

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DR. SQUATCH, LLC,
Petitioner,

v.

THE PROCTER & GAMBLE COMPANY,
Patent Owner.

IPR2024-01104
Patent 11,540,999 B2

Before JOHN G. NEW, SHERIDAN K. SNEDDEN, and
SUSAN L. C. MITCHELL, *Administrative Patent Judges*.

SNEDDEN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background and Summary

Dr. Squatch, LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–18 of U.S. Patent No. 11,540,999 B2 (Ex. 1001, “the ’999 patent”). Petition (“Pet.”), Paper 2. The Procter & Gamble Company (“Patent Owner”) filed a Preliminary Response identifying itself as the owner of the ’999 patent. Preliminary Response (“Prelim. Resp.”), Paper 7. On November 15, 2024, we issued an Order granting Petitioner’s request for additional briefing regarding whether we should exercise our discretion to deny the Petition under §325(d). Paper 8. In response to our Order, Petitioner filed a Reply to the Patent Owner Preliminary Response (Paper 9, “Reply”), and Patent Owner filed a corresponding Sur-reply (Paper 10, “Sur-reply”).

To institute an *inter partes* review, we must determine that the information presented in the Petition shows “a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a) (2018). The Supreme Court has held that a decision to institute under 35 U.S.C. § 314 may not institute on less than all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018). After considering the information presented by the parties, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of claims 1–18 of the ’999 patent is unpatentable.

B. Real Parties in Interest

Petitioner identifies Dr. Squatch, LLC, as its real party-in-interest. Pet. 1. Patent Owner identifies The Procter & Gamble Company as its real party-in-interest. Paper 4, 1.

C. Related Matters

The parties indicate that the '999 patent is involved in *The Procter & Gamble Company v. Dr. Squatch LLC*, Case No. 2-24-cv-04711 (C.D. Cal.), filed November 29, 2022. Pet. 1; Paper 4, 1. Petitioner has also filed petitions for *inter partes* review of the following patents: IPR2024-01105 against U.S. Patent No. 10,966,915; IPR2024-01174 against U.S. Patent No. 11,497,706; and IPR2024-01173 against U.S. Patent No. 10,905,647. Paper 4, 1.

D. The '999 patent (Ex. 1001)

The '999 patent is titled “Deodorant Compositions.” Ex. 1001, code (54). The '999 patent is directed to deodorant compositions and methods of making the compositions. *Id.*, 1:16–17, 10:65. More specifically, the '999 patent is directed to formulating, in response to consumer demands, an aluminum-free, mostly silicone-free deodorant stick, which is not too hard. *Id.*, 1:21–22, 1:32–34.

The '999 patent explains that

[c]onsumers also want a good glide, non-sticky, and non-greasy application. This is a challenge, because a mostly silicone-free formula will often use natural oils or natural oil-based triglycerides. But often natural oils, such as coconut oil, bring a large portion of wax with them, often making the resulting deodorant sticks too hard to meet a more preferable product application for both shaven and unshaven underarms. They are also often undesirably greasy due to the non-volatile nature.

Id., 1:23–31. “As consumers seek more natural ingredients in their deodorants, one approach to formulation is to use emollients derived from natural oils.” *Id.*, 2:59–61. The specification describes that products aimed at emphasizing the use of natural ingredients “may have a significant amount of a liquid triglyceride.” *Id.*, 2:66. To provide structure to these products,

the '999 patent describes that it is known to include waxes and other such structurants. *Id.*, 3:1–3. However, the '999 patent explains that

a currently marketed product, Comparative Formula 1 . . . , 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 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.

Id., 3:5–17. According to the '999 patent, “a deodorant stick having at least about 25% of a liquid triglyceride, and that uses a primary structurant that has a melting point of at least about 50° C., . . . can result in a deodorant stick with a hardness from about 80 mm*10 to about 140 mm*10.” *Id.*, 3:49–57. The '999 patent describes that the “deodorant stick is able to comprise consumer-perceived natural ingredients, while offering a pleasant consumer experience in terms of its hardness.” *Id.*, 3:58–60.

The '999 patent describes that the deodorant compositions “can contain a structurant, an antimicrobial, a perfume, and additional chassis ingredient(s) . . . in the form of a solid stick.” *Id.*, 9:23–27. The '999 patent defines a “structurant” as “any material known or otherwise effective in providing suspending, gelling, viscosifying, solidifying, and/or thickening properties to the composition or which otherwise provide structure to the final product form.” *Id.*, 5:1–5. The '999 patent describes a deodorant stick comprising a magnesium hydroxide that is effective against underarm bacteria strains in raw material evaluations. *Id.*, 8:27–35, 8:43–46.

E. The Challenged Claims

Petitioner challenges claims 1–18. Representative independent claim 1 is reproduced below:

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.

Ex. 1001, 15:30–38.

F. Evidence

Petitioner relies upon information that includes the following.

Ex. 1003, Lesniak et al., US 11,433,018 B2, issued September 6, 2022 (“Lesniak”).

Ex. 1004, Phinney et al., US 9,314,412 B2, issued April 19, 2016 (“Phinney”).

Ex. 1005, John Henderson Lamb, M.D., *Sodium Bicarbonate: An Excellent Deodorant*, THE JOURNAL OF INVESTIGATIVE DERMATOLOGY 7(3) 131–33 (1946) (“Lamb”).

