

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte MARIO FERRUZZI

Appeal No. 2006-2609
Application No. 10/359,165

ON BRIEF

Before SCHEINER, GRIMES, and LINCK, Administrative Patent Judges.

GRIMES, Administrative Patent Judge.

DECISION ON APPEAL

This appeal involves claims to an energy drink, which the examiner has rejected as obvious. We have jurisdiction under 35 U.S.C. § 134. We affirm.

Background

The specification describes “a natural energy drink composition.” Page 3. In particular, the specification describes a composition comprising carbohydrate, milk protein, a natural caffeine source, and a vitamin premix, which provides “onset and maintenance of energy and mental alertness.” Page 5. The specification states that the protein source may be whey protein isolate and that the composition may comprise “at least three, and preferably more, vitamins provided by a vitamin premix.” Page 8.

The specification also states that the composition may further comprise “[a]n amount of an acidulant . . . to maintain the pH of the composition,” which preferably has “a pH of from about 2 to about 8, more preferably from about 2 to about 5.” Page 10. “The most preferred acids are citric and phosphoric acids. Preferably, citric acid and phosphoric acid are present in the amount of from about 0.1% to about 0.5% and from about 0.01% to about 0.05%, respectively.” Id.

Discussion

1. Claim construction

Claims 1-25 are pending and on appeal. The claims have not been separately argued and therefore stand or fall together. We will focus on claim 1, the broadest claim on appeal, which reads as follows:

1. An energy drink composition, comprising:

a carbohydrate in an amount of above 16% to about 20% by weight of composition;

whey protein isolate in an amount of from about 0.1% to about 1.5% by weight of the composition;

a stimulant in an amount of from about 0.1% to about 1.5% by weight of the composition; and

a vitamin premix in a vitamin fortifying amount and which includes at least three different vitamins,

an acidulant mixture of citric acid and phosphoric acid present in the amount of from about 0.1% to about 0.5% and from about 0.01% to about 0.05%, respectively, by weight of the composition to provide a pH of about 2 to about 5, and the energy drink when consumed by a person provides energy, stimulation, and nutrition.

Thus, claim 1 is directed to an energy drink comprising particular amounts of a carbohydrate, whey protein isolate, a stimulant, at least three different vitamins, and an acidulant mixture of citric acid and phosphoric acid, which provides the composition with a pH of about 2 to about 5.

2. Obviousness

The examiner has rejected claims 1-25 under 35 U.S.C. § 103 as obvious over Weber¹ in view of Liebrecht.² The examiner argues that Weber “disclose[s] a beverage containing carbohydrate, protein, a stimulant, and vitamins, which is consumed to provide energy. . . . [A]bsent anything critical in the amounts, it would have been obvious to use close to the claimed amounts of ingredients.” Examiner’s Answer, page 3.

The examiner notes that Weber also discloses acidulants and “pHs within the range of from 2 to 5.” Examiner’s Answer, page 6. The examiner argues that “it would have been obvious to choose particular acids from known acids in particular amounts for their known function.” Examiner’s Answer, page 4.

The examiner also notes that Weber states that the composition can also contain milk base solids. The examiner argues that “no criticality is seen in the use of WPI [whey protein isolate] since the specification discloses on page 6 that various proteins can be used.” Examiner’s Answer, page 3. The examiner also cites Liebrecht as disclosing “a protein containing liquid nutritional supplement that contains from 1 to 10% whey protein isolate in a composition containing a carbohydrate which also has a pH

¹ Weber et al., U.S. Patent No. 6,413,558 B1, issued July 2, 2002.

² Liebrecht et al., U.S. Patent No. 5,641,531, issued January 24, 1997.

within the claimed range (abstract). Therefore, it would have been obvious to substitute the WPI in amounts within the claimed range for the protein in Weber, because Liebrecht et al. disclose that it is known to use WPI in acid conditions, and also since the specification does not show any criticality in the use of a particular type of protein.” Examiner’s Answer, pages 3-4.

