

**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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte MASANORI TAKEUCHI, TAKASHI ONISHI, HIROKI IIDA,  
KAZUSHI SAKAUE, TAKASHI OCHI and SHIRO OHASHI

Appeal No. 94-4307  
Application 07/919,267<sup>1</sup>

ON BRIEF

Before JOHN D. SMITH, WEIFFENBACH and WARREN, Administrative Patent Judges.

WEIFFENBACH, Administrative Patent Judge.

**DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-12. We affirm-in-part.

**The Claimed Subject Matter**

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<sup>1</sup>Application for patent filed July 27, 1992.

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The claims on appeal are directed to a method of preventing a decrease in the sweetness of a solution containing thaumatin and a substance which decreases the sweetness of thaumatin by adding chitosan, hydrolyzed chitosan or mixtures thereof. Claim 1, the only independent claim in the application, is illustrative of the claimed subject matter:

1. A method of preventing a decrease in sweetness of thaumatin, comprising adding at least one member selected from the group consisting of chitosan, hydrolyzed chitosan, and mixtures thereof to an aqueous solution containing thaumatin and a substance which decreases the sweetness of thaumatin, in an amount effective to prevent decrease in sweetness of thaumatin.

### **The Prior Art and Rejections**

According to the examiner, the following prior art references are relied upon to support the rejections of the claims:

Dialog Data Base, File 351 (Derwent World Patent Index),  
Dialog Acc. No. 008363662, Abstracting Japanese Laid Open  
Application 2-174649.

English translation of Japanese Laid Open Application  
2-174649.

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Claims 1-12 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as obvious over Japanese Laid Open Application 2-174649.

Claim 10 stands rejected under 35 U.S.C. § 112, first paragraph, in that "the specification, as originally filed, does not provide support for the invention as is now claimed" (Answer, page 3).

### **Opinion**

We have carefully considered the respective positions advanced by both appellants and the examiner for patentability of the appealed claims. We will affirm the rejection under 35 U.S.C. § 112. However, we will reverse the examiner's rejections under 35 U.S.C. § 102(b) and 103.

#### Rejection Under 35 U.S.C. § 102(b)

The factual determination of anticipation requires the disclosure in a single reference of every element of the claimed invention. In re Spada, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); In re Bond, 910 F.2d 831, 832, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990); Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 677-678, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988); In re Marshall, 578 F.2d 301, 304, 198 USPQ 344, 346 (CCPA 1978); In re Arkley, 455 F.2d 586, 587, 172 USPQ 524, 526 (CCPA 1972). It

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is incumbent upon the examiner to identify wherein each and every facet of the claimed invention is disclosed in the applied reference. Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick, 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

In the claims on appeal, an effective amount of the chitosan, hydrolyzed chitosan or a mixture thereof is added to a solution containing thaumatin and a substance which decreases the sweetness of thaumatin to prevent the decrease in sweetness of thaumatin. The examiner rejected the claims under 35 U.S.C. § 102(b) as being anticipated by the Japanese Laid Open Application 2-174649. The reference teaches adding chitosan to a solution (e.g. apple juice) containing thaumatin to prevent coagulation and separation of thaumatin when it is used in the presence of negatively-charged substances (e.g. apple juice). The reference does not disclose adding hydrolyzed chitosan or a mixture of hydrolyzed chitosan and chitosan to a solution containing thaumatin. Nor does the reference disclose that a substance which decreases the sweetness of thaumatin is present in a solution containing thaumatin when chitosan is added. Since the examiner has not established that each and every facet of the claimed invention is disclosed in the applied reference, we cannot agree with the examiner that the claimed subject matter

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would have been anticipated by the reference relied upon for the rejection. Accordingly, the rejection of claims 1-12 under 35 U.S.C. § 102(b) is reversed.

