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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/739,036	12/19/2003	Jan van Krieken	087258-0601	9240
22428	7590	01/22/2013	EXAMINER	
FOLEY AND LARDNER LLP			CHAWLA, JYOTI	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			1792	
			MAIL DATE	
			DELIVERY MODE	
			01/22/2013	
			PAPER	

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* JAN VAN KRIEKEN  
and EDWIND BONTENBAL

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Appeal 2011-012676  
Application 10/739,036  
Technology Center 1700

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Before PETER F. KRATZ, JEFFREY T. SMITH, and LINDA M. GAUDETTE,  
*Administrative Patent Judges.*

GAUDETTE, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision<sup>1</sup> finally rejecting under 35 U.S.C. § 103(a) claims 1, 2, 4, and 5 as unpatentable over Eyal (US 6,320,077 B1, issued Nov. 20, 2001), and claims 6-14 as unpatentable over Eyal, further in view of Iannotti (WO 00/65924, pub. Nov. 9,

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<sup>1</sup> Final Office Action mailed Jun. 22, 2010 ("Final")

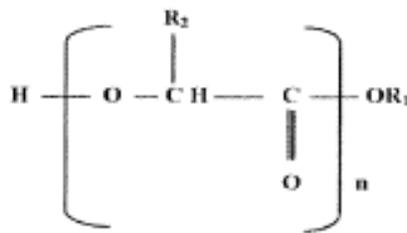
2000) and Shimadzu (JP 10-279577, pub. Oct. 20, 1998).<sup>2</sup> We have jurisdiction under 35 U.S.C. § 6(b).<sup>3</sup>

We REVERSE.

“The present invention relates to the controlled acidification of food products, like dairy products, meat etc. Acidification of food is used to give it a certain flavour and texture.” (Spec.<sup>4</sup> 1:4-5.) A goal of the invention is to provide “a cost effective, well-controlled chemical acidification method for food, that does not (negatively) affect the taste of that food or introduce[] acids that might be undesirable.” (*Id.* at 4:17-19.)

Appellants do not present separate arguments in support of patentability of any particular claim, or claim grouping. Accordingly, we decide patentability of all appealed claims on the basis of claim 1, the sole independent claim on appeal, which is reproduced below from the Claims Appendix to the Appeal Brief:

1. A method for acidification of a food product, comprising adding to the food product an oligomer having a terminal alkyl or glycerol ester according to the following formula:



in which R<sub>1</sub> is an alkyl having 2-10 carbon atoms or glyceroyl;  
n is 2-50; and R<sub>2</sub> is independently hydrogen or methyl;

wherein the acidification occurs without the addition of catalysts or enzymes.

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<sup>2</sup> Appeal Brief filed Feb. 22, 2011 (“App. Br.”)

<sup>3</sup> An oral hearing was held before this panel on January 16, 2013.

<sup>4</sup> Specification filed Dec. 19, 2003.

We decide the following issue in favor of Appellants and, therefore, reverse the rejections of appealed claims 1, 2, and 4-14: Does a preponderance of the evidence favor the Examiner's finding that Eyal discloses or suggests the use of terminal esters of lactic acid oligomers as acidulants for food products?

Eyal is directed to "techniques for processing mixtures of lactic acid and dissolved lactate salts." (Eyal col. 1, ll. 50-52.) According to Eyal, "[t]he potential of lactic acid as a commodity chemical, for example for use in the production of various industrial polymers, is known." (*Id.* at ll. 17-19.) Eyal provides "[p]referred techniques . . . [by which] the lactic acid stream, component or phase can be readily taken on to produce desirable lactate products, such as lactate oligomers, lactide lactate esters, lactate amides and/or polylactate. The preferred processing also provides the lactate salt in a form suitable for further use, such as recycling to a fermentation broth; or, for as a fertilizer or feed." (*Id.* at ll. 60-67.)

Appellants do not dispute Eyal teaches the use of lactic acid oligomers "as: (i) precursors to lactides, (ii) antimicrobial agents, and (iii) as controlled release acidulants." (Decl.<sup>5</sup> ¶ 8). Appellants concede one of ordinary skill in the art at the time of the invention would have known, and would have understood from Eyal, that terminal amides and esters of lactic acid oligomers are also useful as precursors to lactides. (App. Br. 5; Decl. ¶ 13.) However, Appellants disagree with the Examiner's finding that Eyal discloses or suggests terminal esters of lactic acid oligomers can be used as controlled release acidulants in food products (*see*

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<sup>5</sup> (Declaration of Jan van Krieken under 37 C.F.R. §1.132, Evidence Appendix to the Appeal Brief.) We find Mr. van Krieken, one of the named inventors in the present Application, to be an expert in the field of lactic acid and related compounds. (*See* Decl. ¶¶ 2.-3.)

Ans.<sup>6</sup> 7). (App. Br. 5; Decl. ¶¶ 9, 13.) Appellants contend the only support for this finding is based on the following two sentences from Eyal, which the Examiner has taken out of context (App. Br. 4-5): “In addition to use as precursors to lactides, lactic acid oligomers are useful as antimicrobial agents and as controlled release acidulants for food and agricultural use. Of course the oligomer may be terminated or functionalized, in some instances, as the amide or ester.” (Eyal col. 6, ll. 2-7.)

Appellants rely on the testimony of Mr. van Krieken to establish one of ordinary skill in the art would not have understood the lactic acid oligomers referred to in the above, first quoted sentence from Eyal column 6 as including the amides or esters of lactic acid oligomers referenced in the second quoted sentence. (App. Br. 5.) According to Mr. van Krieken,

a person of ordinary skill in the art would appreciate, as a practical matter, that terminal *amides* of lactic acid oligomers would not be used to acidulate food. Amides not only render an undesirable taste in foods, but are suspected to be toxic as well. Therefore, amides are unacceptable for application in foods and, to the best of my knowledge, have never been used in foods. For at least this reason, one of ordinary skill in the art would not have used terminal *amides* of lactic acid oligomers in *any* food application, let alone for acidulating food.

(*Id.* at ¶ 9.) Mr. van Krieken further testified that one of ordinary skill in the art at the time of the invention would have had no reason to believe that terminal esters of lactic acid oligomers could be used for food acidulation. (*Id.* at ¶ 10.)

We agree that the meaning of the last two sentences of the paragraph bridging columns 5-6 of Eyal is ambiguous. However, we accept as true Mr. van Krieken’s testimony regarding the knowledge of the ordinary artisan at the time of

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<sup>6</sup> Examiner’s Answer mailed May 11, 2011.

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the invention, and, in the absence of evidence to the contrary, are persuaded one of ordinary skill in the art would not have understood Eyal as disclosing or suggesting that terminal amides or esters of lactic acid oligomers could be used for acidulating foods.

Because a preponderance of the evidence of record fails to support the Examiner's finding that Eyal discloses or suggests a method which includes a step of adding an oligomer having a terminal alkyl or glycerol ester as claimed to a food product, we do not sustain the rejections of appealed claims 1, 2, and 4-14.

REVERSED

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