We conclude that the examiner has adequately shown that one of ordinary skill in the art would have been motivated to combine Weber with Liebrecht. Weber describes a beverage composition comprising a carbohydrate (col. 1, lines 56-65), a stimulant (col. 8, lines 15-34), more than three different vitamins (col. 13, lines 1-40), and an acidulant that provides a pH of about 2 to about 5 (col. 18, lines 15-20). As noted by the examiner, Weber states that the composition may optionally comprise one or more milk base solids. Col. 11, lines 19-39.

Liebrecht describes a beverage composition comprising carbohydrate, vitamins, and whey protein isolate, and having a pH of about 2.8 to about 3.3. Col. 2, lines 43-54. Liebrecht states that its composition “is essentially devoid of added fat.” Col. 3, lines 61-64. Liebrecht describes its composition as “a non-milk tasting alternative to the mostly milk-based supplements currently available.” Col. 1, lines 24-27. Liebrecht states that, unlike milk tasting products, its composition “provides a clear oral nutritional supplement which has a juice like consistency and flavor.” Col. 2, lines 20-22. We agree with the examiner that one of ordinary skill in the art would have found it obvious to substitute whey protein isolate for the milk base solids in the composition of Weber in order to provide a non-milk tasting energy drink that includes protein.

Appellant argues that Weber is directed to a food and beverage composition comprising a mixture of carbohydrates and water, which can also include various optional components, but that Weber does not describe a composition containing whey protein isolate. “In fact, the only protein mentioned or suggested is milk base solids.” Appeal Brief, page 11 (emphasis in original). In addition, Appellant argues that Weber “uses the whole portion of milk, whether in dry, fermented or liquid form. Weber fails to teach or suggest using an extracted protein from milk or even any individually extracted/purified/isolated components from milk.” Reply Brief, page 2 (emphasis in original).

Appellant argues that Liebrecht is directed to a nutritional composition that is devoid of fat. “In fact, Liebrecht explicitly teaches away from using ‘milky’ or milk-based products.” Appeal Brief, page 12 (emphasis in original). “Because *Liebrecht* intentionally teaches a clear composition devoid of a milk-based product or fat as an alternative to milk-based supplements, it teaches away from *Weber’s* product if the optional milk-base solid was to be added to it.” Id. (emphasis added). In particular, Appellant argues that “one having ordinary skill in the art would not use milk as a substitute ingredient for WPI. WPI, which is a pure, natural, high quality protein that contains little to no fat, lactose or cholesterol, has distinctive qualities compared to a composition such as milk, which contains a mixture of various nutritional ingredients along with fat, lactose and cholesterol.” Reply Brief, pages 2-3.

Appellant argues that, because Weber teaches the use of milk-based products and Liebrecht is directed to a composition devoid of milk-based products, “one skilled in the art would not be motivated to modify or combine the cited references to arrive at the

present claims.” Appeal Brief, page 13 (emphasis in original). “[I]t is only with [improper] hindsight reconstruction . . . that the Patent Office is able to even attempt to piece together a rejection of the claims.” Id.

Appellant’s argument regarding replacing the whey protein isolate of Liebrecht with milk base solids misses the point. The examiner’s rejection is based on substituting the whey protein isolate for the protein in Weber. See the Examiner’s Answer, page 3 (“it would have been obvious to substitute the WPI . . . for the protein in Weber.”)

We agree with the examiner that the benefits of whey protein isolate described in Liebrecht provide sufficient motivation to replace the milk base solids of Weber, which are described as optional, with the whey protein isolate of Liebrecht. Appellant has not set forth any persuasive reason that one of ordinary skill in the art would not have been motivated to include whey protein isolate in a composition of Weber that does not otherwise include milk base solids.

Appellant also argues that the Declaration of Kyle D. Kent under 37 C.F.R. § 1.132 “demonstrate[s] the surprising and unexpected advantages of an energy beverage including whey protein isolate at a pH of about 2 to about 5 . . . over the inclusion of either milk base solids or whey protein concentrates.” Appeal Brief, page 13.

