

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RED DIAMOND, INC.,
Petitioner,

v.

SOUTHERN VISIONS, LLP,
Patent Owner.

IPR2019-01662
Patent 9,725,232 B2

Before CHRISTOPHER L. CRUMBLEY, JEFFREY W. ABRAHAM, and
CHRISTOPHER C. KENNEDY, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Granting In Part Patent Owner's Revised Motion to Amend
35 U.S.C. § 318

I. INTRODUCTION

Petitioner, Red Diamond, Inc., filed a Petition for *inter partes* review of claims 1, 8, 13, and 17 of U.S. Patent No. 9,725,232 B2 (Ex. 1001, “the ’232 patent”). Paper 1 (“Pet.”). Patent Owner, Southern Visions, LLP, did not file a Preliminary Response. On April 1, 2020, we instituted trial. Paper 6 (“Inst. Dec.”).

Following institution, Patent Owner did not file a Response. Instead, Patent Owner filed a Motion to Amend requesting that we cancel claims 1, 8, 13, and 17, unconditionally consider its Motion to Amend, and enter proposed substitute claims 19–22. Paper 8 (“MTA”) 1. Petitioner filed an opposition. Paper 11. Pursuant to Patent Owner’s request (MTA 1) we issued Preliminary Guidance, explaining that Patent Owner had not shown a reasonable likelihood that it satisfied the statutory and regulatory requirements associated with a motion to amend, and that Petitioner had demonstrated a reasonable likelihood that the proposed substitute claims 19–22 were unpatentable. Paper 13 (“PG”) 3, 8.

Patent Owner subsequently filed a Revised Motion to Amend requesting “that the Board cancel original claims 1, 8, 13 & 17, unconditionally consider this Motion, and enter [proposed substitute] claims 23–26.” Paper 14 (Revised MTA) 1. Petitioner filed an Opposition to the Revised Motion to Amend (Paper 26 (“Opp.”)), Patent Owner filed a Reply (Paper 30), and Petitioner filed a Sur-reply (Paper 32).

We held an oral argument on January 29, 2021. A copy of the transcript of that argument was entered into the record. Paper 35 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6, and we issue this Final Written Decision under 35 U.S.C. § 318(a). For the reasons below, we grant

Patent Owner's Revised Motion to Amend with respect to Patent Owner's request that we cancel original challenged claims 1, 8, 13, and 17, but we deny Patent Owner's Revised Motion to Amend with respect to Patent Owner's request that we enter proposed substitute claims 23–26.

A. RELATED MATTERS

The parties identify the following related district court matter: *Southern Visions, LLP v. Red Diamond, Inc.*, No. 2:18-cv-02039-RDP (N.D. Ala.). Pet. 12–13; Paper 4, 1. The parties also identify PGR2019-00045 involving related U.S. Patent No. 10,071,852, IPR2019-01661 involving related U.S. Patent No. 9,468,222, IPR2019-01662 involving related US Patent No. 9,725,232, and IPR2020-00001 involving related US Patent No. 9,549,634. Pet. 12–13; Paper 4, 1. Additionally, Patent Owner identifies related U.S. Patent No. 10,093,480, U.S. Patent No. 10,130,209, and U.S. Application No. 16/166,862. Paper 4, 1.

B. THE '232 PATENT

The '232 patent, titled "Beverage Brewing Product," issued on August 8, 2017, and relates to a products for brewing sweetened beverages such as tea and coffee. Ex. 1001, codes (45), (54), (57). The '232 patent issued from U.S. Application 15/375,881 ("the '881 application"). Ex. 1001, code (21). The '881 application is a continuation-in-part of U.S. Application 14/485,878, which is a continuation-in-part of U.S. Application 13/965,498, which is a continuation-in-part of U.S. Application 13/867,526 ("the '526 application"). Ex. 1001, code (63).

The '232 patent states that prior art methods of brewing sweetened beverages, which include manually adding sugar to a beverage after it brews,

result in “a lack of consistency from one batch of beverages to the next” because, for example, “one usually does not have a scale to weigh out” the sweetener, which results in variation of Brix level¹ among batches. Ex. 1001, 1:24–46. The ’232 patent aims “to provide an accurate and consistent way of brewing sweetened beverages.” Ex. 1001, 2:58–60. To that end, the ’232 patent discloses brewing products that “contain[] beverage materials and sweetener in a prescribed blended ratio.” Ex. 1001, 3:4–8.

The ’232 patent attributes significance to the mesh size and particle size of the sweetener. For example, the patent discloses that “[i]t has been found . . . that an advantageous size of particles of sweetener, particularly sugar, is that retained by US sieve numbers 3–35, although granule sizes larger than 3 will work as well.” Ex. 1001, 9:23–27; *see also* Ex. 1001, 4:18–21 (“Preferably, the size of the granulated sugar particles used is in the range of U.S. mesh sieve nos. 3–35; although, particles the size of U.S. mesh sieve nos. 3 or larger will work successfully in the present invention.”). According to the ’232 patent, “[t]he sweetener dissolves rapidly and more fully . . . when the granular size of the sweetener is generally U.S. Mesh sieve 35 or larger . . . as opposed to when the granular size of the sweetener is generally smaller than U.S. Mesh sieve 35.” Ex. 1001, 11:66–12:4.

