

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PEGGY M. TOMASULA

Appeal No. 2004-1154
Application No. 09/247,219

ON BRIEF

Before KIMLIN, WALTZ and JEFFREY T. SMITH, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 2, 4-6, 9, 11-13 and 15-19.

Claim 15 is illustrative:

15. A process for providing a concentrate of vegetable protein comprising:
 - a) applying carbon dioxide at a pressure of from about 400 to 800 pounds per square inch (psi) to an initial solution/dispersion of a vegetable protein source having a protein concentration of

less than 80% by total weight of solids, wherein said carbon dioxide forms carbonic acid (H_2CO_3) in the solution/dispersion and lowers the pH below about 5.5;

- b) holding the pressurized solution/dispersion at a pressure of from about 400 to 800 psi for at least 1 minute in order to precipitate the vegetable protein;
- c) gradually depressurizing the solution/dispersion in order to maintain particle size of the protein precipitate;
- d) separating said protein precipitate from said solution/dispersion; and
- e) recovering a solid protein precipitate having a concentration of protein greater than 85% by total weight of solids in said precipitate.

The examiner relies upon the following references as evidence of obviousness:

Dahlstrom et al. (Dahlstrom)	5,006,349	Apr. 09, 1991
Tomasula	5,432,265	Jul. 11, 1995

Appellant's claimed invention is directed to a process for producing a concentrate of vegetable protein from a solution or dispersion of a source of the vegetable protein. The process entails applying carbon dioxide at high pressure to the solution/dispersion, holding the pressure for at least one minute and gradually depressurizing the system in order to maintain the particle size of the protein precipitate. It is recognized by

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appellant that "the invention is an extension of that taught by the Tomasula patent" presently applied by the examiner (page 8 of supplemental brief, second paragraph). The Tomasula patent involves the preparation of a concentrate by "the continuous removal of solid products from a high pressure system" (column 2, lines 6-7). According to appellant, the claimed method "avoids use of objectionable inorganic acids such as hydrochloric acid and the need for subsequent purification of the isolate from the acid and other materials conventionally added during concentration of the protein" (page 3 of principal brief, first paragraph).

Appealed claims 2, 4-6, 9, 11-13 and 15-19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tomasula in view of Dahlstrom.

Appellant submits at page 7 of the principal brief that "[c]laims 2, 4-6, 9, 11-13 and 15-19 are not considered to be separately patentable, and all claims are deemed to stand or fall together." Accordingly, all the appealed claims stand or fall together with claim 15.

We have thoroughly reviewed each of appellant's arguments for patentability. However, we are in complete agreement with

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the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the answer and we add the following primarily for emphasis.

We agree with the examiner that, although Tomasula does not expressly state that the disclosed precipitation process employing appellant's high pressure use of carbon dioxide is used to form a concentrate of vegetable protein, the reference would have suggested as much to one of ordinary skill in the art, particularly in light of the Dahlstrom disclosure. While appellant urges that "[t]he only example of efficacy given by Tomasula is with milk proteins" (page 6 of supplemental brief, third paragraph) the examiner correctly points out that Tomasula specifically teaches that the process may be used to precipitate materials that are known to precipitate in acidic media (see column 2, lines 27-31), and that "any precipitable material may be separated from solution from the novel process described herein" (column 2, lines 51-53). Accordingly, since, as

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acknowledged by appellant and evidenced by Dahlstrom, it was known in the art to precipitate protein from dairy milk or vegetable from an acidic media, we are satisfied that it would have been prima facie obvious for one of ordinary skill in the art to apply the precipitation process of Tomasula to vegetable protein. It is not insignificant that appellant states that "[a]pplicant does not refute the teachings in Tomasula regarding applicability of the CO₂ process to other proteins for the primary purpose of precipitating those proteins" (page 6 of supplemental brief, last paragraph).

Appellant further maintains that "there is nothing in Tomasula to suggest that when vegetable proteins (as opposed to dairy, animal, or microbial proteins) are precipitated, the original size of the precipitated solids can be maintained as required by step (c) of Claim 15" (id.) However, since we find that it would have been obvious to apply the process of Tomasula to a solution/dispersion of vegetable protein, we agree with the examiner that maintaining particle size of the precipitate during the depressurizing step of Tomasula would be an obvious, if not an inevitable, result.

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As a final point, we note that appellant bases no arguments upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the inference of obviousness established by the examiner.

In conclusion, based on the foregoing, and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

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

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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THOMAS A. WALTZ)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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)	
JEFFREY T. SMITH)	
Administrative Patent Judge)	

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