The conclusions in the Kent declaration, however, are not based on all of the evidence currently in the record. Notably, Dr. Kent did not consider Liebrecht in reaching his conclusions. When viewed in light of the evidence of record, Appellant’s evidence does not show that many of the allegedly “surprising and unexpected benefits”

are actually surprising and unexpected. Expected beneficial results are not evidence of nonobviousness. See In re Skoner, 517 F.2d 947, 950, 186 USPQ 80, 82 (CCPA 1975). For example, Dr. Kent declared that among the “surprising benefits” of the claimed drink are that “whey protein isolate provides a clearer product” (¶ 6) and that including whey protein isolate “decreases the amount of lactose . . . and thus inhibits or prevents the development of off-flavors in the claimed energy drink . . . that may occur due to undesired reactions of lactose and/or fats during pasteurization and storage” (¶ 7). Dr. Kent also states that “the large amount of lactose in milk base solids . . . would be expected to contribute to undesirable browning and the likely development of off-flavors during pasteurization and storage.” ¶ 10.

Liebrecht provides evidence that these properties would not have been unexpected. Liebrecht teaches that a composition containing whey protein isolate is clear with “a juice like consistency and flavor.” Col. 2, lines 20-22. Liebrecht also teaches that “[w]hey protein isolate is greater than 90% protein by weight and contains very low levels of fat and lactose.” Col. 2, lines 64-65. This disclosure shows that those skilled in the art would have expected a composition containing WPI, rather than milk base solids, to have fewer of the problems that are caused by lactose and fats.

Dr. Kent also declared that, surprisingly, the low pH of the claimed compositions additionally “promotes microstability of the compositions by inhibiting or preventing growth of microorganisms in the compositions.” ¶ 6. Weber, however, teaches that acidity promotes microstability, stating that acidity “is a balance between maximum acidity for microbial inhibition and optimum acidity for the desired beverage flavor.” Col.

18, lines 25-28. Thus, the evidence shows that those skilled in the art would have expected low pH to inhibit growth of microorganisms.

Dr. Kent also declared that “whey protein isolate minimizes or prevents sedimentation of the proteins at the low pH of the compositions compared to higher sedimentation that tends to occur when an equal amount of another protein source is used.” ¶ 6.

The declaration, however, presents no basis for concluding that this property would have been unexpected. “[W]hen unexpected results are used as evidence of nonobviousness, the results must be shown to be unexpected compared with the closest prior art.” In re Baxter-Travenol Labs., 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991). Based on the general statement provided, it cannot be determined whether the Declaration is referring to a comparison between the composition of claim 1 and the closest prior art, specifically a composition of Weber that contains milk base solids.

Moreover, Dr. Kent states that “[t]he extra fat and lactose from the whey protein concentrates and milk base solids . . . would tend to result in . . . significantly more sedimentation at the low pH of the energy drink compositions than would be obtained with the claimed whey protein isolate.” Kent Declaration, ¶ 10. Thus, the declaration itself suggests that the known properties of whey protein isolate would have been expected to cause less sedimentation compared to milk base solids.

Finally, Dr. Kent declared that whey protein isolate “provides a more consistent protein source, as well as a more concentrated source of branched chain amino acids, compared to what is provided by an equal amount of whey protein concentrates or milk

base solids.” ¶ 7. Again, however, Dr. Kent provides no evidence or reasoning to suggest that these properties of whey protein isolate were unexpected. In view of Liebrecht’s teaching that “[w]hey protein isolate is greater than 90% protein by weight” (col. 2, lines 64-65) and that “[w]hey protein isolates . . . are the preferred source of protein” (col. 1, lines 53-54), those skilled in the art would have been well aware of the beneficial properties of whey protein isolate.