C. LEVEL OF ORDINARY SKILL IN THE ART

In the Institution Decision, we determined that “a person of ordinary skill in the art would have had sufficient experience and/or education in the food industry to possess an understanding of (1) sugar particle size as it

¹ “One degree Brix is one gram of sucrose in 100 grams of solution Brewed sweetened tea has a typical Brix level of 10½ to 11.” Ex. 1001, 1:35–43.

pertains to brewed beverages, (2) sugar particle size screening, and (3) the storage and use of sugar in commercial settings.” Inst. Dec. 7. We observed that this level of ordinary skill is consistent with the level of ordinary skill that we adopted in a related case that involves similar subject matter. *See Red Diamond, Inc. v. Southern Visions, LLP*, PGR2019-00045, Paper 9 at 6–8 (PTAB Oct. 15, 2019). We also asked the parties to expressly discuss the level of ordinary skill in the art in the remaining briefing if either party disagreed with our determination. Inst. Dec. 8.

For purposes of this Final Written Decision, we maintain our determination from the Institution Decision because neither party disputes the level of ordinary skill identified in the Institution Decision (*see* Revised MTA 12–13), and because we continue to find that the stated level of ordinary skill is consistent with the record.

II. MOTION TO AMEND

A. ORIGINAL CHALLENGED CLAIMS

As noted above, Patent Owner requests that we “unconditionally consider” the Revised Motion to Amend and cancel original claims 1, 8, 13, and 17. Revised MTA 1. Because Patent Owner has not indicated that our consideration of the Revised Motion to Amend is contingent on a determination that original challenged claims 1, 8, 13, and 17 are unpatentable, we grant Patent Owner’s request to cancel original challenged claims 1, 8, 13, and 17. *See Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 3 (PTAB Feb. 25, 2019) (precedential) (“*Lectrosonics*”) (“A request to cancel claims will not be regarded as contingent.”). The

remaining issue before us is whether to grant the Revised Motion to Amend as to proposed substitute claims 23–26.

B. APPLICABLE LAW

In reviewing a motion to amend, we consider whether the motion meets the statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) (2012) and 37 C.F.R. § 42.121 (2019). *See Lectrosonics*, Paper 15 at 4. That is, the patent owner must demonstrate the following: (1) the amendment proposes a reasonable number of substitute claims; (2) the amendment responds to a ground of unpatentability involved in the trial; (3) the amendment does not seek to enlarge the scope of the claims of the patent or introduce new subject matter; and (4) the proposed claims are supported in the original disclosure of the patent. *See* 35 U.S.C. § 316(d) (2012); 37 C.F.R. § 42.121 (2019); *see also Lectrosonics*, Paper 15 at 4–8.

We also consider unpatentability. In that regard, a patent owner “does not bear the burden of persuasion to demonstrate the patentability of [the proposed] substitute claims.” *Lectrosonics*, Paper 15 at 4 (citing *Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017); *Bosch Auto. Serv. Sols. LLC v. Matal*, 878 F.3d 1027 (Fed. Cir. 2017)). “Rather, as a result of the current state of the law and [U.S. Patent and Trademark Office] rules and guidance, the burden of persuasion ordinarily will lie with the petitioner to show that any proposed substitute claims are unpatentable by a preponderance of the evidence.” *Lectrosonics*, Paper 15 at 4.

C. PROPOSED SUBSTITUTE CLAIMS

Patent owner moves to replace original claims 1, 8, 13, and 17 with proposed substitute claims 23–26, respectively. Revised MTA 1.

The proposed substitute claims, with underlining indicating language added to, and strikethrough indicating language removed from, the original claims, are reproduced below. *See Revised MTA, Appendix A (Listing of Proposed Substitute Claims).*

23. A beverage brewing product for producing a concentrated solution for mixing with a proportioned amount of water to make a sweetened tea beverage comprising:

at least one water permeable sieve for placement in a container of a commercial iced tea brewing machine;

~~a flavored concentrate~~ tea particles and granulated sugar contained in said at least one water permeable sieve;

wherein said granulated sugar includes particles having a size in the range of U.S. mesh sieve nos. 3 to 35;

said permeable sieve having openings being generally smaller than the size of the particles of said ~~concentrate~~ tea particles and said sugar for the retention of said particles of said sugar and said ~~concentrate~~ tea particles; ~~and so that said particles of said sugar are dissolved in said container during steeping in water and a said concentrated solution is produced to be diluted with a said proportioned amount of water for making said sweetened tea beverage; and~~

wherein said beverage brewing product is capable of producing said sweetened tea beverage having a Brix value when said beverage brewing product is steeped in said commercial iced tea brewing machine using a sugar-to-water ratio of one pound of sugar per gallon of water dispensed by said commercial iced tea brewing machine to produce said sweetened tea beverage, wherein said Brix value is at least 10.5 degrees Brix.

24. ~~The beverage brewing product of claim 1~~ A beverage brewing product for producing a concentrated solution for mixing with a proportioned amount of water to make a sweetened tea beverage comprising:

at least one water permeable sieve for placement in a container of a commercial iced tea brewing machine;

tea particles and granulated sugar contained in said at least one water permeable sieve;

wherein said granulated sugar includes particles having a size in the range of U.S. mesh sieve nos. 3 to 35;

said permeable sieve having openings being generally smaller than the size of the particles of said tea particles and said sugar for the retention of said particles of said sugar and said tea particles; so that said particles of said sugar are dissolved in said container during steeping in water and said concentrated solution is produced to be diluted with said proportioned amount of water for making said sweetened tea beverage;

wherein said sieve contains a blend ratio of said ~~flavored concentrate~~ tea particles to said sugar in the range of 1:35 to 1:8025 by weight; and

wherein said beverage brewing product is capable of dissolving more of said granulated sugar in comparison to the use of typical grocery store sugar when producing about 3 gallons of said sweetened tea beverage when steeped in said commercial iced tea brewing machine.

