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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* WOLFGANG BEILFUSS, SABINE BEHREND, and  
PETER GORONCY-BERMES, and  
BURGHARD PUCHSTEIN

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Appeal 2011-005186  
Application 11/328,380  
Technology Center 1700

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Before CHARLES F. WARREN, TERRY J. OWENS, and  
CATHERINE Q. TIMM, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

### STATEMENT OF THE CASE

The Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1, 5, 8, 11-17, and 19-27, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b).

#### *The Invention*

The Appellants claim a disinfectant composition and a method of using it for hygienic hand disinfection. Claim 26 is illustrative:

1. A disinfectant composition, comprising:
  - a) 1-(2-ethylhexyl)glycerol ether;
  - b) octenidine dihydrochloride;
  - c) glycerol; andat least one surfactant selected from the group consisting of:
  - cl) a nonionic surfactant, and
  - c2) a quaternary ammonium compound.

#### *The References*

Gorman	US 4,542,125	Sep. 17, 1985
Beilfuss	US 5,516,510	May 14, 1996
Behrends (Behrends '963)	US 2001/0036963 A1	Nov. 1, 2001
Modak	US 2003/0152644 A1	Aug. 14, 2003
Behrends (Behrends '313) <sup>1</sup>	DE 102 05 883 A1	Aug. 21, 2003

#### *The Rejections*

The claims stand rejected under 35 U.S.C. § 103 as follows: claims 1, 5-8, 11-17, 19-21, 24, 26, and 27 over Gorman in view of Modak, claims 22 and 25 over Gorman in view of Modak and Behrends '313, claims 1, 16, 17,

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<sup>1</sup> Our consideration of DE 102 05 883 A1 is based upon US 2005/0119313 A1 (published Jun. 2, 2005) which the Examiner relies upon as an English language equivalent of DE 102 05 883 A1 (Ans. 3).

19, 26, and 27 over Behrends '313 in view of Beilfuss and claims 21-25 over Behrends '313 in view of Beilfuss and Behrends '963.

### OPINION

We affirm the rejections.

*Rejections over Gorman in view of Modak and over  
Gorman in view of Modak and Behrends '313*

The Appellants argue the claims in the following groups: 1) claims 1, 5-7, 12-17, 19-22, and 24-27, 2) claim 8 and 3) claim 11 (Br. 6-22). Although the Appellants address claims 22 and 25-27 under separate headings and the rejection of claims 22 and 25 includes an additional reference, the Appellants do not provide a substantive argument as to the separate patentability of those claims (Br. 14-22). We therefore limit our discussion to one claim in the first group, i.e., claim 26, and separately address claims 8 and 11. Claims 1, 5-7, 12-17, 19-22, 24, 25, and 27 stand or fall with claim 26. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Gorman discloses an antimicrobial surface degerming composition containing, as the antimicrobial agent, about 0.1 to about 10 wt% of a bis[4-substituted-amino)-1-pyridinium]alkane salt, preferably 1,10-bis[4-(octylamino)-1-pyridinium]decane dihydrochloride, the generic name of which is octenidine hydrochloride (or octenidine dihydrochloride) (col. 1, ll. 9-12; col. 1, l. 64 – col. 2, l. 22; col. 4, ll. 28-34), and containing an aqueous vehicle which can include glycerin (i.e., glycerol) (col. 4, ll. 58-62).

Modak discloses an antimicrobial composition containing a synergistic combination of octoxyglycerin (glycerol 1-(2-ethylhexyl) ether, sold under the trade name Sensiva<sup>®</sup> SC 50), a quaternary ammonium compound and at least one other antimicrobial agent (abstract; ¶¶ 0001,

0013, 0018-19; 0023; claim 2), and optionally containing a humectant, which can be glycerin, and a nonionic surfactant (¶¶ 0028, 0031). Modak exemplifies a composition containing, in combination, Sensiva<sup>®</sup> SC 50 and glycerin (¶ 0034, composition 1). Modak teaches that the synergistic action may be due to the Sensiva<sup>®</sup> SC 50 compromising the bacterial transport system by penetrating the bacterial cell wall, thereby increasing the uptake of the second antimicrobial agent (¶ 0044). “This mechanism would indicate that Sensiva would promote the antimicrobial effects of a diverse array of compounds, including quaternary ammonium compounds, biguanides, chlorinated phenols, metal salts, antifungal azoles, etc.” *Id.*

The Appellants argue that Modak does not predict that Sensiva<sup>®</sup> SC 50 would be synergistic with antimicrobial agents other than those disclosed and does not show a preference for glycerin over another polyol as a component of the aqueous vehicle (Br. 7-10).