To summarize, the Kent declaration does not provide adequate evidence or reasoning to show that the properties of the claimed energy drink would have been unexpected. In the absence of such evidence or reasoning, we do not find the declaration’s unsupported conclusion to be credible. See *Perreira v. Secretary of the Dept. of HHS*, 33 F.3d 1375, 1377 (Fed. Cir. 1994) (“An expert opinion is no better than the soundness of the reasons supporting it.”).

In addition to the Kent declaration, Appellant argues that “testing was conducted showing the surprising and unexpected benefits of the claimed whey protein isolate in Examples 1-4 of the present application.” Appeal Brief, page 14.

We conclude that the specification’s examples do not provide evidence of unexpectedly superior results to overcome the prima facie case of obviousness. As noted by the examiner, the testing provided in Examples 1-4 of the application does not present a comparison between a composition containing whey protein isolate and a composition containing another milk protein source, specifically milk base solids as described in Weber. Examiner’s Answer, page 8. Instead, each of the compositions described in these examples contains whey protein isolate as the protein source. Thus,

these examples do not demonstrate that compositions containing whey protein isolate are superior to compositions containing other milk protein sources.

In sum, Appellant has not presented evidence of unexpectedly superior results to overcome the examiner's prima facie case of obviousness.

Appellant also argues that Weber "fails to disclose or suggest an acidulant mix of citric acid at about 0.1% to about 0.5% and phosphoric acid at about 0.01% to about 0.05% by weight of the composition" and that Liebrecht "also fails to disclose or suggest specific ingredient mixture levels for the acids." Appeal Brief, page 15. In particular, Appellant argues that the claimed acid levels are not "optimum values of result effective variables" because many acids can accomplish the required pH, "citric acid is generally considered a fruit acid, thus having limited applicability in the beverage industry," and "there are no optimal acid levels for a ready-to-drink beverage." Appeal Brief, pages 15-16.

We conclude that the examiner has set forth a prima facie case that it would have been obvious to include 0.1% to 0.5% by weight citric acid and 0.01% to 0.05% by weight phosphoric acid, in order to adjust the pH of the composition to pH 2 to 5. Weber discloses that the composition "may optionally comprise one or more acidulants . . . to maintain the pH of the composition," which preferably has "a pH of from about 2 to about 8, more preferably from about 2 to about 5." Col. 18, lines 15-20. In addition, Liebrecht describes adding acid to bring the pH within the range of from about 2.8 to about 3.3. Col. 4, lines 43-46. Thus, we conclude that the examiner has set forth a prima facie case that it would have been obvious to include one or more acidulants to provide a pH of from about 2 to about 5.

Weber teaches that the preferred acids are edible organic acids, including citric acid, phosphoric acid, eight other acids, and mixtures thereof, and that citric acid and malic acid are most preferred. Col. 18, lines 34-38. We agree with the examiner that it would have been prima facie obvious to include any of these ten acids, including a mixture of citric acid and phosphoric acid, in the composition of Weber, in amounts that would provide the desired pH. “[I]t is not inventive to discover the optimum or workable ranges by routine experimentation.” In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (emphasis added).

“Only if the ‘results of optimizing a variable’ are ‘unexpectedly good’ can a patent be obtained for the claimed critical range. In re Antonie, 559 F.2d 618, 620, 195 USPQ 6, 8 (CCPA 1977).” In re Geisler, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997). Appellant has provided no evidence, such as evidence of unexpectedly superior results, to show that the types and amounts of acids recited in the claims would have been nonobvious to those skilled in the art.

For the reasons discussed above, we conclude that the examiner has set forth a prima facie case that claim 1 would have been obvious and that Appellant has not rebutted this prima facie case. Therefore, we affirm the rejection of claim 1. Claims 2-25 fall with claim 1.

Summary

The examiner’s position is supported by the preponderance of the evidence of record. Therefore, we affirm the rejection of claims 1-25 under 35 U.S.C. § 103.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Toni R. Scheiner)	
Administrative Patent Judge)	
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