25. The beverage brewing product of claim 423 wherein said at least one water permeable sieve contains a blend ratio of said ~~flavored concentrate~~ tea particles to said sugar granules in the range of 1:35 to 1:8025 by weight;

wherein said Brix value is no greater than achievable when using said sugar-to-water ratio and said granulated sugar contained in said at least one water permeable sieve completely dissolves.

26. A beverage brewing product for producing a sweetened tea beverage comprising:

at least one water permeable sieve for placement in a container of a commercial tea brewing machine;

~~beverage material~~ tea particles and granulated sugar contained in said at least one water permeable sieve;

wherein said granulated sugar includes particles having a size in the range of U.S. mesh sieve nos. 3 to 35;

said permeable sieve having openings being generally smaller than the size of the particles of said ~~beverage material~~ tea particles and said sugar for the retention of said particles of said sugar and said ~~beverage material~~ tea particles; ~~and~~ so that said particles of said sugar are dissolved in said container during steeping in water and said ~~sugar~~ sweetened tea beverage is produced; and

wherein said beverage brewing product contains enough of said particles having a size in the range of U.S. mesh sieve nos. 3 to 35 to achieve the result that more of said granulated sugar dissolves in comparison to the use of typical grocery store sugar when steeped in said commercial tea brewing machine using a ratio of one pound of said granulated sugar for each gallon of said sweetened tea beverage.

D. STATUTORY AND REGULATORY REQUIREMENTS

Petitioner contends the proposed substitute claims fail to meet the statutory and regulatory requirements set forth in 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121. Opp. 1. Among other things, Petitioner argues proposed substitute claims 23 and 25 introduce new matter in violation of 35 U.S.C. § 316(d)(3). Opp. 1; *see* 37 C.F.R. § 42.121(a)(2)(ii).

“[T]he Board requires that a motion to amend set forth written description support in the originally filed disclosure of the subject patent for each proposed substitute claim, and also set forth support in an earlier filed disclosure for each claim for which benefit of the filing date of the earlier filed disclosure is sought.” *Lectrosonics*, Paper 15 at 7 (citing 37 C.F.R. §§ 42.121(b)(1) and (2)).

Proposed substitute claim 23 includes the following new limitation:

wherein said beverage brewing product is capable of producing said sweetened tea beverage having a Brix value when said beverage brewing product is steeped in said commercial iced tea brewing machine using a sugar-to-water ratio of one pound of sugar per gallon of water dispensed by said commercial iced tea brewing machine to produce said sweetened tea beverage, wherein said Brix value is at least 10.5 degrees Brix.

Revised MTA, Appendix A at 1. Proposed substitute Claim 25 depends from claim 23, and thus also includes this limitation.

Patent Owner refers to this new limitation of proposed substitute claims 23 and 25 as the “functional limitation” and cites to paragraphs 3–5, 7–9, 11, 16, 17, 35, 51, 56, 57, and 61 of the ’881 application (Ex. 2063) and paragraphs 2, 3, 6–10, 23, 25, 27, 28, and 31 of the ’526 application (Ex. 2025) for written description support. Revised MTA 2. In particular, Patent Owner contends the applications disclose the following:

- (1) placing a mesh bag containing tea and large sugar in a basket of a commercial iced tea brewing (ITB) machine, starting the brewing cycle, and producing sweet tea in the machine’s urn (Revised MTA 4 (citing Ex. 2025 ¶¶ 2, 3, 9, 10, 24, 25, 27, 31, cl. 1; Ex. 2063 ¶¶ 4, 5, 11, 12, 16, 17, 26, 51, 61, cl. 1));
- (2) commercial ITB machines have urns capable of holding at least three gallons of tea (Revised MTA 4 (citing Ex. 2025 ¶ 3; Ex. 2063 ¶ 4));
- (3) sweet tea is “typically” at least 10.5 degrees Brix (Revised MTA 4 (citing Ex. 2025 ¶ 2; Ex. 2063 ¶ 3));
- (4) tea is typically sweetened with one pound of sugar per gallon of liquid (Revised MTA 4–5 (citing Ex. 2025 ¶¶ 2, 3; Ex. 2063 ¶¶ 3, 4));

- (5) the U.S. mesh nos. 3–35 range is a preferred range (Revised MTA 5 (citing Ex. 2025 ¶ 10; Ex. 2063 ¶¶ 16, 26, 51, 61));
- (6) “The larger sugar granules allow the water to flow around it” (Revised MTA 6 (quoting Ex. 2025 ¶ 31; Ex. 2063 ¶ 61));
- (7) “A concentrated sweetened tea solution flows out of the brewing basket into the urn . . . for consistently brewing sweet tea” (Revised MTA 6–7 (quoting Ex. 2025 ¶ 31; Ex. 2063 ¶ 61; referring to this statement as the “*functional* result”));
- (8) “One degree Brix is one gram of sucrose in 100 grams of solution” (Revised MTA 6 (citing Ex. 2025 ¶ 2; Ex. 2063 ¶ 3)); and
- (9) “Sugar refiners run sugar through a series of sieves rated with a US mesh number” (Revised MTA 6 (citing Ex. 2025 ¶ 25; Ex. 2063 ¶ 51)).