Ex. 1006, Bianchi et al., US 6,048,518 B2, issued April 11, 2000 (“Bianchi ’518”).

Ex. 1007, Wayback Machine archives, captured May 26, 2016, November 23, 2016, and November 1, 2015 respectively for:
<https://www.nativecos.com>,
<https://www.nativecos.com/product/deodorant/>, and
<https://www.nativecos.com> (“Native”).

Ex. 1008, Bianchi, US 2007/0166254 A1, published July 19, 2007 (“Bianchi ’254”).

Ex. 1009, Wayback Machine archive, captured January 26, 2017, for <http://soapdelinews.com/2016/11/easy-homemade-deodorantrecipe.html> (“Easy Homemade”).

Ex. 1044, Millet, US 2018/0168954 A1, published June 21, 2018 (“Millet”).

Petitioner also relies on the Declaration of Bozena B. Michniak-Kohn, Ph.D. (Ex. 1002) to support its contentions.

G. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–18 would have been unpatentable on the following grounds:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
I	1–7, 9–13, 15–18	103	Lesniak, Phinney, Bianchi '518
II	8	103	Lesniak, Phinney, Bianchi '518, Lamb
III	14	103	Lesniak, Phinney, Bianchi '518, Bianchi '254
IV	1–15, 17, 18	103	Native, Bianchi '254, Easy Homemade
V	16	103	Native, Bianchi '254, Easy Homemade, Millet

H. Claim Construction

The challenged claims should be read in light of the Specification, as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.” (internal quotation marks omitted));

see also 37 C.F.R. § 42.100(b) (stating that claims are construed in IPRs according to the same standard as used in federal court).

Petitioner does not argue that any claim terms require construction. *See generally* Pet. Patent Owner asserts that “reasons exist for denial of institution that do not require addressing the construction of claim terms at this time.” Prelim. Resp. 8.

We determine that no express construction of any claim term is necessary to determine whether to institute *inter partes* review. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). To the extent further discussion of the meaning any claim term is necessary to our decision, we provide that discussion below in our analysis of the asserted grounds of unpatentability.

I. Level of Ordinary Skill in the Art

Petitioner proposes that a person of ordinary skill in the art (“POSA” or “POSITA”) at the time of the invention “would have (1) at least a B.S. or equivalent degree; and (2) at least two years of experience in cosmetics formulations.” Pet. 24 (citing Ex. 1002, ¶¶ 26–28). Patent Owner does not dispute Petitioner’s proposal about the POSA’s qualifications. Prelim. Resp. 8.

For this Decision, we adopt and apply Petitioner’s proposal above, which does not appear to be inconsistent with the level of skill reflected in the asserted prior art.

II. DISCRETIONARY DENIAL UNDER 35 U.S.C. § 325(d)

Patent Owner argues that the Petition should be denied under 35 U.S.C. § 325(d). Prelim. Resp. 21–30. In determining whether to deny institution under § 325(d), we use

the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of [the] first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6, 8 (PTAB Feb. 13, 2020) (precedential).

The *Becton, Dickinson* factors provide useful insight into how to apply the framework under 35 U.S.C. § 325(d). *Id.*, 9 (referencing *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph)).

A. Brief Summary of Prosecution of the '999 patent

The '999 patent's filing date as application No. 17/194,437 ("the '437 Application") is March 8, 2021. *Id.*, codes (21), (22). The '999 patent claims priority, through parent continuation applications No. 16/716,542 (now U.S. Patent 10,966,915 B2) and No. 16/021,965 (now U.S. Patent 10,543,164 B2), to provisional applications No. 62/647,104, filed March 23, 2018, and No. 62/527,180, filed June 30, 2017. Ex. 1001, codes (60), (63), 1:7–13.

On May 31, 2022, the Examiner rejected claims on the basis of: (i) anticipation by or obviousness over U.S. Patent 5,433,943 ("Osipow") and (ii) nonstatutory double patenting. Ex. 1033, 1–11; Ex. 2002. In response, Applicant filed a terminal disclaimer and amended the sole independent

claim to: (i) require that “the at least one antimicrobial” comprises magnesium hydroxide and (ii) deleted a limitation regarding secondary structurants. Ex. 1033, 15–18. The examiner issued a Notice of Allowance on October 20, 2022. *Id.*, 22–32. In that Notice of Allowance, the Examiner stated the following as a reason for allowance of the ’999 patent claims:

Osipow does not disclose the use of magnesium hydroxide . . . , nor is there any teaching within the art to indicate that magnesium hydroxide can be used in deodorant stick compositions.

Ex. 1033, 31.

B. Discussion

1. *Whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office*

Under the first part of the *Advanced Bionics* framework, we consider “whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office.” *Id.*, 8. We evaluate *Becton, Dickinson* factors (a), (b), and (d) to determine whether Petitioner has demonstrated material error. *Id.*, 10. Those factors are:

- (a) the similarities and material differences between the asserted art and the prior art involved during examination;
- (b) the cumulative nature of the asserted art and the prior art evaluated during examination; and
- (d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art.

Becton, Dickinson & Co. v. B. Braun Melsungen AG, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017) (precedential as to § III.C.5, first paragraph). Previously presented art includes art made of record by the

Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (“IDS”), in the prosecution history of the challenged patent. *Id.*, 7–8.

