluminum is further belied by the fact that Lesniak's compositions include zinc oxide, and zinc compounds were known antiperspirant actives that could be alternatives to aluminum. Ex. 1003, 3:39-4:21, 8:46-48, 10:27 (describing zinc-based antiperspirant compositions); Ex. 1014, ¶¶ [0020]-[0026] (“[A]ntiperspirant actives include ... salts of aluminum, zirconium, and zinc ...”). P&G's patent family at-issue expressly states that antiperspirant actives include zinc salts (as well as “any” listed antimicrobial). Ex. 1081, 57:5-61:18.

A POSA would recognize Lesniak's stick compositions include aluminum-free deodorants. Indeed, this is consistent with an examiner's recent rejection of P&G's arguments concerning Lesniak in other applications. Ex. 1077. Lesniak's stick compositions contain at least 25% liquid triglyceride, structurants, an antimicrobial, and optionally essential oil. Dr. Lochhead admitted that, in the context of P&G's patents, stick compositions with those ingredients “would be considered a deodorant.” Ex. 1081, 25:2-27:7.

2. Lesniak's Other Applications Are Irrelevant.

P&G seeks to limit Lesniak to a subset of applications, such as sunscreens and diaper creams. But these alternative applications do not change the fact that the compositions are antiperspirants/deodorants. Ironically, P&G recognizes, in the context of its other patents, that “wax based cosmetic stick compositions” have

multiple applications, including “sun care, moisturizing or analgesic sticks and antiperspirants/deodorant sticks.” Ex. 1043, Abstract, 1:5-9.

P&G also focuses on Lesniak’s use of zinc oxide at a concentration of 11-20%, which it contends to be suitable for a sunscreen or diaper cream but not “useful” in deodorants. POR, 18. P&G’s argument contradicts the ’915 Patent. *First*, the claims require only an antimicrobial, without reciting any concentration. P&G does not dispute that zinc oxide is an antimicrobial and would function as such at Lesniak’s concentrations. *See* Ex. 1081, 87:15-23, 99:4-21 (agreeing zinc oxide has “antibacterial effects”). *Second*, the ’915 Patent states that, for a deodorant, the antimicrobial may be present in a concentration up to 30% by weight (including magnesium hydroxide at a concentration of 25%). Ex. 1001, 7:7-19. Thus, the ’915 Patent defines deodorants in a way that encompasses Lesniak’s compositions. *Third*, other deodorants were known to contain the same amount of zinc oxide as Lesniak’s compositions. *See* Ex. 1072 at 1-2 (disclosing deodorants having “from 0.5 to 20%” zinc oxide).

3. P&G’s Enablement Arguments Fail Because Lesniak Overcame Stability Issues and the Challenged Claims Have No Stability Limitations.

P&G argues that Lesniak cannot render unpatentable any claims because Lesniak does not enable a “stable” deodorant stick. P&G is wrong.

First, no challenged claim recites **any** requirements for stability, let alone stability at the “high” temperatures (49°C (120°F)) described by Lesniak. *See* Ex. 1003, Table 2. And “[e]nablement of prior art [only] requires that the reference teach a skilled artisan to make or carry out what it discloses *in relation to the claimed invention*.” *In re Antor Media Corp.*, 689 F.3d 1282, 1290-91 (Fed. Cir. 2012) (emphasis original). Consequently, it is irrelevant whether the Lesniak compositions satisfy unclaimed stability requirements at high temperatures. *Id.*

Second, the specification of the ’915 Patent does not disclose any stability data. Thus, P&G would have no basis for imputing stability requirements to its claims (and tellingly does not try to do so). If accepted, P&G’s enablement arguments would invalidate P&G’s claims for lack of enablement. P&G contends that Lesniak discloses data establishing high-temperature stability for two compositions, which P&G deems insufficient, while ignoring the absence of such stability data for **any** claimed compositions in its own patent. P&G’s argument is further undercut Dr. Lochhead’s testimony that P&G’s compositions are stable because (1) they were tested for hardness, (2) they do not contain water, and/or (3) a POSA would “know” how to make them stable. Ex. 1081, 35:23-43:24. Dr. Lochhead’s three criteria for stability are equally met by Lesniak’s compositions.

