

UNITED STATES PATENT AND TRADEMARK OFFICE

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

Ex parte THOMAS M. WOERNER, JOSEPH A. ROSEBROCK,
CHARLES W. HEWITT, and HEIDI L. WOERNER

Appeal 2007-3270
Application 10/141,177
Technology Center 1600

Decided: November 27, 2007

Before ERIC GRIMES, LORA M. GREEN, and NANCY J. LINCK,
Administrative Patent Judges.

LINCK, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a 35 U.S.C. § 134 appeal in the above-referenced case.¹
We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

¹ The application was filed May 9, 2002. The real party in interest is BioFX Laboratories, Inc.

STATEMENT OF THE CASE

The field of the invention is “luminescence, chemifluorescence and colorimetric assays” which utilize peroxides (Specification 1).

The claimed subject matter is reflected in representative claim 1:

1. A composition for use in a fluorescent, luminescent or colorimetric assay comprising a heme containing protein, a peroxide, a peroxide stabilizing and/or enhancing amount of a stannous halide and an alkaline buffer, and wherein said composition has a pH of about 8.0 or greater.

The Examiner has rejected claims 1-24 and 26-31 under 35 U.S.C. § 103(a). While there are a number of grounds of rejection, each requires the combination of Mueller et al., *Anal. Biochem.* 245: 55-60 (1997) and Metcalfe et al., U.S. Patent No. 4,539,294 (issued Sep. 3, 1985). Because we find the skilled artisan would not have had any reason to combine these teachings, we reverse all of the outstanding rejections.

DISCUSSION

The Examiner relies upon Mueller for teaching all the limitations of claim 1, except the stannous halide (Answer² 3-4 (citing Mueller, at 56)). According to the Examiner, Metcalfe compensates for this deficiency (Answer 4 (citing Metcalfe, col. 5, ll. 31-42)).

We agree with the Examiner that Mueller expressly teaches all of the limitations of claim 1, except the stannous halide, and Metcalfe discloses increasing the activity of catalase through a stannous chloride pretreatment of a particular polymeric support prior to immobilizing catalase on the

² “Answer” refers to the Examiner’s Answer (mailed Jan. 18, 2007).

support (col. 6, ll. 56-68).³ Enhancing the activity of catalase is important to Metcalfe because “higher enzyme activity translates into a more effective support in that more catalysis can occur thereon” (col. 3, ll. 54-56).

However, we do not agree with the Examiner that it would have been “prima facie obvious . . . to add stannous chloride as taught by Metcalfe to the catalase assay of Mueller” (Answer 4) when the teachings of these two references are considered in their entirety.

Mueller has no interest in increasing the catalytic activity of their catalase. Rather, Mueller discloses an analytical technique for measuring the catalytic activity of catalase at physiological conditions via an indirect method of measuring the amount of hydrogen peroxide (H₂O₂) down to submicromolar amounts (Mueller 55 (right hand col.)). Significantly, the authors note “catalase . . . is not saturable up to molar H₂O₂ concentration,” a concentration of no interest to these authors (*id.* at 57 (left hand col.)). Thus, as Appellants note, “Mueller is not interested in stabilizing or enhancing hydrogen peroxide, because as disclosed by Mueller, high concentrations of H₂O₂ inactivate catalase and are highly toxic to cells (page 59, left column, first full paragraph)” (Reply Br.⁴ 5). Further, “Mueller also would avoid stabilizing or enhancing H₂O₂, because that could introduce an artifact into the assay as to the state of physiological H₂O₂” (*id.*).

³ Metcalfe teaches that “this method provided optimal activity on this particular support and for this particular enzyme. Other enzymes and other porous supports may show optimal activity after being processed in a markedly different manner” (col. 7, ll. 1-5).

⁴ “Reply Br.” refers to “Reply Brief & Request for Oral Hearing . . .” (rec’d Mar. 16, 2007).

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Based on the above, we find the skilled artisan would not have had any reason to combine the teachings of Mueller and Metcalfe as proposed by the Examiner. *See KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (“it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does”). Accordingly, the Examiner has not made a prima facie case of unpatentability under § 103(a).

CONCLUSION

We reverse the Examiner’s rejections of claims 1-24 and 26-31 under 35 U.S.C. § 103(a).

REVERSED

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