Here, Petitioner concedes that Lesniak was of record during the prosecution of the ’437 Application. Pet. 19. But Petitioner asserts that in the prosecution of a related application, US Patent Application No. 17/961,089 (“the ’089 Application”), which is from a subsequent application in the patent family of the ’437 Application, the same Examiner concluded that the limitations of claim 1 of the ’999 Patent were disclosed by Lesniak, except the feature requiring the antimicrobial to be magnesium hydroxide. *Id.* The Petitioner notes that, despite claim amendments to claim 1 of the ’089 Application, the Examiner still found claim 1 of the ’089 Application to be unpatentable. *Id.*, 20 (citing to Ex. 1034, 20–33).

Patent Owner responds that the Examiner was aware of Lesniak, in addition to Phinney, as indicated by the Information Disclosure Statement of record. Prelim. Resp. 25 (citing to Ex. 2001, 132, 137). With regard to Petitioner’s reliance on the ’089 Application and its use of Lesniak during its prosecution, the Patent Owner counters that Petitioner’s understanding of the Examiner’s awareness of the reference is “pure speculation,” and that Lesniak was in front of the Examiner “for years throughout the prosecution of the parent applications to the ’999 patent.” *Id.*, 25.

We determine that the first part of the *Advanced Bionics* framework is satisfied. While the Examiner did not specifically apply Lesniak to the grounds of rejection for ’437 Application, the Examiner was aware of Lesniak during its prosecution as evidence by its inclusion on an IDS acknowledged by the Examiner. Pet. 19; Ex. 2001, 132. Furthermore, we note that there is no dispute that the cited art Phinney was before the

Examiner during prosecution of the '999 patent. Pet. 6; Prelim. Resp. 23; Ex. 2001, 137; Ex. 1004.

We turn to whether Petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims when it considered Lesniak and Phinney.

2. *Whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims*

Under the second part of the *Advanced Bionics* framework, we consider “whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics*, Paper 6, 8. “An example of a material error may include misapprehending or overlooking specific teachings of the relevant prior art where those teachings impact patentability of the challenged claims.” *Id.*, 8 n.9. We evaluate *Becton, Dickinson* factors (c), (e), and (f) to determine whether Petitioner has demonstrated material error. *Id.*, 10. Those factors are:

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection; . . . (e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and (f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, Paper 8 at 17–18.

As described above, Petitioner contends that Lesniak was applied to claim 1 of the '089 Application, a subsequent application from the '437 Application. Pet. 19. However, Patent Owner counters that “[t]he Petition does not explicitly address *any* material error the Examiner allegedly committed.” Prelim. Resp. 29. On November 14, 2024, Petitioner requested

authorization from the Board to file a Reply in each of IPR2024-01104, IPR2024-01105, IPR2024-01173, and IPR2024-01174 to address Patent Owner's argument in the Preliminary Response that the Petition should be discretionarily denied under 35 U.S.C. § 325(d). *See* Ex. 3001. We granted additional briefing on this issue with respect to this proceeding, IPR2024-01104. *See* Paper 8.

In Reply to the Patent Owner Preliminary Response, the Petitioner states that “the Examiner erred by overlooking Phinney’s teachings” in the prosecution of the ’999 patent. Reply, 5. Specifically, Petitioner contends that, during prosecution, the Examiner stated “‘Osipow does not disclose . . . magnesium hydroxide” and that there was no ‘art to indicate that magnesium hydroxide can be used in deodorant stick compositions.’” *Id.* (quoting Ex. 1033, 31). However, as noted by Petitioner, Phinney is prior art and of record during prosecution and expressly states that magnesium hydroxide can be included in its formulation. *Id.* (citing Prelim Resp. 27); *see also*, Ex. 1004, 5:46–50 (“A suitable and simple agent . . . is magnesium hydroxide, (milk of magnesia). It has low solubility and therefore does not “wash away” under heavy perspiration. The pH is in the range of 10.0 and magnesium hydroxide provides 16-20 hour protection and more for a broad cross section of people.”).

In view of the above, we are persuaded that the evidence of record (i.e., Phinney) appears to teach the inclusion of magnesium hydroxide in a deodorant stick composition. Hence, we are persuaded that Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art in allowing claim 1 over Osipow and Phinney, specifically, that the Examiner did not adequately consider Phinney’s disclosure that magnesium hydroxide could be used in deodorant stick compositions.

Accordingly, we determine that Petitioner demonstrates that the Office erred in a manner material to the patentability of the challenged claims.

3. *Summary*

For the reasons discussed above, we decline to exercise our discretion under § 325(d) to deny the Petition.

III. ANALYSIS

A. *Introduction*

“In an *inter partes* review, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015). Moreover, a petitioner should not “place the burden on [the Board] to sift through information presented by the Petitioners, determine where each element [of the challenged claims] is found in [the cited references], and identify any differences between the claimed subject matter and the teachings of [the cited references.]” *Google Inc. v. EveryMD.com LLC*, IPR2014-00347, Paper 9 at 25 (PTAB May 22, 2014).

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3)

the level of ordinary skill in the art; and (4) objective evidence of nonobviousness.¹ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

The obviousness inquiry also typically requires an analysis of “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)). A petitioner cannot prove obviousness with “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Rather, a petitioner must articulate a sufficient reason why a person of ordinary skill in the art would have combined the prior art references. *In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish a reasonable likelihood of success at trial.