Third, Lesniak overcame any stability issues, as it expressly discloses compositions that are “physically stable at high and low temperatures.” Ex. 1003,

5:23-32. Lesniak achieves this by using “a second wax having a melting point of 73 to 90° C.” *Id.*, 1:39-54. Lesniak’s compositions (nos. 8 and 11) that had such a wax (“CastorWax MP80”) passed all stability tests. *Id.*, Table 2. P&G misplaces reliance on Lesniak’s “comparative composition[s]” (nos. 1-7, 9-10) that failed the more onerous stability tests because they did not embody Lesniak’s invention, lacking a secondary wax with a sufficiently high melting point.⁴ *Id.* Lesniak teaches that a secondary structurant (castor wax) with a sufficiently high melting point made the compositions more stable. Lesniak also details how to make its compositions. *Id.*, 15:9-45. Lesniak therefore enables stable deodorant sticks.

Fourth, non-enabled references can still render claims obvious. *Raytheon Techs. Corp. v. General Elec. Co.*, 993 F.3d 1374, 1380 (Fed. Cir. 2021). At

⁴ P&G misleadingly calls these comparative examples “Lesniak’s compositions.” POR, 45. Lesniak denotes the “comparative composition[s]” with an asterisk (*) to indicate that they are **not** the inventive compositions. *Id.*, Table 2. The ’915 patent similarly relies on “Comparative Formula[e]” that it contrasts with the purportedly inventive formulations. Ex. 1001, Table 1. Dr. Lochhead did not appreciate this distinction (Ex. 1081, 84:16-24), although he later conceded that “only [stable compositions] 8 and 11 have a second wax” required by Lesniak’s invention. Ex. 1081, 85:1-86:9.

minimum, Lesniak sufficiently teaches a deodorant stick with the relevant ingredients for purposes of § 103, especially in view of P&G's admissions concerning the POSA's ability to adjust waxes to achieve, *e.g.*, stability. Specifically, P&G acknowledged in a patent incorporated into the '915 Patent that a POSA could "easily" employ waxes with suitable melting points to alter the properties of deodorant sticks. Ex. 1041, 4:37-44. The '915 Patent further concedes that "[i]t is **known** that to formulate a solid antiperspirant or deodorant stick, the structurants generally have a melting point above 50° C. **to provide a stable structure** to the stick." Ex. 1001, 3:46-48.⁵ The '915 Patent thus recognizes that, consistent with Lesniak's teachings, a POSA knew how to make stable deodorants. Ex. 1086, ¶7.

Fifth, P&G has the burden to prove lack of enablement. *See Antor*, 689 F.3d at 1288. Yet, P&G failed to introduce any evidence that Lesniak's inventive compositions were unstable and, thus, has not overcome the "presump[tion]" of enablement. *Id.*

⁵ Emphasis added throughout.

B. A POSA Would Have Been Motivated to Improve/Modify Lesniak's Deodorant Sticks Despite Their Completeness (Grounds 1-4).

P&G tries to conjure a non-existent tension between Petitioner's position that Lesniak teaches "complete" deodorants/antiperspirants and Petitioner's motivations to modify Lesniak. A complete deodorant is merely one that qualifies as a deodorant without the need for additional ingredients. It does not mean that Lesniak's formulations were perfect or that a POSA lacked any reason to improve or modify them. *See* Ex. 1081, 43:25-44:18 (admitting "there was a motivation to make [deodorants] better," notwithstanding that they were "complete").

