

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte THOMAS R. OAKES,
PATRICIA M. STANLEY
and JEROME D. KELLER

Appeal No. 95-3977
Application 08/004,075¹

HEARD: AUGUST 5, 1997

Before WILLIAM F. SMITH, PAK and WALTZ, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 27-31, 33, 38-42, and 46-66. These are the only claims remaining in this application.

¹ Application for patent filed January 13, 1993. According to appellants, this application is a division of 07/734,580 filed July 23, 1991, now Patent No. 5,200,189 granted April 6, 1993.

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According to appellants, the invention is directed to an aqueous antimicrobial composition and its method of use, where the composition contains a microbiocidal amount of a C₁-C₄ peroxy-carboxylic acid and an effective biocidal amount of a C₆-C₁₈ peroxy-carboxylic acid (brief, page 2).

Appellants state that, for each of the stated rejections, the claims stand or fall together (brief, page 4). The subject matter on appeal is adequately illustrated by claims 27, 46 and 61, reproduced below:

27. An aqueous peroxyacid antimicrobial composition consisting essentially of:

(a) at least about 10 parts per million (ppm) of a C₁-C₄ peroxy-carboxylic acid; and

(b) at least about 1 ppm of an aliphatic C₆-C₁₈ peroxy-carboxylic acid; wherein the aqueous composition has a pH in the range of about 2 to 8.

46. A method of sanitizing substantially fixed in-place process facilities comprising the steps of:

(a) introducing into the process facilities the composition of claim 27 at a temperature in the range of about 4⁰C to 60⁰C.;

(b) circulating the composition through the process facilities for a time sufficient to sanitize the process facilities; and

(c) draining the composition from the process facilities.

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61. The composition of claim 27 further consisting of an effective amount of a chelating agent for binding polyvalent metal cations.

The references relied upon by the examiner are:

Herting et al. (Herting)	3,895,116	July 15, 1975
Wang	4,404,040	Sept. 13, 1983
Beilfuss et al. (Beilfuss)	4,917,815	Apr. 17, 1990
Lokkesmoe et al. (Lokkesmoe)	5,122,538	Jun. 16, 1992
Baldry et al. (Baldry) (European Patent Application)	233,731	Aug. 26, 1987

Claims 46, 52-60, 65 and 66 stand rejected under 35 U.S.C. § 112, first paragraph, as the disclosure "is enabling only for claims limited to disclosure of a critical time." (answer, page 3)². Claims 27-29 and 31 stand rejected under 35 U.S.C. § 102(b) as anticipated by Beilfuss. Claims 27-31, 33, and 38-42 stand rejected under 35 U.S.C. § 103 as unpatentable over Beilfuss in view of Baldry and Herting. Claims 46-60 stand rejected under 35 U.S.C. § 103 as unpatentable over Beilfuss in view of Baldry, Herting and Wang. Claims 61-66 stand rejected under 35 U.S.C. § 103 as unpatentable over Beilfuss in view of Wang and Lokkesmoe. We reverse all of the stated rejections.

² Although there was some confusion regarding statements in the Advisory Actions dated Nov. 5, 1993, and Dec. 8, 1993, it now appears to be clear that there is no rejection under 35 U.S.C. § 112, second paragraph, and the final rejection of claims 46 and 52 under 35 U.S.C. § 112, fourth paragraph, has been withdrawn by the examiner (see the Supplemental Examiner's Answer, dated Mar. 3, 1995).

OPINION

A. *The Rejection under 35 U.S.C. § 112, first paragraph*

Claims 46, 52-60, 65 and 66 are all directed to a method of sanitizing or disinfecting using the composition of claim 27 "for a time sufficient to sanitize the process facilities" (claim 46) or "for an effective period of time sufficient to sanitize or disinfect the solid surface or liquid media" (claim 52). The examiner states that a specific time "is lacking", one of ordinary skill in the art is "forced to guess" at the general or specific meaning of sanitizing/disinfecting, and perform "undue experimentation" to arrive at the requisite time (answer, page 3).

When rejecting a claim under the enablement requirement of section 112, the PTO bears an initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention in the application, including providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. *See In re Wright*, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).

The examiner has not met this initial burden by failing to present any reasonable explanation as to why appellants'

disclosure is non-enabling. Appellants present numerous statements and examples regarding the effective contact time to disinfect or sanitize (see the specification, page 5, lines 10-14, page 6, lines 19-23, page 16, lines 1-2, page 18, lines 11-14 and 19-20, page 19, lines 18-23, and the Examples on page 20 *et seq.*). The Oxford affidavit dated Aug. 20, 1993 (Paper No. 7) was made of record to show that guidelines exist to determine what times must be used to sanitize or disinfect. It is clear from the prior art that such times are well known (see Baldry, page 3). The examiner has not produced any reasons why undue experimentation would be necessary to practice the invention as claimed. See *In re Wands*, 858 F.2d 731, 735, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

For the foregoing reasons, the rejection under 35 U.S.C. § 112, first paragraph, is reversed.