Modak’s indication that Sensiva<sup>®</sup> SC 50 would be synergistic with a diverse array of antimicrobial agents (¶ 0044) would have provided one of ordinary skill in the art with a reasonable expectation of success in obtaining synergism when using it in combination with Gorman’s octenidine dihydrochloride antimicrobial agent. Modak’s disclosure that the aqueous vehicle can contain glycerin (col. 4, ll. 58-62) would have provided one of ordinary skill in the art with a reasonable expectation of success in using glycerin as an aqueous vehicle component. Hence, the combination of Sensiva<sup>®</sup> SC 50, octenidine dihydrochloride and glycerin would have been *prima facie* obvious to one of ordinary skill in the art. *See In re O’Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988) (“Obviousness does not require

absolute predictability of success .... For obviousness under § 103, all that is required is a reasonable expectation of success”).

The Appellants argue that the Declaration under Rule 132 by Wolfgang Beilfuss (filed Dec. 7, 2009) shows that the claimed composition provides unexpected results (Br. 8-10).

For the following reasons the totality of the evidence does not support a conclusion of nonobviousness of the Appellants’ claimed composition or method of using it.

First, Beilfuss’ evidence of unexpected results due to using 1-(2-ethylhexyl) glycerol ether and octenidine dihydrochloride in combination (Decl. ¶ 3) does not provide a comparison of the claimed composition with the closest prior art which, the Appellants acknowledge (Br. 23), is Beilfuss ‘510’s example wherein those components are used in combination (col. 7, ll. 30-43). *See In re Baxter Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984). Moreover, Beilfuss states that “according to the invention, the improvement of efficacy of the specific cationic active agent, octenidine hydrochloride by the specific glycerol ether 1-(2-ethylhexyl) glycerol ether (also called octoxyglycerine, or Sensiva<sup>®</sup> SC 50) is much larger than the improvement of the efficacy of other cationic active agents such as polyhexamethylene biguanide (polybiguanide) by said glycerol ether” (Decl. ¶ 2(i)). The Declaration compares the Appellants’ composition to one which differs only in that it lacks Sensiva<sup>®</sup> SC 50 (Composition A versus Composition B), thereby showing the effect of Sensiva<sup>®</sup> SC 50 on the efficacy of octoxyglycerine, but does not compare Composition C containing polybiguanide and Sensiva<sup>®</sup>

SC 50 to a composition which lacks Sensiva<sup>®</sup> SC 50. Thus, the evidence does not show the alleged improved effect of Sensiva<sup>®</sup> SC 50 on octoxyglycerine relative to Sensiva<sup>®</sup> SC 50's effect on polybiguanide.

Second, it is not enough for the Appellants to show that the results for the Appellants' invention and the comparative examples differ. The difference must be shown to be an unexpected difference. *See In re Freeman*, 474 F.2d 1318, 1324 (CCPA 1973); *In re Klosak*, 455 F.2d 1077, 1080 (CCPA 1972). The Declaration shows that the comparative combination of Sensiva<sup>®</sup> SC 50 and polyguanide provides a larger *S. aureus* log reduction factor than the Appellants' combination of Sensiva<sup>®</sup> SC 50 and octenidine dihydrochloride and that unlike the Appellants' combination of Sensiva<sup>®</sup> SC 50 and octenidine dihydrochloride, the comparative combination of Sensiva<sup>®</sup> SC 50 and polyguanide is ineffective against *E. hirae* (Decl. ¶ 3). Beilfuss concludes from the comparison that one cannot conclude that all combinations of Sensiva<sup>®</sup> SC 50 with any antimicrobial agent are synergistic and that polybiguanide and octenidine dihydrochloride differ substantially in their efficacy when combined with Sensiva<sup>®</sup> SC 50, *see id.*, but Beilfuss does not state that the results of the comparison would have been unexpected by one of ordinary skill in the art. The Declaration also shows that the *S. aureus* log reduction factor is better when glycerol instead of 1,2-propylene glycol is used with octenidine dihydrochloride and 1-(2-ethylhexyl) glycerol ether (Decl. ¶ 4). Beilfuss states that the results show "a marked and unexpected improvement in efficacy", *see id.*, but Beilfuss does not establish that one of ordinary skill in