C. A POSA Would Have Been Motivated to Add Magnesium Hydroxide to Lesniak's Compositions with a Reasonable Expectation of Success Because Phinney Teaches the Benefits of Magnesium Hydroxide in Deodorants (Ground 2).

P&G argues against the motivation to combine by expressing misguided and irrelevant views about Phinney. Phinney teaches that: (i) zinc oxide has "low activity" as a "deodorant agent"; (ii) magnesium hydroxide is "an effective deodorant"; and (iii) zinc and magnesium compounds have synergistic effects, hence motivating a POSA to add magnesium hydroxide to Lesniak's zinc oxide deodorants. Ex. 1004, 1:13-3:16, 5:61-67. It is irrelevant whether (as P&G emphasizes) the zinc oxide converts into zinc hydroxide in embodiments of Phinney.

While P&G notes that Phinney teaches additional benefits associated with potassium chloride, P&G fails to explain how that weighs against the combination

of Phinney's magnesium hydroxide with Lesniak's zinc oxide deodorants. *See In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004) ("Our case law does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention."). Even if a POSA would have been motivated to incorporate other ingredients from Phinney, it would not undermine the obviousness argument.

P&G points out that some of Phinney's compositions contain water, whereas Lesniak's compositions are anhydrous. But a POSA would have expected that magnesium hydroxide would act as an antimicrobial, and bolster the deodorizing activity of zinc oxide, regardless of the presence or absence of water. *See* Ex. 1072, 1-2, 5 (disclosing deodorants without added water and with zinc oxide and/or magnesium hydroxide); Ex. 1081, 100:14-106:8 (conceding, after repeatedly mischaracterizing Ex. 1072, that it discloses zinc oxide and magnesium hydroxide as "actives" for deodorants that do not contain water); Ex. 1086, ¶9.

P&G's criticisms of Phinney further fall short because "no express suggestion would have been needed to prompt one to substitute a known, interchangeable alternative for another, to perform a common function." *Conopco*, IPR2013-00505, Paper No. 69, at 23; *see Almirall*, 28 F.4th at 273 (holding claims obvious because they involved "substituting one known gelling agent for another"; "[e]ach may be effective at a different concentration in different formulations, but that is just a

property of the particular known material, subject to conventional experimentation”). Magnesium hydroxide and zinc oxide were known options for deodorant antimicrobials. *See* Ex. 1072, 1-2, 5; Ex. 1086, ¶9.

D. Bianchi-518 Teaches the Claimed Hardness Range and Renders Obvious the Challenged Claims in Combination with Lesniak (Ground 4).

P&G argues that Bianchi-518’s hardness range does not overlap with the claimed hardness ranges, even though the reported numbers indisputably overlap.⁶ According to P&G, its claims require a different hardness test than the standard ASTM D-1321 test discussed by Bianchi-518. That argument fails.

To begin, the ’915 Patent’s claims recite measuring hardness with an “ASTM D-1321 needle.” While P&G does not dispute that Bianchi-518 discloses an

⁶ P&G alludes to Lesniak’s own hardness range, which it contends cannot be converted to the claimed values. A POSA would have looked to Bianchi-518 notwithstanding Lesniak’s hardness disclosure because Bianchi-518, unlike Lesniak, expressly ties its hardness range to the consumer acceptability requirements for antiperspirants (and thus deodorant). Contrary to P&G’s contention, Bianchi-518’s range is not specific to Bianchi-518’s compositions, but rather relates to the consumer preference for antiperspirants/deodorants generally. Ex. 1002, 26-27.

overlapping hardness range that also is measured with an ASTM D-1321 needle, P&G contends that the '915 Patent's claimed use of "ASTM D-1321" should be understood to *require* a nonstandard variation of the ASTM D-1321 test purportedly discussed in the specification.