B. Summary of the Cited Prior Art

1. Lesniak (Ex. 1003)

Lesniak is titled “NON-GREASY PERSONAL CARE COMPOSITIONS.” Ex. 1003, code (54). Lesniak provides an anhydrous personal care composition, comprising

- (a) at least one ester, wherein said at least one ester is selected from one or more of the following groups: (i) triglycerides, (ii) diglycerides, (iii) monoglycerides, (iv) monoesters of dials, and (v) diesters of dials, and wherein a total concentration of said at least one ester is 45 to 60 weight %, based on the total weight of

¹ Patent Owner does not present any objective evidence of nonobviousness (i.e., secondary considerations) for the challenged claims at this time.

the composition; (b) a first wax having a melting point of 35° C. to 72° C. present in an amount of 5 to 25 weight %, based on the total weight of the composition; (c) a second wax having a melting point of 73° C. to 90° C. present in an amount of 0.5 to 15 weight% based on the total weight of the composition; (d) at least one plant oil having a saponification value of 150 to 275 mg KOH/g, wherein a total concentration of said at least one plant oil is from 5 to 35 weight%, based on the total weight of the composition.

Id., 5:32–48. Lesniak describes that “[o]ptionally, the at least one ester is a combination of caprylic triglyceride and capric triglyceride” in ranges from 50–60 weight %, based on the total weight of the composition. *Id.*, 2:38–39, 3:42–44. “Optionally, the composition further comprises zinc oxide . . . present in a concentration of 10 to 30 weight %.” *Id.*, 3:39–42. Lesniak describes that the composition may be in the form of a stick. *Id.*, 4:22. According to Lesniak, the compositions possess “good micro-robustness, . . . reduced greasiness and an improved after-feel (such as reduced tackiness and drag) on the skin as compared to other anhydrous compositions[, and] . . . are also physically stable at high and low temperatures.” *Id.*, 5:50–54.

Lesniak discloses a desire to “to formulate such compositions from all-natural ingredients (i.e. ‘100% natural’ compositions).” *Id.*, 5:29–31. Lesniak discloses that “the term ‘natural compositions’ indicates that the composition is formulated from ingredients which are extracted from the earth or sea, derived from plants, or synthesized by other organisms.” *Id.*, 4:61–64. Lesniak discloses that the composition may comprise “essential oils which may be used as natural fragrances.” *Id.*, 8:38.

2. *Phinney (Ex. 1004)*

Phinney is titled “DEODORANT FORMULATION.” Ex. 1004, code (54). Phinney relates to a deodorant “formulation and preparation thereof

with natural ingredients in the absence of heavy metal complexes and/or petroleum based or related compounds.” *Id.*, 1:7–9. Phinney discloses finding that “a mixture of the hydroxides of zinc and magnesium could provide long lasting protection against odour due to perspiration . . . and are dispersible in aerosols, moisturizing creams, sticks, sprays and roll-on type applicators.” *Id.*, 1:17–22.

Phinney explains that zinc and aluminum oxide are “very unreactive against perspiration odour due to insolubility and low hydrolysis rate.” *Id.*, 2:35–36. According to Phinney, “magnesium hydroxide, . . . has low solubility and therefore does not ‘wash away’ under heavy perspiration” and thus “provides 16–20 hour protection and more for a broad cross section of people.” *Id.*, 5:47–51. Phinney discloses an embodiment of a specific formulation prepared as a solid stick that “includes magnesium oxide in an amount of between 1% and 2.5% by weight and zinc oxide in an amount of between 0.5% and 1.5% by weight.” *Id.*, 6:32–34, 6:12, 8:46–57 (claim 1).

3. *Lamb (Ex. 1005)*

Lamb is an article titled “SODIUM BICARBONATE: AN EXCELLENT DEODORANT” that was published in *The Journal of Investigative Dermatology*. Ex. 1005, 131. Lamb describes a study that evaluated the effectiveness of baking soda as an underarm deodorant in 90 patients. Ex. 1005, 131–33. Lamb hypothesizes that the perspiration’s free fatty acids, which possess a disagreeable odor, forms a less malodorous sodium salt in the presence of sodium bicarbonate. *Id.*, 133. Based on the results of the study, Lamb concludes that “bicarbonate of soda is a valuable underarm deodorant for common daily usage.” *Id.* Lamb observed that “[n]o furunculosis,” or boils, “developed in over 90 cases which have used

bicarbonate of soda over periods of from four weeks to a year's duration.”

Id.

4. *Bianchi '518 (Ex. 1006)*

Bianchi '518 is titled “LOW RESIDUE SOLID ANTIPERSPIRANT.” Ex. 1006, code (54). Bianchi '518 “relates to antiperspirant sticks, substantially free of water and long chain fatty alcohols, which provide the user with excellent antiperspirant efficacy, reduced residue when the composition is first applied to the skin, reduced residue after dry down, high temperature stability, and excellent cosmetics and aesthetics. *Id.*, 1:8–13.

Bianchi '518 discloses that the antiperspirant composition possesses a specification of “Penetration-ASTM D-1321@ 100/77/5 10–16.” *Id.*, 2:57–58. Bianchi '518 explains that

[o]ne important physical parameter affecting consumer acceptance of suspensoid antiperspirant sticks of the invention is hardness as measured by needle penetration. Typical compositions of the invention will range in hardness from about 7.0 to about 14.0 mm as shown by the above mentioned needle penetration test. Products outside this range will typically generate low consumer acceptance ratings.