the art would not have expected glycerol's extra hydroxyl group relative to 1,2-propylene glycol to result in better antimicrobial efficacy.

Third, the evidence is not commensurate in scope with the claims. *See In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035 (CCPA 1980). The Appellants' claim 26 is unlimited as to the component concentrations. Each comparison in the Declaration, however, is limited to one concentration of each component. The Appellants have not established that the evidence in the Declaration is representative of the full range of component concentrations encompassed by that claim. The Appellants argue that the concentrations in the Declaration are within the ranges in claims 8 and 11 (Br. 10-11). The Appellants, however, have not established that the results obtained using the single component concentrations in the Declaration are representative of the results which would be obtained over the ranges in those claims.

For the above reasons we are not persuaded of reversible error in the rejections over Gorman in view of Modak and over Gorman in view of Modak and Behrends '313.

*Rejections over Behrends '313 in view of Beilfuss and over Behrends '313 in view of Beilfuss and Behrends '963*

The Appellants argue the claims as a group (Br. 23-33). Although the Appellants address claims 17 and 19, 21-24, 25, and 26 and 27 separately and an additional reference is applied in the rejection of claims 21-25, the Appellants do not provide a substantive argument as to the separate patentability of those claims (Br. 25-33). The claims, therefore, stand or fall together. Accordingly, we limit our discussion to one claim, i.e., claim 26. *See 37 C.F.R. § 41.37(c)(1)(vii) (2007).*

Behrends '313 discloses an antiseptic comprising octenidine dihydrochloride and, as a humectant, glycerol (¶¶ 0001, 0032, 0061, 0063, 0073). Behrends '313 teaches that “[c]ompositions based on octenidine dihydrochloride are known, and they are used for wound and suture care, and for hygienic and surgical hand disinfection. The antimicrobial action commences rapidly and lasts for a long time” (¶ 0005).

Beilfuss '510 discloses a deodorizing composition comprising octenidine dihydrochloride and 2-ethylhexyl glycerin ether (col. 2, ll. 5-20; col. 3, ll. 13-37; col. 7, ll. 30-43). Beilfuss '510 discloses that some combinations of glycerin monoalkyl ethers and other deo-active ingredients/antiperspirants produce a synergistic increase in effectiveness (col. 3, ll. 39-42). Beilfuss '510 assumes that the mechanisms through which glycerin monoalkyl ethers have surprising deodorizing effect include antimicrobial action (col. 2, ll. 21-26).

The Appellants do not argue that Behrends '313 and Beilfuss '501 fail to support a prima facie case of obviousness but, rather, argue only that the Declaration under Rule 132 by Wolfgang Beilfuss (filed Dec. 7, 2009) shows that the claimed composition provides unexpected results (Br. 23-25, 30-32). That argument is not persuasive for the reasons given above regarding the rejections involving Gorman and Modak.

Thus, we are not convinced of reversible error in the rejections over Behrends '313 in view of Beilfuss and over Behrends '313 in view of Beilfuss and Behrends '963.

DECISION/ORDER

The rejections under 35 U.S.C. § 103 of claims 1, 5-8, 11-17, 19-21, 24, 26, and 27 over Gorman in view of Modak, claims 22 and 25 over Gorman in view of Modak and Behrends '313, claims 1, 16, 17, 19, 26, and 27 over Behrends '313 in view of Beilfuss and claims 21-25 over Behrends '313 in view of Beilfuss and Behrends '963 are affirmed.

It is ordered that the Examiner's decision is affirmed.

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

AFFIRMED

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