Specifically, P&G re-writes its claims to recite, "[a 50-g total force] ASTM D-1321 needle," so as to exclude the standard methodology of adding an additional 50-g weight at the time the test is performed. POR, 39 (alteration original). POR, 39 (alteration original). However, the bracketed language does not appear in any claim, such that P&G's attempt to add "50-g total force" contravenes hornbook law that precludes "reading limitations from the specification into the claims" absent a disclaimer or express definition. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc); *IQRIS Techs. LLC v. Point Blank Enters.*, 130 F.4th 998, 1004 (Fed. Cir. 2025). Notably, P&G does not seek to construe any term, much less identify a disclaimer or definition that could justify its argument.

Even if P&G had sought a construction, its argument would still fail. The only hardness testing method mentioned in the claims is "ASTM D-1321." The plain language of the claims thus precludes P&G's construction excluding ASTM D-1321. Furthermore, the '915 Patent specification similarly reports hardness measured by "a needle penetration test under ASTM D-1321 (as described herein)." Ex. 1001, 3:5-10. If P&G had invented a different hardness test or intended to exclude ASTM

D-1321 testing, it would not have reported testing conducted “under ASTM D-1321.”

Additionally, the portion of the specification that P&G relies upon to allege a modified test is not part of the test at all. P&G cites a partial quote that “the total weight of the shaft and needle is 50 ± 0.2 grams.” But P&G omits the preceding language, which states that this is the weight to be used for “[p]eriodic calibration” to “confirm” that the equipment is in proper working order. Ex. 1001, 12:20-29. That “[p]eriodic calibration” section precedes a section identifying what needs to be confirmed “[a]t the time of use.” *Id.*, 12:30-37. Only after those two sections pertaining to equipment checks does the specification set forth the test. *Id.*, 12:38-67 (“Sample Preparation and Measurement”). Moreover, the “[p]eriodic calibration” comports with the ASTM D-1321 standard, which likewise requires that the “weight of the needle shall be 2.5 g” and the “weight of the plunger shall be 47.5 g,” for a 50-g total weight of the needle assembly. Ex. 2018, 5. Although the ASTM D-1321 standard further describes using an additional 50-g weight during the test, a POSA would not read the ’915 Patent’s silence on this weight as excluding it. Ex. 1086, ¶2.

Rather, a POSA would consult the details of the ASTM D-1321 standard identified by the ’915 Patent to ensure compliance. Relatedly, the specification does not support P&G’s implicit claim construction requiring a “50-g total force,” as the specification says nothing about a 50-g **force** and instead merely describes the total

weight for calibration of the shaft and needle (50-g, as specified in ASTM D-1321). Ex. 1001, 12:25-26; Ex. 1086, ¶3.

Notably, the PTAB rejected similar arguments advanced by P&G, with the support of Dr. Lochhead, in another IPR that it lost. In *Conopco*, the relevant claims recited a shampoo having four measurable properties, each with an associated numerical range. P&G argued that the claims required the properties to be measured using methods set forth in the specification. The Board rejected that argument because “[n]either the express claim language, nor the disclosure, limits the methods that may be used to evaluate the four” properties. IPR2013-00505, Paper No. 69, at 7. P&G and Dr. Lochhead nevertheless advance similar arguments in this proceeding, but their position here is even weaker. The claims here not only fail to recite P&G’s proposed test, but they expressly reference the “ASTM D-1321” standard that P&G now wants to exclude from the scope of the claims. Also, the specification in *Conopco* undisputedly defined new tests; here, the specification states that testing was conducted “under ASTM D-1321,” the standard test.

