

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CLAUS CHRISTOPHERSEN, SVEN PEDERSEN
and TOMMY R. CHRISTENSEN

Appeal No. 1999-1981
Application No. 08/628,625

ON BRIEF

Before GARRIS, PAK, and JEFREY SMITH, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 7 through 10, which are all of the claims pending in the above-identified application. Claims 7 and 9 were amended subsequent to the final Office action dated May 28, 1988 (Paper No. 11).

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Claim 7 is illustrative of the subject matter on appeal and reads as follows:

Claim 7. A method for producing maltose and a limit dextrin, comprising:

(a) treating a raw starch with a hydrolase classified as EC 3.2.1.133, wherein said treatment of the starch is performed at a temperature above 40°C, and below the lowest temperature at which the raw starch is gelatinized;

(b) subjecting the treated starch to ultrafiltration to form a permeate comprising the maltose, and a retentate comprising the limit dextrin, wherein the maltose content of the permeate is more than 90%; and

(c) recovering the maltose from the permeate and the limit dextrin from the retentate by subjecting the retentate to liquid-solid separation.

In support of his rejection, the examiner relies on the following prior art references:

Rohrbach et al. (Rohrbach)	4,511,654	Apr. 16,
1985		
Kaper et al. (Kaper)	4,780,149	Oct. 25,
1988		
Outtrup et al. (Outtrup)	0 120 693 A1	Oct. 3,
1984		
(Published European Patent Application)		

Appellants' admission at page 3 of the specification (hereinafter referred to as "admitted prior art").

Claims 7 through 10 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Rohrbach, Kaper and either Outtrup or the admitted prior art.

We reverse.

We agree with the examiner to the extent that one of ordinary skill in the art would have been led to employ the claimed enzyme taught by Outtrup or the admitted prior art to produce maltose from liquefied or gelatinized starch in the process of either Rohrbach and/or Kaper.¹ However, the above combination suggested by the applied prior art does not result in the claimed process since the applied prior art does not teach, nor would have suggested, the treatment of raw starch with the claimed enzyme at a temperature above 40°C, but below the starch gelatinization temperature. In spite of appellants' repeated arguments regarding the importance of treating raw starch with the claimed enzyme, the examiner has not explained, much less supplied evidence, to demonstrate why

¹ Outtrup provides sufficient motivation to employ the claimed enzyme since it teaches the advantage of using the claimed enzyme in producing maltose (thermal stability). Moreover, as is apparent from the teachings of Rohrbach and Kaper, it is well known to purify the product of the type described in Outtrup, i.e., a product containing maltose resulting from an enzymatic reaction, with a means of ultrafiltration to obtain a highly pure maltose product (a product having more than 90% maltose). See Rohrbach, column 7, lines 38-63 and column 8, lines 45-50 and Kaper, column 2, lines 63-68.

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it would have been obvious to use raw starch, rather than pretreated starch, i.e., liquefied or gelatinized starch, with the claimed enzyme in the above-mentioned process. Compare Brief, pages 3-5 and Reply Brief, page 1 with Answer in its entirety. Accordingly, we are constrained to reverse the examiner's rejection of claims 7 through 10 under 35 U.S.C. § 103.

As a final point, we note that appellants refer to EP 350737 at page 2 of the specification. EP 350737 is said to describe an enzymatic reaction involving the conversion of raw starch to maltose and maltotriose. Upon return of this application, the examiner is to obtain EP 350737 and review it to determine whether it, together with any or all of the above-mentioned prior art references, affects the patentability of the claimed subject matter.

REVERSED

BRADLEY R. GARRIS)
Administrative Patent Judge)
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CHUNG K. PAK)	APPEALS
Administrative Patent Judge)	AND
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JEFFREY T. SMITH)	
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APJ PAK

APJ SMITH, JEFREY

APJ GARRIS

DECISION: REVERSED
Send Reference(s): Yes No
or Translation (s)
Panel Change: Yes No
Index Sheet-2901 Rejection(s):

Prepared: May 3, 2002

Draft Final

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OB/HD GAU

PALM / ACTS 2 / BOOK
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