In addition to these disclosures, Patent Owner argues that a person of ordinary skill in the art “would be aware of commercially available sugar around mesh 3–35,” and “would be able to select from commercially available ‘large’ sugars around mesh 3–35 to achieve the claimed functions.” Revised MTA 5–6 (citing *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1364 (Fed. Cir. 2006)). Patent Owner further argues that the ’881 and ’526 applications “guide creation of a working product because a person of ordinary skill in the art knows how to determine the size of sugar and knows how to measure Brix.” Revised MTA 6 (citing *Ex parte Johnson*, Appeal No. 2009-006686, at 10 (PTAB Dec. 30, 2009)). Patent Owner also contends that a person of ordinary skill in the art, “reviewing both [applications], understands that the *structure* of larger sugar (increased granule size or more large granules), results in the *function* of producing sweet tea as claimed.” Revised MTA 7.

Petitioner argues that the only discussion of Brix levels in the '881 and '526 applications is in the context of prior art, where sweetener is added after brewing. Opp. 2. According to Petitioner, “[t]here is no mention of what Brix levels are achievable by using the claimed invention, i.e., a blend of tea and sugar, together, steeped in at least one sieve having sugar where one or more sugar particles is between the size[s] of 3 - 35 mesh.” Opp. 2 (emphasis omitted).

Petitioner contends that the language “capable of producing a Brix level of at least 10.5 degrees Brix” is a “purely functional recital of a broad genus without giving any supporting structure in the specification of how to accomplish that function.” Opp. 2–3 (citing *Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1349 (Fed. Cir. 2010)). Petitioner asserts that “Patent Owner is attempting to claim a genus of any product that includes one or more sugar particles having a size in the range of U.S. mesh sieve nos. 3–35 that is ‘capable of’ producing the claimed Brix value,” but does not disclose a single species that satisfies the requirement. Opp. 3. Petitioner argues there is no written description support for such broad claims. Opp. 4. Petitioner also argues that testing conducted by Patent Owner’s declarant, Mr. Ebersole, shows the claimed minimum of 10.5 degrees Brix is not necessarily present when sweet tea is made with a product including one or more sugar particles in the range of U.S. mesh sieve nos. 3–35, as claimed. Opp. 2 (citing Ex. 2076 at Exhibit C, 20–29 (Table 3)).

In reply, Patent Owner argues that the '526 and '881 applications provide written description support for the recited Brix value because the applications “provide a typical [Brix] range for ‘sweet tea’” and then “go on

to teach and claim that the disclosed invention produces ‘sweet tea.’” Reply 1. Patent Owner also argues that the claimed genus is narrow due to the amount of sugar and liquid recited in the claims. Reply 2. In particular, Patent Owner contends that proposed substitute claims 23 and 25 recite a range between 10.5 and 13 Brix – as 13 is “the empirically observed maximum Brix (at 1 lb. of sugar per gal.)” Reply 2 (citing Ex. 2076 ¶ 72). Patent Owner contends this entire range is supported without specific examples because a person of ordinary skill in the art “knows about . . . and ‘would have been readily able to choose’ working large granule sugar, even without working examples.” Reply 2–3 (citing *Falko-Gunter*, 448 F.3d at 1364; *Johnson*, Appeal No. 2009-006686). Patent Owner argues that reciting “sugar in the 3–35 range” provides structure for achieving the claimed result, and, therefore, “Patent Owner does not claim *any way* of producing the claimed result – only those ways that use sugar in the 3-35 range.” Reply 3.

The test for sufficiency of written description is whether the disclosure “clearly allow[s] persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Ariad*, 598 F.3d at 1351 (quoting *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562–63 (Fed. Cir. 1991)). The disclosure must “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Id.* After considering the parties’ arguments and evidence, we find that the aforementioned “functional limitation” constitutes new matter and warrants denial of the Revised Motion to Amend with respect to entry of proposed substitute claims 23 and 25.

Proposed substitute claims 23 and 25 require a product, having sugar particles of a size in the range of U.S. mesh sieve nos. 3–35, that is capable of brewing a sweetened tea beverage having a Brix value of at least 10.5 degrees using a ratio of one pound of sugar per gallon of water. Revised MTA, Appendix A at 1, 3. Patent Owner contends the requirement of a Brix value of at least 10.5 degrees is adequately supported because the applications disclose that sweet tea “typically” has a Brix value of 10.5–11, and the claimed products produce sweet tea. Revised MTA 4–5. The discussion of the typical Brix of sweetened tea appears in a paragraph under the heading “Background of the Invention,” and refers to the Brix value of tea made using the conventional tea brewing method involving steeping tea in the brewing basket of a commercial tea brewing machine, passing the concentrated tea solution into the urn, adding cold water to the urn to mix with the concentrated solution, and then adding sugar to the tea. Ex. 2025 ¶¶ 2–3; Ex. 2063 ¶¶ 3–4.