Id., 6:23–29.

5. *Native (Ex. 1007)*

Native is a printed publication from a website advertising a deodorant product sold in 2016. Ex. 1007, 5–8, 11–12, 14–18. Native is advertised as a “Deodorant That Isn't A Chemistry Experiment,” which contains “NATURAL INGREDIENTS” and is “ALUMINUM-FREE.” *Id.*, 5. Native lists each ingredient for the Native deodorant stick product,

including, *inter alia*, shea butter, beeswax, baking soda, and stearyl alcohol. *Id.*, 6, 11.

The picture on page 5 of Native, reproduced below, illustrates a deodorant product. *Id.*, 5.



The picture of the Native deodorant product, reproduced above, illustrates the deodorant stick in a supine position with the cap removed. *Id.*

6. *Bianchi '254 (Ex. 1008)*

Bianchi '254 is titled "ANTIPERSPIRANT STICK COMPOSITIONS." Ex. 1008, code (54). Bianchi '254 discloses "antiperspirant stick compositions comprising specified amounts of antiperspirant active; carrier oil comprising volatile silicone oil and non-volatile masking oil; structurant comprising fatty alcohol and cosmetically acceptable wax having a melting point of 75 to 95° C., a portion of wax comprises polyethylene in specified amounts." *Id.*, code (57). Bianchi '254 addresses

a need for non-whitening fatty alcohol-containing antiperspirant sticks, particularly sticks containing fatty alcohol at levels of 12% by weight or above, more particularly, 15 wt % or above. Also desired are non-whitening fatty alcohol-containing sticks that have desirable antiperspirant payouts, while providing a 'clean', non-sticky feel. There also remains a need for a non-whitening fatty-alcohol containing stick that provides desirable

payout as well as being thermally stable and resistant to dome collapse at temperatures of 50° C.

Id., ¶ 10. Table 5 of Bianchi '254 provides eight different formulations of antiperspirant sticks with each of their respective components and amounts listed. *Id.*, ¶ 131.

Bianchi '254 explains that the “[t]he hardness of the sticks can be measured in a needle penetration test.” *Id.*, ¶ 26. Bianchi '254 describes the method for measuring stick hardness using a “brass/steel tapered needle (DIN 51-579)” depth on six locations of the stick, “with the hardness values being reported as an average of the six measurements.” *Id.*, ¶ 117.

7. *Easy Homemade (Ex. 1009)*

Easy Homemade is a printed publication of a blog post titled “Easy Homemade Deodorant Recipe with just 3-Ingredients.” Ex. 1009, 5. Easy Homemade describes the blogger’s first experience with natural deodorant, but falling “victim to the burning fiery rash you get after using deodorant with baking soda.” *Id.*, 6. Easy Homemade describes that the blogger discovered that she “could swap the baking soda with magnesium hydroxide - basically the same thing as Milk of Magnesia - and it worked just as well.” *Id.* The Easy Homemade blogger describes melting “two natural deodorants” that are aluminum-free, and making a “[h]uge difference” in each deodorants’ performance by adding “arrowroot powder and magnesium hydroxide to them.” *Id.*, 7. Easy Homemade provides a deodorant recipe and lists “2.15 oz. natural aluminium free deodorant (base) of choice[,], 1 oz. arrowroot powder[,], .5 oz. magnesium hydroxide[,],” to which one may “[a]dd essential oils if desired.” *Id.*, 7–8.

8. *Millet (Ex. 1044)*

Millet is titled “ANHYDROUS DEODORANT COMPOSITION MADE FROM BICARBONATE.” Ex. 1044, code (54). Millet “relates to an anhydrous cosmetic composition made from bicarbonate salt, []the cosmetic use of same as a deodorant,” and “a deodorant product containing said composition.” *Id.*, code (57). Millet describes that it is “possible to formulate anhydrous deodorants . . . in the form of sticks of soft texture, based on ingredients of natural origin,” that “have proved easy to apply, effective against perspiration odors and capable of depositing a soft, non-greasy and non-tacky film on the skin.” *Id.*, ¶ 4. Millet describes adding “pulverulent fillers, which are suitable for absorbing moisture and sweat,” such as, “in particular []native starch, []modified starch and cellulose.” *Id.*, ¶¶ 38, 39; *see also id.* ¶¶ 48–50 (disclosing two examples of a “Deodorant Balm” and each of their respective ingredients and percentage amounts.”).

C. *Ground I: Obviousness over Lesniak, Phinney, and Bianchi ’518*

1. *Petitioner’s Contentions*

Petitioner asserts that claims 1–7, 9–13, and 15–18 are unpatentable under 35 U.S.C. § 103 as obvious over the combination of Lesniak, Phinney, and Bianchi ’518. Pet. 24–37. In support of its assertion, Petitioner provides a detailed discussion explaining how each claim limitation is disclosed in the combination of Lesniak, Phinney, and Bianchi ’518. *Id.* Petitioner’s contentions are supported by the declaration of Dr. Michniak-Kohn. *See generally* Ex. 1002.

2. *Patent Owner’s Contentions*

At this point in the proceeding, Patent Owner does not dispute Petitioner’s characterization of or prior art status of Lesniak, Phinney,

Bianchi '518, or the other references that Petitioner cites. *See generally* Prelim. Resp.