Even assuming, *arguendo*, the ’915 Patent required hardness to be tested under P&G’s supposedly unique test, that could only matter if there were evidence that Bianchi’s hardness range (using the standard test) did not overlap with the range under P&G’s proposed test. Here, P&G relies on nothing but Dr. Lochhead’s unsupported conjecture that the claimed hardness ranges (as interpreted by P&G)

and the Bianchi ranges “are not overlapping at all.” Ex. 2011, ¶88; see Ex. 1081, 115:7-124:19.⁷ But, neither P&G nor Dr. Lochhead conducted any hardness testing to support this “not overlapping” assumption; and actual testing proves their assumption is incorrect. Specifically, testing confirms that a deodorant stick can fall within the claimed range regardless of whether it is measured using the standard test or P&G’s purported modification thereof (*i.e.*, without the 50 g weight called for). In other words, Dr. Lochhead’s assumption is wrong; the hardness ranges overlap. Ex. 1086, ¶¶4-5. Indeed, the average delta between the two test methods is about 37 mm*10, which means that the claimed range and Bianchi-518’s range overlap regardless of the test used.⁸ *Id.* Thus, even if P&G’s incorrect interpretation of the ’915 Patent were adopted, its claims would still be unpatentable because P&G does not even attempt to overcome the presumption of obviousness that applies where

⁷ Dr. Lochhead’s assumption is especially unfounded because he does not regularly conduct hardness tests. *Id.*

⁸ Notably, P&G marked its Native deodorant with U.S. Patent No. 11,540,999 (Ex. 1080). The ’999 Patent’s sole independent claim recites a hardness range of 80 to 140. Ex. 1082. Importantly, Native’s hardness falls comfortably within the 80-140 range using the standard ASTM D-1321 test, but falls outside of that range under P&G’s proposed test. Ex. 1078.

ranges overlap (*e.g.*, by establishing criticality). *EI DuPont de Nemours & Co. v. Synvina CV*, 904 F.3d 996, 1006 (Fed. Cir. 2018). In any event, any difference here is merely one of “degree” (harder vs. softer, predictably changing based on the amount of structurant), and not a new “kind” of unexpected result. *Id.*; *see* Ex. 1086, ¶6. Thus, the claims are obvious.

Moreover, even if P&G’s interpretation of the claims were adopted and the ranges did not overlap, P&G’s nonobviousness argument would *still* fail. “[I]t is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *In re Boesch*, 617 F.2d 272, 276 (C.C.P.A. 1980) (“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.”). For example, in *In re Kulling*, 897 F.2d 1147, 1148-49 (Fed. Cir. 1990), prior art did not “recite the numerical quantities of wash liquors used in the instant claims.” Yet the Court held the claims obvious because “[t]he determination of the precise amount [of] wash solution and water used in the wash is a matter of routine optimization obvious to one of ordinary skill in the art balancing normal considerations of [] purity ... [and] dissolution.” *Id.* Likewise, adjusting the amount of structurant (*e.g.*, beeswax) to achieve a desired hardness was a matter of routine optimization well within the skill of a POSA, as P&G conceded in its prior art patent incorporated into the ’915 Patent. *See* Ex. 1041, 2:64-68, 4:37-44 (explaining that a POSA could “easily” adjust waxes

to achieve desired “soft[ness]” based on balancing known considerations, with “[h]igher levels of wax lead[ing] to lower wear rates, and lower levels of wax tend[ing] to give higher wear rates and a softer, less desirable structure”).⁹

Here too, P&G’s loss in *Conopco* is instructive. The Board there held claims obvious even without prior art disclosure of: (1) P&G’s new tests (assays) for measuring four claimed properties (indices); (2) the claimed values for those properties; and (3) any way to “convert[] the prior art assay values into the [claimed] index values.” IPR2013-00505, Paper No. 69, at 24 (finding it “sufficient that a [POSA] art would have had the desire, and the tools, to formulate a shampoo in

⁹ P&G incorrectly contends that Petitioner does not provide any reference that discloses the claimed hardness range, as interpreted by P&G. P&G overlooks its own prior art patent cited by Petitioner that discloses a hardness range of “about 70 to about 160, most preferably from about 75 to about 120,” measured using a “needle as specified in ASTM Method D 1321-DIN 51 579,” with the “***total weight of the needle and shaft in the penetrometer is 50.00±0.05 grams.***” Ex. 1025, 12:41-55.

which the four properties are optimized; an awareness of meeting the index values is not required”).¹⁰

E. A POSA Would Have Been Motivated to Add Baking Soda to Lesniak’s Compositions, as a Combination Does Not Need to Be the Best Possible Option (Ground 3).