Distinguishing its invention over conventional tea brewing procedures, Patent Owner contends the disclosed invention produces “sweet tea” having a Brix value of at least 10.5 degrees by providing sugar in the brewing basket with the tea, instead of adding sugar to the urn. Revised MTA 4 (citing Ex. 2025 ¶¶ 2, 3, 9, 10, 24, 25, 27, 31, cl. 1; Ex. 2063 ¶¶ 4, 5, 11, 12, 16, 17, 26, 51, 61, cl. 1). It is undisputed, however, that neither the ’881 application nor the ’526 application provide any examples of producing a tea having the required Brix by adding sugar particles in the claimed size range to the tea in the brewing basket of a commercial ITB machine. *See* Revised MTA 3–4; Opp. 2–3; Reply 2; Sur-reply 2.

Notably, testing by Patent Owner’s Declarant, Mr. Ebersole, shows the claimed minimum Brix value of 10.5 degrees is not necessarily achieved simply by combining sugar, having particles of a size in the range of U.S. mesh sieve nos. 3–35, with tea in the brewing basket. Ex. 2076 at Exhibit C, 20–29 (Table 3). Rather, Mr. Ebersole’s testing shows that only certain sugar sizes produced tea having a Brix value of at least 10.5 degrees. Sur-Reply 1–2; Ex. 2076 at Exhibit C, 20–29 (Table 3)). These specific sizes are not identified or otherwise disclosed in the ’881 or ’526 applications. *See* Sur-reply 1–2.

Additionally, Patent Owner acknowledges that “sweetened tea” can have a Brix as low as 5 or 6 degrees. Reply 2 (stating that proposed substitute claims 24 and 26, which are directed to a “sweetened tea beverage,” “lower the bottom of the range” of the Brix value to “about 5–6°”). Similarly, Mr. Adam Stewart, one of the named inventors listed on the ’232 patent, testified that “a Brix of at least 8.0 [degrees] qualifies as ‘sweet tea.’” Ex. 2028 ¶ 69. This evidence undermines Patent Owner’s contention that the inventors possessed the claimed subject matter – a product capable of producing a sweetened tea beverage with a Brix value of *at least 10.5 degrees* – based on the disclosure that the claimed invention produces sweet tea. Instead, the evidence suggests Patent Owner disclosed the “desired result” of matching the prior art in the ’881 and ’526 applications, but did not “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.” *Ariad*, 598 F.3d at 1349, 1351.

We disagree with Patent Owner’s argument that “even with functional claims, the ultimate question is whether a [person of ordinary skill in the art]

‘could derive the claim[s] . . . from the parent’s disclosure.’” Revised MTA 3 (quoting *Union Oil Co. of Cal. v. A. Richfield Co.*, 208 F.3d 989, 1001 (Fed. Cir. 2000)). Patent Owner relies on a truncated quote from *Union Oil*, making the holding appear to have broader applicability than it does when considered in its entirety. The sentence in *Union Oil* Patent Owner quotes appears in the portion of the decision discussing written description in the context of whether the narrow range disclosed in a claim must correspond exactly to those disclosed in the parent application. *Id.* Answering that question, the Federal Circuit stated that “the issue is whether one of skill in the art could derive the ***claimed ranges*** from the parent’s disclosure.” *Id.* (emphasis added). The Federal Circuit also compared the facts in *Union Oil* to those in *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1575, (Fed. Cir. 1985), another case involving claims directed to “ranges and combinations.” *Union Oil*, 208 F.3d at 1001. We discern nothing in *Union Oil* or in *Ralston Purina* indicating that the claims involved functional limitations, and note the Federal Circuit’s statement that “[b]ecause of the fact-sensitive nature of the written description inquiry, this court has often warned against misapplication of precedents in this area.” *Id.* (citing *Vas-Cath*, 935 F.2d at 1562).

Patent Owner also argues that “[w]ritten description may be found by combining patent disclosures with known art, with a disclosed function structure relationship, or with the ability to derive working results based on known testing procedures.” Revised MTA 4 (citing *Falko-Gunter*, 448 F.3d at 1366; *Enzo Biochem, Inc. v. Gen-Probe Inc.*, 323 F.3d 956, 964 (Fed. Cir. 2002); *Johnson*, Appeal No. 2009-006686, at 10–11; *Ex parte Adler*, Appeal No. 2006-00157 (PTAB Mar. 23, 2006)). Patent Owner argues the facts in

the present proceeding are similar to those in *Falko-Gunter* because a person of ordinary skill in the art would have been aware of “commercially available sugar around mesh 3–35,” and would have been able to select from these sugars to achieve the claimed function. Revised MTA 5–6.

We disagree that the facts here are analogous to those in *Falko-Gunter*. The claim in *Falko-Gunter* recited “[a] vaccine comprising . . . a defective poxvirus that lacks a function imparted by an essential region of its parental poxvirus” *Falko-Gunter*, 559 F.3d at 1360. The Federal Circuit held the claim was adequately supported because the specification of the patent at issue disclosed that the invention could be used with any virus where essential genes can be identified and there was evidence in the record (in the form of published articles) that essential genes in poxvirus were known in the art. *Id.* at 1365–66. Thus in *Falko-Gunter*, the Federal Circuit relied on a discussion in the specification of the narrowing feature tied to the “functional” aspect of the claims, and knowledge in the art of this narrowing feature. *Id.* Here, unlike the situation in *Falko-Gunter*, there is no discussion of the narrowing feature (the specific size of the sugar particles within U.S. mesh sieve nos. 3–35 capable of achieving the recited Brix value) of the functional limitation in the ’881 or ’526 applications. Nor is there any indication that the narrowing feature tied to the functional limitation was known in the art. To the contrary, Patent Owner contends the use of larger sugar to achieve the claimed invention was an unexpected result. Revised MTA 22–24.