Patent Owner contends that persons of ordinary skill in the art would not have been motivated to combine Lesniak, Phinney, Bianchi '518, or the other references the Petitioner cites, charging that Ground 1 is a “rehash” of proceedings previously in front of the Examiner. Prelim. Resp. 11.

Specifically, the Patent Owner contends that the Petitioner fails to demonstrate there is a reasonable likelihood it will prevail on the merits of Ground 1 allegedly because (1) the Petition fails to adequately explain why persons of ordinary skill in the art would have been motivated to combine Lesniak, Phinney, and Bianchi '518, and (2) the Petition fails to adequately explain how the combination of Lesniak, Phinney, and Bianchi '518 meets the hardness limitation of independent claim 1, also asserting that (3) the dependent claims should not be instituted on for the same reasons. *Id.*, 11–21.

3. Discussion

Having considered the parties' positions and evidence of record, summarized above, we are persuaded, based on the current record, that persons of ordinary skill in the art would have been motivated to combine Lesniak, Phinney, and Bianchi '518 to arrive at the deodorant stick of at least claim 1 with a reasonable expectation of success for the reasons stated in the Petition. Pet. 24–37. In particular, we are persuaded by Petitioner that Lesniak teaches natural anhydrous personal care compositions, including a deodorant stick in the form of an antiperspirant stick. Pet. 24 (citing Ex. 1003, 1:16–35, 4:22, 5:5–32, 10: 27, 10:32–33). Lesniak explains that such compositions include at least one antimicrobial (i.e., zinc oxide) and a

primary structurant with a melting point of at least 50 °C (i.e., beeswax), where the compositions are free of an aluminum salt. *Id.*, 24–25.

While Petitioner concedes that Lesniak does not expressly teach that its compositions include magnesium hydroxide, for that element, Petitioner combines Phinney disclosure for using magnesium hydroxide as an antimicrobial in a deodorant stick. *Id.*, 25–26 (citing Ex. 1004, 2:33–37). And Petitioner provides a reason to combine Lesniak and Phinney, noting that “[b]oth Lesniak and Phinney are directed to deodorants with ‘natural ingredients’ and both describe the use of known antimicrobials”. *Id.*, 26–27 (citing to Ex. 1003, 4:61–5:31, 9:45, 10:27, 10:31–33, 3:39–4:21, 8:31–9:59; Ex. 1004, 1:5–9, 1:15–19, 5:52–67, 6:31–34, 8:40–44). Petitioner concludes that “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.” Pet. 27; Ex. 1002 ¶ 62 (same).

Petitioner also concedes that Lesniak also does not expressly teach hardness as measured by penetration within an ASTM-D 1321 needle test, but that Bianchi ’518 discloses a hardness range by needle penetration. *Id.* at 26–28. By combining these references of record in the manner proposed by the Petitioner, we are persuaded on the record before us that those of ordinary skill in the art would combine the teachings of Lesniak, Phinney, and Bianci ’518 to meet each limitation of claim 1 for the reasons set forth in the Petition. *See e.g. id.*, 27 (“a POSA would have known that hardness was an ‘important physical parameter affecting consumer acceptance,’ and would have looked to achieve hardness levels that were taught in the field to achieve consumer acceptance”); *see also* Ex. 1002 ¶¶ 63–64 (same). Patent

Owner does not substantively challenge Petitioner's contentions with regard to how the combination teaches each element of claim 1.

Patent Owner argues that the Petition fails to adequately explain why persons of ordinary skill in the art would have been motivated to combine Lesniak, Phinney, and Bianchi '518. Prelim. Resp. 11. We disagree, and note that Petitioner does, indeed, articulate a rational motivation to combine, stating that both Lesniak and Phinney are directed to deodorants with "natural ingredients" and both describe the use of antimicrobials. Pet. 26–27 (citing to Ex. 1003, 4:61–5:31, 9:45, 10:27, 10:31–33, 3:39–4:21, 8:31–9:59; Ex. 1004, 1:5–9, 1:15–19, 5:52–67, 6:31–34, 8:40–44). Lesniak discloses using zinc oxide, a known antimicrobial, and Phinney teaches that combining magnesium hydroxide with zinc oxide improves its antimicrobial properties. *Id.*

Patent Owner further argues that Petitioner fails to adequately explain how the combination of Lesniak, Phinney, and Bianchi '518 meets the hardness limitation of independent claim 1. Prelim. Resp. 16. But this is inconsistent with the Petition because Petitioner acknowledges that Lesniak is deficient in its teachings of hardness as measured by penetration with an ASTM-D 1321 needle. Pet. 26. Petitioner indicates that Bianchi '518 teaches needle hardness within the claimed hardness range. *Id.* (citing to Ex. 1006, 2:56–58, 6:23–29).

Next, Patent Owner asserts that no trial should be instituted for the dependent claims for the same reasons as claim 1. Prelim. Resp. 21. Because the Petitioner has demonstrated a reasonable likelihood of prevailing in showing that claim 1 is obvious over the combination of Lesniak, Phinney, and Bianchi '518, the Patent Owner's arguments suffer the same deficiencies as claim 1.

4. Conclusion

For the foregoing reasons, we determine that Petitioner has shown a reasonable likelihood that at least one of the challenged claims of the '999 patent is unpatentable. Accordingly, we institute an *inter partes* review of claims 1–18 of the '999 patent. *SAS*, 138 S. Ct. at 1359–60.