B. The Rejection under 35 U.S.C. § 102(b)

The aqueous composition of claim 27 consists essentially of at least about 10 parts per million (ppm) of a C₁-C₄ peroxy-carboxylic acid and at least about 1 ppm of an aliphatic C₆-C₁₈ peroxy-carboxylic acid, at a pH of about 2 to 8.

Beilfuss discloses an aqueous disinfectant composition containing an aromatic peroxy-carboxylic acid and perglutaric acid

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(an aliphatic C₅ peroxy-carboxylic acid)(see Beilfuss, column 2, lines 19-49). Beilfuss teaches the addition of peracetic or perpropionic acid to the composition to increase the stability or achieve a reduction in the crystallization temperature (column 3, lines 36-43). Beilfuss also teaches that the composition can contain biocidal compounds stable to oxidation "such as...persuccinic acid, peradipic acid, and permaleic acid" (column 4, lines 44-48). The amounts of these additives used can be up to about 5% by weight of the solution (column 4, lines 52-53). The pH of the solution is acidic or neutral (column 5, lines 15-17). None of the examples disclose the use of any peroxy-carboxylic acid additives.

Under section 102(b), anticipation requires that the prior art reference disclose, either expressly or under the principles of inherency, every limitation of the claim. See *In re King*, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986).³ For a rejection under 35 U.S.C. § 102 to be proper, the reference must clearly disclose the claimed subject matter or direct those skilled in the art to this subject matter without any need for

³ To be prior art under section 102(b), a reference must also be enabling but this issue has not been contested here. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990).

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picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference. See *In re Arkley*, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972).

Beilfuss discloses the use of perglutaric acid (a C₅ peroxy-carboxylic acid) and teaches that the composition can also contain peracetic (C₂), perpropionic (C₃), persuccinic (C₄), peradipic (C₆), and permaleic (unsaturated C₄) acids (column 4, lines 44-52). One skilled in the art would have had to select the peradipic acid in combination with one of the C₂-C₄ peroxy acids to achieve the composition of the appealed claims, notwithstanding that even more additives are disclosed with the peroxy acids (i.e., monoperoxysulfuric acid and potassium peroxymonosulfate, see Beilfuss, column 4, lines 46-47). Beilfuss contains no disclosure teaching this combination of peroxy acids with reasonable specificity and therefore a rejection under section 102 is improper. See *Arkley, supra*.

For the foregoing reasons, the rejection under 35 U.S.C. § 102(b) is reversed.

C. The Rejections under 35 U.S.C. § 103

The primary reference in every section 103 rejection in this application is Beilfuss, which has been discussed above.

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Herting relates to mixtures of at least two carboxylic acids that are anti-bacterial (column 1, lines 5-10). Herting does not relate to peroxy acids.

Wang is directed to compositions comprising short chain fatty acids with a hydrotrope that are useful in cleaning (see column 1, line 63-column 2, line 6). Wang is not drawn to peroxy acids.

Lokkesmoe discloses an *in situ* process of generating peroxy acids useful as sanitizing compositions (column 2, lines 25-39). Lokkesmoe does not disclose or teach combinations of peroxy acids.

Baldry teaches the disadvantages of using peroxyacetic acid as a biocide (page 1). Baldry also teaches the disadvantages of employing higher chain aliphatic peroxy acids as biocides (i.e., ones with a molecular weight of more than 174, see pages 2-3). This reference does disclose the advantages of certain monoperoxy aliphatic acids but does not teach or disclose combinations of peroxy acids (see page 3).

Appellants discuss the objective evidence of nonobviousness presented in Table II of the specification (pages 13-14 of the brief). The results in Table II on page 23 of the specification clearly show more than additive results for the use of

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combinations of peroxy acids as claimed over the individual peroxy acids of the prior art. According to appellants, these results are unexpected.

The examiner attempts to rebut the showing in Table II by noting that "Herting teaches synergy" and "no synergistic effect is claimed" (emphasis examiner's, see the answer, page 9). However, Herting only relates to the synergy of certain carboxylic acids, not peroxy carboxylic acids, and is not directed to the particular combination here claimed. There is no evidence of the equivalence of carboxylic and peroxy carboxylic acids. Therefore, the results achieved by the carboxylic acid in Herting are not predictive of the results that can be attained by the here claimed peroxy carboxylic acid combination. Finally, there is no requirement that a "synergistic effect" has to be claimed.

Weighing the combined teachings of the cited prior art and the objective evidence of nonobviousness together, we must conclude that the claimed subject matter as a whole would not have been obvious to a person of ordinary skill in the field of the invention. See *Applied Materials Inc. v. Advanced Semiconductor Materials*, 98 F.3d 1563, 1570, 40 USPQ2d 1481, 1486 (Fed. Cir. 1996); *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ

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685, 686 (Fed. Cir. 1986). Accordingly, all of the rejections under section 103 are reversed.

D. CONCLUSION

For the foregoing reasons, all of the stated rejections of the examiner in this appeal are reversed.

REVERSED

WILLIAM F. SMITH)	
Administrative Patent Judge)	
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CHUNG K. PAK)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS
)	AND
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)	
THOMAS WALTZ)	
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