Drawing a comparison to *Johnson*, Patent Owner contends that the written description requirement is met because the ’881 and ’526 applications “guide creation of a working product . . . and how to test.”

Revised MTA 6. The disputed claim in *Johnson* recited a composition with four components and a pH greater than about 7. *Johnson*, Appeal No. 2009-006686, at 2. The specification of the patent in *Johnson* included examples having all of the recited components, but did not disclose the pH of the exemplary compositions. *Id.* at 4–5. The specification did, however, indicate that pH adjusting agents could be used to achieve the claimed pH, and “provide[d] guidance as to what components could be incorporated into the composition to achieve the claimed” pH value. *Id.* at 11. Based on these disclosures, the Board determined the written description requirement was satisfied. *Id.* In particular, the Board concluded the specification not only described how a person of ordinary skill in the art could determine whether the claimed properties were met, but also that it “provid[ed] guidance as to what components could be incorporated into the composition to achieve the claimed properties.” *Id.*

Johnson, however, is distinguishable because there was specific guidance in the specification regarding what agents could be used to achieve the claimed pH value. *Johnson*, Appeal No. 2009-006686, at 4–5. Here, there is no guidance regarding what specific sugar particles within the range of U.S. mesh sieve nos. 3–35 can be used to achieve the claimed Brix value. Thus, the fact that a person can measure particle size and Brix alone is not enough for written description support of the claimed functional limitations. Furthermore, *Johnson*, a routine decision by another panel of the Board, is not precedential, and we are not bound by it. For all of these reasons, Patent Owner’s reliance on *Johnson* is also unavailing. Revised MTA 6.

Patent Owner also points to the disclosure of the functional result in the Specification, namely “[a] concentrated sweetened tea solution flows out

of the brewing basket into the urn . . . for consistently brewing sweet tea,” arguing that written description may be satisfied through the disclosure of function and minimal structure. Revised MTA 6–7 (quoting MPEP § 2163 (II)(A)(3)(a); *Enzo*, 323 F.3d at 964). In *Enzo*, the Court stated that the written description requirement may be met if the functional characteristic recited in the claim was “coupled with a disclosed correlation between that function and a structure that is sufficiently known or disclosed.” *Enzo*, 323 F.3d at 964. Here, the functional characteristic recited in the claim is producing sweet tea having a Brix of at least 10.5 degrees. Patent Owner has not directed us to “a disclosed correlation between that function and a structure that is sufficiently known or disclosed.” *Id.* Instead, Patent Owner has simply directed us to a very general function, producing “sweet tea” (which includes tea as low as 5 degrees Brix), and a correlation between producing sweet tea and the use of larger sugar in general. We thus disagree that a person of ordinary skill in the art “reviewing both [applications], understands that the *structure* of larger sugar (increased granule size or more large granules), results in the *function* of producing sweet tea **as claimed.**” Revised MTA 7 (bold and underlining emphasis added).

We recognize, as Patent Owner points out, that working examples are not always required to satisfy the written description requirement. Revised MTA 3; *Ariad*, 598 F.3d at 1351; *Falko-Gunter*, 448 F.3d at 1366. We also recognize that “[i]n making his claim the inventor is at liberty to choose his own form of expression” *Cont’l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 419 (1908). Here, Patent Owner chose to use functional language in proposed substitute claims 23 and 25. Addressing functional claim language, the Federal Circuit in *Ariad* stated:

a generic claim may define the boundaries of a vast genus of chemical compounds, and yet the question may still remain whether the specification, including original claim language, demonstrates that the applicant has invented species sufficient to support a claim to a genus. The problem is especially acute with genus claims that use functional language to define the boundaries of a claimed genus. In such a case, the functional claim may simply claim a desired result, and may do so without describing species that achieve that result. But the specification must demonstrate that the applicant has made a generic invention that achieves the claimed result and do so by showing that the applicant has invented species sufficient to support a claim to the functionally-defined genus.

Ariad, 598 F. 3d at 1349.

Structurally, Patent Owner has claimed a broad genus of brewing products – any product that includes sugar having particles in the range of U.S. mesh size nos. 3–35. Patent Owner attempts to further distinguish the genus by including the functional limitation of requiring the product to be capable of producing a tea with a Brix level of at least 10.5 degrees. Patent Owner does not dispute that there are products falling within the structural limitations that do not satisfy the functional limitations. Indeed, there is undisputed testing evidence on the record demonstrating that the entire range of recited structures does not perform the recited function. *See* Ex. 2076 at Exhibit C, 20–29 (Table 3); Revised MTA 8 (Patent Owner arguing the claims only cover products that include particles within the claimed range that perform the recited function).