D. Ground II: Obviousness over Lesniak, Phinney, Bianchi '518, and Lamb

Petitioner asserts that claim 8 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Lesniak, Phinney, Bianchi '518, and additionally Lamb. Claim 8 depends from claim 1 and further requires that the recited deodorant stick further comprise baking soda. Ex. 1001, 16:12–13. Petitioner contends that Lamb discloses a deodorant stick comprising baking soda as an effective antimicrobial. Pet. 37 (citing Ex. 1005, 132). Petitioner contends that a person of ordinary skill in the art would have been motivated to add baking soda to a deodorant stick composition because “[a] POA would have recognized that deodorant compositions often use multiple antimicrobials” and because Lamb discloses “that baking soda is an ‘excellent deodorant’ that ‘lasts through the entire day.’” *Id.*, (citing Ex. 1005, 131–33; Ex. 1002 ¶¶ 98–100).

Patent Owner at this stage does not offer any arguments addressing Petitioner’s substantive showing with regard to claim 8. Rather, Patent Owner’s arguments as to this challenge refer back to the discussion with respect to Ground 1, which we have discussed above. *See* Prelim. Resp. 21 (“Because Petitioner failed to meet its burden with respect to independent claim 1, Petitioner’s challenge of the dependent claims in Grounds 1–3 similarly fail.”).

Having considered the parties' positions and evidence of record, we determine that Petitioner has shown a reasonable likelihood that claim 8 of the '999 patent is unpatentable as obvious over the combination of Lesniak, Phinney, Bianchi '518, and Lamb.

E. Ground III: Obviousness over Lesniak, Phinney, Bianchi '518, and Bianchi '254

Petitioner asserts that claim 14 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Lesniak, Phinney, Bianchi '518, and additionally Bianchi '254. Claim 14 depends from claim 1 and further requires that the primary structurant of the recited deodorant stick is stearyl alcohol. Ex. 1001, 16: 30–31. Petitioner contends that Bianchi '254 discloses stearyl alcohol as a structurant widely used for deodorants and describes examples including 12-25% stearyl alcohol as the structurant present in the greatest amount. Pet. 40 (citing Ex. 1008 ¶¶ 1, 10, 18, 19, 58).

Patent Owner at this stage does not offer any arguments addressing Petitioner's substantive showing as to how the combination teaches each limitation of dependent claim 14. Rather, Patent Owner's arguments as to this challenge is the same as those with respect to Ground 1, which we have discussed above and found unpersuasive. Prelim. Resp. 21.

Having considered the parties' positions and evidence of record, we determine that Petitioner has shown a reasonable likelihood that claim 14 of the '999 patent is unpatentable as obvious over the combination of Lesniak, Phinney, Bianchi '518, and Bianchi '254.

F. Ground IV: Obviousness over Native, Bianchi '254, and Easy Homemade

1. Petitioner's Contentions

Petitioner asserts that claims 1–15 and 17–18 are obvious over Native in view of Bianchi '254 and Easy Homemade. Pet. 43. In support of this assertion, Petitioner describes the Native reference as a printed publication from a website for the Native deodorant product, which describes the product as “a natural, aluminum-free deodorant stick” marketed and sold in 2016. Pet. 43 (citing to Ex. 1007, 5, 11). Petitioner believes persons of ordinary skill in the art “looking to formulate new deodorant compositions would have looked to existing formulations and would have understood that commercial deodorant brands typically provided ingredient lists of their products on their websites.” *Id.*

Petitioner argues that Native discloses each feature of independent claim 1 except the percentage of each ingredient used and the recited hardness of independent claim 1. *Id.*, 44. However, Petitioner asserts that Bianchi '254 establishes these percentages (concentrations) as conventional and also establishes the claimed hardness range as “standard.” *Id.* Last, Petitioner contends that Easy Homemade explains that magnesium hydroxide can replace baking soda as the antimicrobial. *Id.*, 44–45. The Petitioner concludes that it would have been obvious to arrive at the composition of claim 1 by combining Native, Bianchi '254, and Easy Homemade in the manner just described and provides a motivation to do so. Pet. *Id.*, 46–48. Petitioner asserts this combination has a reasonable expectation of success because persons of ordinary skill in the art would look to teachings about deodorant compositions and the “various combinations of known ingredients, such as antimicrobials, structurants, and

carrier oils, as simple design choices.” *Id.*, 49 (citing to Ex. 1002 ¶¶ 118–120).

2. *Patent Owner’s Contentions*

Patent Owner responds to the contentions of Petitioner by asserting that the Petitioner fails to demonstrate that there is a reasonable likelihood it will prevail on the merits. Prelim. Resp. 30. Specifically, Patent Owner asserts that the Petition fails to adequately explain why a person of ordinary skill in the art would have been motivated to combine Native, Bianchi ’254, and Easy Homemade and also questions how the combination of these three references meets the hardness limitation of independent claim 1. *Id.*, 30–35.

3. *Discussion*

Having considered the parties’ positions and evidence of record, summarized above, we determine that the information in the Petition establishes that the Petitioner has a reasonable likelihood of prevailing in showing that claim 1 is obvious over the combination of Native, Bianchi ’254, and Easy Homemade. Based on the current record, we are persuaded that those of ordinary skill in the art would have motivated to combine Native, Bianchi ’254, and Easy Homemade in at least the manner described by Petitioner and arrive at the composition of independent claim 1.