P&G argues that a POSA would not have been motivated to add baking soda to Lesniak’s compositions because baking soda was known to cause irritation for some users. This argument fails because less-preferred combinations can still “provide motivation for the current invention.” *In re Fulton*, 391 F.3d at 1200; *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016) (“[A] given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”).

Lesniak’s antimicrobial, zinc oxide, was thought to have low efficacy (Ex. 1004, 1:13-3:16) and baking soda was known to be an “excellent” antimicrobial for deodorants. Ex. 1002, 49. That provides a motivation to add baking soda to

¹⁰ The USPTO Director intervened in the appeal of this decision (which ended with a Rule 36 affirmance) and warned that “P&G’s position of inventing new tests” should “not be rewarded” because it would cause uncertainty and result in patents on known compositions “for which the new tests had not been used.” Ex. 1085, 20-21.

Lesniak's compositions. It does not matter that different antimicrobials may have had other advantages.

III. NATIVE RENDERS OBVIOUS THE CHALLENGED CLAIMS

A. A POSA Would Have Been Motivated to Modify Native, and P&G's Arguments to the Contrary Contravene Supreme Court Precedent and P&G's Own Actions (Ground 5-6).

P&G posits that a POSA would not have been motivated to modify Native because Native itself does not identify any deficiencies with the deodorant. The Supreme Court rejected this reasoning in *KSR*, eschewing a "rigid rule" requiring "precise teachings" and an explicit motivation from the prior art in favor of a "common sense" approach. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418-21 (2007). A motivation to combine may exist "even absent any hint of suggestion in the references themselves." *DyStar Testilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1368 (Fed. Cir. 2006).

In any event, as discussed below, Easy Homemade explicitly provides the motivation to modify Native. Moreover, P&G's argument is belied by its own efforts to modify and improve the Native formula. The "comparative" preexisting formulation described in the specification of the '915 Patent matches Native (which P&G owned) in relevant respects. Ex. 1002, 29. Yet the subject inventions purportedly improve that product, contrary to P&G's insinuation that Native's formulation would not have been altered. Ex. 1081, 43:25-44:18.

B. Bianchi-254 Teaches the Claimed Hardness Range and Renders Obvious the Challenged Claims in Combination with Native (Ground 5).

P&G's arguments with respect to Native's hardness fail for the same reasons that they fail with respect to Lesniak. See Section II(D). In addition, P&G's interpretation of Bianchi-254 contradicts its interpretation of the '915 Patent claims. Bianchi-254's "Hardness Method" identifies only the relevant needle ("a 2.5 gm brass/steel tapered needle (DIN 51-579)"), without describing any additional weight or explicitly mandating full compliance with the DIN 51-579 standard. Ex. 1008, [0117]. Indeed, Dr. Lochhead testified that Bianchi-254 "deviat[es]" from the DIN 51-579 standard, just like he believes the '915 Patent deviates from the ASTM D-1321 standard. Ex. 1081, 112:11-114:6. Yet P&G asserts that a POSA following the teachings of Bianchi-254 would consult and adhere to the DIN 51-579 standard, including its use of a 50-g weight described in that standard but not explicitly called for in Bianchi-254. *Id.* Similarly, a POSA interpreting the '915 Patent's claims would adhere to the ASTM D-1321 standard, including its use of the 50-g weight.

C. A POSA Would Have Been Motivated to Follow Bianchi-254's Guidance on the Quantitative Amounts of Ingredients in Deodorants with a Reasonable Expectation of Success (Ground 5).