Here, we discern no evidence on this record of “a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can ‘visualize or recognize’ the members of the genus.” *Ariad*, 598 F.3d at

1350. Nor do we discern “a precise definition, such as by structure, formula, chemical name, physical properties, or other properties, of species falling within the genus sufficient to distinguish the genus from other materials” in the disclosures, or evidence that “the art has established a correlation between structure and function.” *Id.* Instead, we view Patent Owner’s proposed substitute claims to involve “merely drawing a fence around the outer limits of a purported genus,” which “is not an adequate substitute for describing a variety of materials constituting the genus and showing that one has invented a genus and not just a species.” *Id.*

We recognize that the subject matter here is different from, and less complex than, the chemical and biochemical subject matter in *Ariad*. Nevertheless, the written description requirement still requires sufficient description to convey to one of skill in the relevant art that the inventors “had possession of the claimed invention” and “showing that the applicant has invented species sufficient to support a claim to the functionally-defined genus.” *Id.* at 1351, 1356. Thus we consider the difference in technology in determining “the level of detail required to satisfy the written description requirement,” but do not consider the difference in technology to eliminate entirely the need for some disclosure in the specification indicating possession of the claimed invention. *Id.* at 1351.

Patent Owner has not directed us to any portion of the ’526 or ’881 applications showing actual Brix levels achieved by the inventors. *Ariad*, 598 F.3d at 1352 (“[I]t is the specification itself that must demonstrate possession.”). Based on Patent Owner’s own arguments, sweetened tea can have Brix levels as low as 5–6 degrees. Reply 2. Additionally, undisputed test data shows that not all sugar having particles within the claimed size

range of U.S. mesh sieve nos. 3–35 is capable of providing a tea having a Brix of at least 10.5 degrees. Ex. 2076 at Exhibit C, 20–29 (Table 3). In view of the lack of disclosure of the structural features (i.e., sugar granule particle size) of products capable of producing tea having a Brix of at least 10.5 degrees when included in the brewing basket, we do not discern evidence demonstrating a person of ordinary skill in the art would have understood that the inventors had possession of a brewing product meeting the structural limitations that provided a sweetened tea having a Brix of at least 10.5 degrees as claimed.

In view of the foregoing, we find that the functional limitation in proposed substitute claims 23 and 25 constitutes new matter. Because each of proposed substitute claims 23 and 25 introduces new matter, we must deny Patent Owner’s Revised Motion to Amend with respect to Patent Owner’s request that we enter claims 23 and 25 as substitutes for cancelled claims 1 and 13. *See* 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii).

E. CHALLENGES TO PATENTABILITY

Petitioner contends proposed substitute claims 24 and 26 are indefinite, and, therefore, unpatentable under 35 U.S.C. § 112(b).

Proposed substitute claim 24 recites a beverage brewing product comprising a water permeable sieve containing tea particles and sugar granules, wherein the sugar granules include particles having a size in the range of U.S. mesh sieve nos. 3–35 and “wherein said beverage brewing product is capable of dissolving more of said granulated sugar in comparison to the use of typical grocery store sugar.” Revised MTA, Appendix A at 2. Proposed substitute claim 26 similarly requires a beverage brewing product that “contains enough of said particles having a size in the range of U.S.

mesh sieve nos. 3 to 35 to achieve the result that more of said granulated sugar dissolves in comparison to the use of typical grocery store sugar.”

Revised MTA, Appendix A at 4.

Petitioner argues that these proposed substitute claims are indefinite because “typical grocery store sugar” has at least three possible meanings. Petitioner first directs us to the Specification, which states: “*Typically, the sugar found in grocery stores and restaurants are of a small particle and are retained in a mesh sieve the size of 45-120.*” Opp. 8 (quoting Ex. 1001, 5:5–10). Petitioner contends a second interpretation could be “any granular sugar product typically sold in grocery stores,” including extra fine granulated (“EFG”) sugar, Sugar in the Raw, and confectioner’s sugar. Opp. 8–9. Finally, Petitioner contends the term may refer to EFG sugar because it is the largest volume of sugar sold in the grocery store. Opp. 9. Petitioner asserts, however, that this interpretation is “divorced from anything in the specifications – EFG sugar is never mentioned.” Opp. 9. Petitioner also argues that testing by Mr. Coffield shows the grain size distribution in EFG sugar can vary widely. Opp. 9 (citing Ex. 1004, at pages 51–53 (Exhibit B)). According to Petitioner, “even if this third interpretation were to be applied, a [person of ordinary skill in the art] would still be left without any informed choice as to which EFG sugars are ‘typical’ and which are not.” Opp. 9. Further, Petitioner contends that “[i]nstead of using a numerical standard or some other well-defined parameter, the Patent Owner has chosen to use an intentionally ambiguous term requiring the public to risk infringement by guessing the definition of ‘grocery store sugar’ and also what is ‘typical’ for such sugar.” Opp. 9.

Patent Owner argues EFG is synonymous with “typical grocery store sugar,” and even if there are some differences between various EFG sugars, there is a standard specification and a “typical” analysis. Reply 4 (citing Ex. 2062, Ex. D; Ex. 2003, 24²). According to Patent Owner, “not only does a [person of ordinary skill in the art] know what is typical EFG, a [person of ordinary skill in the art] can buy EFG, ensure that it is on spec, and perform brew tests with it in order to determine the scope of the claims.” Reply 4.

After considering the evidence of record, we find that proposed substitute claims 24 and 26 are indefinite. We agree with Patent Owner that a person of ordinary skill in the art would understand “typical grocery store sugar” to refer to EFG sugar, as the evidence of record supports such a finding. For example, Petitioner’s declarant, Mr. Coffield, testified that EFG is synonymous with grocery store sugar. Ex. 2029, 228:13–229:13.