As the Petition discusses, Native discloses an aluminum-free deodorant stick including an antimicrobial and a primary structurant with a melting point of at least 50 °C. Pet. 49–51. Petitioner concedes that Native does not expressly disclose that the antimicrobial includes magnesium hydroxide, but Petitioner explains how a POSA would look to Easy Homemade and its disclosure of magnesium hydroxide as an antimicrobial for deodorant since Native is a deodorant and Easy Homemade describes ways of making deodorant with various ingredients, including magnesium

hydroxide. *Id.*, 50. Petitioner concedes that Native does not expressly disclose the claimed hardness of claim 1, but Petitioner describes how Bianchi '254 discloses hardness as measured by needle penetration. Petitioner further explains that a POSA would have been motivated to combine the hardness disclosure of Bianchi '254 with Native because, as Bianchi '254 explains, consumers prefer certain hardness levels in deodorant. *Id.*, 52. Hence, we determine that Petitioner has shown sufficiently a reasonable likelihood of prevailing in showing the combination of Native, Bianchi '254, and Easy Homemade renders claim 1 obvious based on the Petition and the current record.

While Patent Owner contends that a POSA would not have been motivated to combine the teachings of Native, Bianchi '254, and Easy Homemade as described above, we disagree. In particular, Patent Owner charges that “Petitioner fails to adequately show why a POSA would have been motivated to look at [Easy Homemade’s] soap blog in the first place or why a POSA would have found it necessary to modify the already-successful Native product.” Prelim. Resp. 31. But as Petitioner already explained in its Petition, “Easy Homemade is a printed publication from a website dedicated to natural deodorant formulations. Pet. 45. Since the Native product is a deodorant stick and Easy Homemade describes how to make deodorant compositions, a POSA would have reason to review the disclosure of Easy Homemade and apply its teachings, for example, its teaching that magnesium hydroxide could be used to replace baking soda as an antimicrobial in deodorant compositions. Pet. 45 (citing Easy Homemade 6, 9); *see also* Ex. 1002 ¶¶ 110–113 (Dr. Michniak-Kohn testifying that Native was a well-known product, that baking soda was known to “cause skin irritation for some users,” and that “it would be obvious to use

magnesium hydroxide as a substitute to baking soda in the composition of Native, as taught by Easy Homemade.”).

Hence, contrary to Patent Owner’s contention that Petitioner has not articulated why POSA would be motivated to combine Native, Bianchi ’254, and Easy Homemade, Petitioner has, indeed, articulated a persuasive motivation as to why Native, Bianchi ’254, and Easy Homemade would be combined. Therefore, we are persuaded by Petitioner’s contention that, based on the current record, Petitioner has shown sufficiently that it has a reasonable likelihood in prevailing in showing that claim 1 would have been obvious over Native, Bianchi ’254, and Easy Homemade.

4. Conclusion

For the foregoing reasons, we determine that Petitioner has shown a reasonable likelihood that at least one of the challenged claims of the ’999 patent is unpatentable.

G. Ground V: Obviousness over Native, Bianchi ’254, and Easy Homemade

Petitioner asserts that claim 16 is unpatentable under 35 U.S.C. § 103 as obvious over the combination of Native, Bianchi ’254, Easy Homemade, and Millet. Claim 16 depends from claim 1 and further requires that the recited deodorant stick of claim 1 also include tapioca starch. Ex. 1001, 16: 35–36. Petitioner contends that Millet teaches starch as an “effective filler in deodorants capable of absorbing sweat and moisture and that tapioca starch is specifically preferable. Pet. 63–64 (citing Ex. 1044, ¶¶ 38, 39, 42). Accordingly, Petitioner alleges it would have been obvious to use tapioca starch in the Native deodorant stick, as taught by Millet. Id (citing Ex. 1002, ¶ 165).

Consistent with Ground 4, Patent Owner at this stage does not offer any arguments addressing Petitioner's substantive showing of how each claim limitation is met by the combination. Rather, Patent Owner's arguments as to this challenge are similar to those raised for the previously discussed Ground 4, which we have addressed above. Prelim. Resp. 33. Accordingly, for the reasons discussed above, we determine that Petitioner has shown a reasonable likelihood that claim 16 of the '999 patent is unpatentable as obvious over the combination of Native, Bianchi '254, Easy Homemade, and Millet.

IV. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated a reasonable likelihood of success in proving that at least one of the challenged claims of the '999 patent is unpatentable. We therefore institute trial on all challenged claims under the grounds raised in the Petition. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (indicating that a decision whether to institute an *inter partes* review "require[s] a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition"); 37 C.F.R. § 42.108(a). We emphasize that, at this stage of the proceeding, we have not made a final determination with respect to the patentability of any of the challenged claims.

Any argument not raised in a timely Patent Owner Response to the Petition, or as permitted in another manner during trial, shall be deemed waived even if asserted in the Preliminary Response. *See In re NuVasive, Inc.*, 842 F.3d 1376, 1380–81 (Fed. Cir. 2016) (holding Patent Owner waived an argument addressed in the Preliminary Response by not raising the same argument in the Patent Owner Response). In addition, nothing in

this Decision authorizes Petitioner to supplement information advanced in the Petition in a manner not permitted by the Board's Rules.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to claims 1–18 of the '999 patent based on the unpatentability challenges presented in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial commencing on the entry date of this decision.

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