P&G argues that a POSA could not have combined the teachings of Native and Bianchi-254 because Bianchi-254 includes aluminum and silicone in its compositions. P&G ignores that Native already achieved a silicone and aluminum-

free deodorant stick, so a POSA therefore would not have to draw on Bianchi-254's teachings for those features. Ex. 1002, 57-61. Native further discloses the relative amounts of each ingredient in that stick. *Id.* Bianchi-254 simply provides a POSA with guidance on the quantitative amounts of those ingredients and preferred hardness.

Moreover, P&G fails to explain how the "differences" between Native and Bianchi-254 matter for its claims. For example, removing silicone oil from Bianchi-254's compositions would just increase the concentration of liquid triglyceride so as to maintain the total amount of oil called for in Bianchi-254. *Id.* Further, a POSA could achieve Bianchi-254's hardness (regardless of aluminum) by simply increasing the amount of Native's structurants (e.g., stearyl alcohol) to increase hardness, or decreasing those ingredients to decrease hardness. Ex. 1086, ¶6. P&G's belief that a POSA could not "implement" (POR, 4) this binary concept (e.g., more stearyl alcohol=harder; less stearyl alcohol=softer) defies credulity. Here, too, P&G mistakenly relies on Lesniak's purported "stability" issues, ignoring that Lesniak teaches how to make stable compositions by including a higher melting point secondary structurant, as the '915 Patent concedes was known in the art.

P&G's speculation that it may not have been "possible" to combine Native and Bianchi-254 in view of their different ingredients also is irrelevant. "[I]t is not necessary that [prior art] be physically combinable to render obvious" claims. *Allied*,

825 F.3d at 138; *see In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (en banc) (finding assertions that “obsolete technology” could not be “incorporated” into another reference “irrelevant”).

Finally, P&G’s theory that a POSA formulating an aluminum-free deodorant would not have “looked to” Bianchi-254 for guidance contradicts the ’915 Patent, which incorporates references disclosing aluminum-containing antiperspirants for their disclosure of “suitable” structurants, emulsifiers, antimicrobials, and other ingredients. Ex. 1001, 5:66-6:4, 10:57-64; Ex. 1041; Ex. 1083; Ex. 1081, 46:22-52:22 (admitting that inventors of natural, aluminum-free deodorants included aluminum-containing “antiperspirants” in the field of their invention and looked to aluminum and silicone-containing formulations “to see how to put other formulations together” because “that’s what a POSA does”).

D. A POSA Would Have Been Motivated to Add Magnesium Hydroxide to Native with a Reasonable Expectation of Success Based on Easy Homemade’s Teaching of the Substitution of Magnesium Hydroxide for Baking Soda (Ground 6).

P&G incorrectly contends that a POSA would not have been motivated to replace Native’s baking soda with magnesium hydroxide. “There is a motivation to combine when a known technique ‘has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way,’ *KSR*, 550 U.S. at 417, using the ‘prior art elements according to their established functions[.]’” *Intel Corp. v. PACT XPP Schweiz AG*,

61 F.4th 1373, 1380-81 (Fed. Cir. 2023) (quoting *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 784, 799-800 (Fed. Cir. 2021)). A known antimicrobial for deodorants, baking soda, caused irritation for some users, and another known antimicrobial for deodorants, magnesium hydroxide, ameliorated that issue when substituted for baking soda. Ex. 1002, 77-78; Ex. 1081, 53:6-55:12. “Nothing more is required to show a motivation to combine under *KSR*.” *Intel*, 61 F.4th at 1381.

Although P&G insists that “Easy Homemade does not actually teach removal and substitution of baking soda,” P&G overlooks Easy Homemade’s statements that “baking soda can easily be swapped for magnesium hydroxide,” Ex. 1009, 6, 9. P&G alludes to the alleged lack of detail on Easy Homemade’s formulations, which is beside the point. Native discloses all the ingredients for a deodorant stick; Easy Homemade just directs the POSA to substitute one known antimicrobial for another.