It is undisputed that EFG sugar contains a distribution of particle sizes ranging from 20–100 mesh, including some particles within the range of 3–35 mesh as recited in the proposed substitute claims. Ex. 2062, Ex. D; Ex. 2003, 42; Ex. 1004, at pages 51–53 (Exhibit B). Evidence presented by Petitioner, however, suggests that the number of particles in EFG sugar falling in the range of U.S. mesh sieve nos. 3–35 can vary based on the brand of sugar. In particular, Petitioner’s declarant, Mr. Coffield, tested several different brands of EFG sugar, and reported that the number of particles within 3–35 mesh varies from approximately 24% (Domino brand

² Patent Owner cites to page 24, but we believe the correct citation is to page 42, as Patent Owner did not include page 24 of the Sucrose Guide as part of Exhibit 2003 and the chart Patent Owner refers to appears on page 42.

sugar) to 47% (Publix brand sugar). Ex. 1004, at pages 51–53; Opp. 9. Patent Owner does not contest Mr. Coffield’s test results.

Instead, Patent Owner asserts there is a “standard” specification for EFG sugar. Reply 4. Patent Owner’s standard, however, is a corporate product specification for the ASR Group, which operates under the Domino Sugar brand. Ex. 2062 ¶ 7, Ex. D. There is insufficient evidence on this record that the corporate product specification for the ASR group is a “standard” for all EFG sugar, regardless of brand.

Patent Owner also contends there is a “typical” analysis for EFG, which indicates that between 2–25% of the particles in EFG sugar can have a size in the range of U.S mesh sieve nos. 20–30. Ex. 2003, 42 (showing the “Typical Analysis” for “X-fine” granulated sugar). Even if we were to agree with Patent Owner that this shows a typical analysis for EFG sugar, it still presents a variance of up to 20% for particles having a size in the range of U.S. mesh sieve nos. 20 and 30. Ex. 2003, 42. Thus, the evidence of record suggests that the particle size distribution for EFG sugar, including the number of particles falling in the range of U.S. mesh sieve nos. 3–35, can vary among different EFG sugars. Thus, the term “typical grocery store sugar,” “might mean several different things” in terms of the number of its particles having a size in the range of U.S. mesh sieve nos. 3–35, and “no informed and confident choice is available among the contending definitions.” *HZNP Meds. LLC v. Actavis Labs UT*, 940 F.3d 680, 698 (Fed. Cir. 2019) (quoting *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1371 (Fed. Cir. 2015)); Opp. 7–10; Reply 4.

Proposed substitute claims 24 and 26 compare the dissolution of the claimed beverage brewing product against the dissolution of a product using

typical grocery store sugar (i.e., EFG). Patent Owner explains that the size of the particles affects dissolution – namely that larger sugar is more advantageous – in the claimed invention. *See, e.g.*, Revised MTA 5; Ex. 1001, 9:23–27, 10:19–22. This suggests that an EFG sugar product having a greater percentage of large particles will be capable of dissolving “more of granulated sugar” as compared to an EFG sugar product having a lower percentage of large particles. As a result, using the dissolution properties of “typical grocery store sugar” as a comparator in the claims is problematic as there is a potential for inconsistent results based on which particular EFG sugar product is used. The potential for inconsistent results undermines Patent Owner’s argument that these claims satisfy the definiteness requirement because a person of ordinary skill in the art “can buy EFG . . . and perform brew tests with it in order to determine the scope of the claims.” Reply 4.

Particle size is a critical factor for proposed substitute claims 24 and 26, which require a comparison of dissolution properties of the sugar used in the recited brewing product and typical grocery store sugar. Patent Owner contends “[t]here is an ‘informed and confident’ choice for ‘typical grocery store sugar’ - *EFG sugar*.” Reply 4. The evidence of record, however, shows the number of large particles (3–35 mesh) varies among EFG sugars. Ex. 2003, 42; Ex. 1004, at pages 51–53. In view of this, we find a person of ordinary skill in the art would not have understood “typical grocery store sugar” identifies sugar having particles of a particular size with sufficient specificity to allow the comparisons that proposed substitute claims 24 and 26 require. Accordingly, proposed substitute claims 24 and 26 are indefinite because they “fail[] to inform, with reasonable certainty, those skilled in the

art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014); *see* USPTO Memorandum on the Approach to Indefiniteness Under 35 U.S.C. § 112 in AIA Post-Grant Proceedings (Jan. 6, 2021); MPEP 2173.05(e) (9th ed., Rev. 08.2017, June 2020).

III. CONCLUSION

Patent Owner’s request to cancel original claims 1, 8, 13, and 17 is *granted*. Patent Owner’s request to enter proposed substitute claims 23–26 is *denied*.

The table below summarizes our conclusions as to Patent Owner’s Revised Motion to Amend the claims:

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	1, 8, 13, 17
Substitute Claims Proposed in the Amendment	23–26
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	23–26
Substitute Claims: Not Reached	

IV. ORDER

It is hereby:

ORDERED that Patent Owner’s Revised Motion to Amend is *granted* with respect to Patent Owner’s request to cancel claims 1, 8, 13, and 17 of the ’232 patent;

FURTHER ORDERED that Patent Owner’s Revised Motion to Amend is *denied* with respect to Patent Owner’s request to enter proposed substitute claims 23–26;

FURTHER ORDERED that parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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