#### Rejection for Obviousness

In the alternative, the examiner rejected all of the appealed claims under 35 U.S.C. § 103 as being unpatentable over Japanese Laid Open Application 2-174649. For substantially the same reasons as given above, this rejection too must fail. The examiner has failed to present evidence or any analysis of the prior art which would have led a skilled artisan to the claimed subject matter, i.e. to add chitosan or hydrolyzed chitosan or a mixture thereof to a solution containing thaumatin and a substance that decreases the sweetness of thaumatin. See In re Brouwer, 77 F.3d 422, 425, 37 USPQ2d 1663, 1666 (Fed. Cir. 1996); In re Ochiai, 71 F.3d 1565, 1570, 37 USPQ2d 1127, 1131 (Fed. Cir. 1995). According to appellants, the sweetness of thaumatin decreases when an aqueous solution of thaumatin contains coloring agents or polysaccharides (specification, paragraph bridging pages 1 and 2). They have discovered that adding chitosan or hydrolyzed chitosan or a mixture thereof to such a solution will effectively prevent the decrease in sweetness of thaumatin. The problem and appellants' solution of the problem is not addressed

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or suggested by the Japanese reference relied upon by the examiner. We find that the examiner has not made out aprima facie case of obviousness over the prior art. Accordingly, the examiner's rejection of claims 1-12 under 35 U.S.C. § 103 is reversed.

Rejection Under 35 U.S.C. § 112

The examiner rejected claim 10 on the ground that the expression "ascorbic acid is substantially absent from said aqueous solution" does not have descriptive support in the specification as originally filed. Appellants argue that support for the expression can be found at page 1, lines 12-19 of the specification wherein appellants state that

[t]he present inventors have formerly found that, when [a] negatively-charged substance (e.g. fruit juice and anionic surface active agent) is present in aqueous solution of thaumatin, precipitates are formed and that it is effective to use chitosan for preventing such precipitation and also to use ascorbic acid and chitosan together for preventing unpleasant after-taste of aqueous solution of thaumatin (cf. Japanese Laid-Open Publication 02/174,649).

According to appellants, this disclosure plus the discussion of the invention in the specification coupled with the fact that none of the examples in their specification include ascorbic acid "establishes that [the] absence of ascorbic acid, from the

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process of the invention, is contemplated, in the application as filed" (Brief, paragraph bridging pages 6 and 7). We disagree.

The function of the 35 U.S.C. § 112, first paragraph, written description requirement is to ensure that the inventors had possession of the specific subject matter later claimed as of the filing date of the application. In re Edwards, 568 F.2d 1349, 1351, 196 USPQ 465, 467 (CCPA 1978); In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). In order to comply with this requirement, it is not necessary that the claimed limitation be described ipsis verbis in the specification. In re Lukach, 442 F.2d 967, 969, 169 USPQ 795, 796 (CCPA 1971). However, the specification must reasonably convey to a person of ordinary skill in the art that as of the filing date of the application, the inventors had possession of the subject matter later claimed. In re Edwards, 568 F.2d at 1351-1352, 196 USPQ at 467; In re Wertheim, 541 F.2d at 262, 191 USPQ at 96. The determination as to whether the specification provides support for the newly claimed subject matter is primarily factual and depends on the nature of the invention and the amount of knowledge imparted by the disclosure to those of ordinary skill in the art. In re Wertheim, 541 F.2d at 262, 191 USPQ at 96.

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The limitation in question is a negative limitation wherein appellants' claim 10 is open to the inclusion of compounds other than ascorbic acid. Appellants' specification does not explicitly state that ascorbic acid is excluded from the thaumatin solution comprising the claimed invention and it fails to provide any explanation as to why only ascorbic acid should be excluded from the thaumatin solution as opposed to other compounds which may have similar chemical properties as ascorbic acid. The disclosure upon which the appellants rely on for support of the limitation is limited only to what is known in the prior art. The prior art did not disclose or suggest a reason for excluding ascorbic acid from a thaumatin solution containing a coloring agent or polysaccharide. For the reasons given above, we find that appellants' specification, at the time the application was filed, would not have conveyed to a person having ordinary skill in the art that ascorbic acid is substantially absent from appellants' thaumatin solution. Accordingly, the examiner's rejection of claim 10 under 35 U.S.C. § 112, first paragraph, is affirmed.

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**Conclusion**

For the foregoing reasons, the decision of the examiner is affirmed-in-part.

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

**AFFIRMED-IN-PART**

JOHN D. SMITH	)	
Administrative Patent Judge)	)	
	)	
	)	
CAMERON WEIFFENBACH	)	BOARD OF PATENT
Administrative Patent Judge)	)	APPEALS AND
	)	INTERFERENCES
	)	
CHARLES F. WARREN	)	
Administrative Patent Judge)	)	

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