P&G incorrectly alleges that Easy Homemade was not publicly accessible because it had not been indexed by search engines. The Federal Circuit explicitly declined to adopt such an indexing requirement in *Voter Verified, Inc. v. Premier Election Soln’s*, 698 F.3d 1374, 1380 (Fed. Cir. 2012). The Court in *Voter Verified* treated online material as prior art notwithstanding the absence of indexing evidence because it was “available to the extent that persons interested” could locate it with “reasonable diligence.” *Id.* at 1380. The Board has abided by this precedent, recognizing online references as prior art despite the lack of indexing evidence. *See*

LG Elecs., Inc. v. Multimedia Techs. Pte. Ltd., IPR2024-00353, Paper No. 28, at 21-25 (P.T.A.B. May 12, 2025) (finding lack of indexing evidence inconsequential because the prior art had an associated review that showed “an interested person actually found the [reference] online”). Easy Homemade contains reviews from interested persons that show such persons not only could have located—but actually did locate—the website, confirming its public accessibility. Ex. 1009, 7-8; Ex. 1016, 7-8; Ex. 1018, 6.

P&G’s only alleged authority for its position, *First Solar Inc. v. Rovshan Sade*, IPR2023-00827, Paper 13 (Nov. 16, 2023), is inapposite. There, the Board denied institution. While it noted a “question” as to the public accessibility of a reference, it did not deny institution based on public accessibility alone but rather based on “combined deficiencies” that included claim limitations missing from the alleged anticipatory reference. *Id.* at 18.

E. A POSA Did Not Need a Motivation to “Add” Baking Soda to Native Because Native Already Contained Baking Soda (Grounds 5-6).

P&G alleges that a POSA could not have a motivation to both add and remove baking soda from Native, so Native does not render unpatentable claim 8, which requires baking soda. But a POSA would not need a motivation to add baking soda to Native, since Native already contains baking soda, which was thought to be an “excellent” antimicrobial for deodorants. Ex. 1002, 49. Both baking soda and

magnesium hydroxide were known options for antimicrobials, which P&G does not dispute. *Id.*, 26. P&G fails to identify anything unexpected regarding the inclusion or removal of baking soda. Moreover, as discussed above, a combination of prior art does not need to be the most preferred option to render obvious a claim, and multiple viable motivations may exist simultaneously.

IV. CONCLUSION

For these reasons, Petitioner submits that claims 1-15 of the '915 Patent are unpatentable.

DATED: July 25, 2025

Respectfully submitted,

By: /Justin J. Oliver/
Justin J. Oliver
Reg. No. 44,986
VENABLE LLP
600 Massachusetts Ave., NW
Washington, DC 20001
T 202-721-5423
F 202-344-8300

CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

I hereby certify that this petition complies with the word count limitation of 37 C.F.R. § 42.24(c) because the Reply contains a total of 5547 words. This total excludes the cover page, signature block, and the parts of the petition exempted by 37 C.F.R. § 42.24.

DATED: July 25, 2025

/Justin J. Oliver/
Justin J. Oliver
Reg. No. 44,986
VENABLE LLP
600 Massachusetts Ave., NW
Washington, DC 20001
T 202-721-5423
F 202-344-8300

CERTIFICATE OF SERVICE

The undersigned certifies that a complete copy of this Reply and all Exhibits and other documents filed together with this Reply were served on P&G's counsel of record, on this date:

David M. Maiorana
Andrea W. Jeffries
Marlee R. Hartenstein
Jesse T. Wynn
JONES DAY
dmaiorana@jonesday.com
ajeffries@jonesday.com
mhartenstein@jonesday.com
jwynn@jonesday.com

DATED: July 25, 2025

/Justin J. Oliver/_____
Justin J. Oliver
Reg. No. 44,986
VENABLE LLP
600 Massachusetts Ave., NW
Washington, DC 20001
T 202-721-5423
F 202-344-8300