

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANANDARAMAN SUBRAMANIAM
and ANNE REILLY

Appeal 2007-2484
Application 10/234,775
Technology Center 1700

Decided: January 30, 2008

Before BRADLEY R. GARRIS, PETER F. KRATZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Statement of the Case

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1-10. We have jurisdiction under 35 U.S.C. § 6.¹

Appellants' invention relates to the preparation of microcapsules comprising a hydrophobic core material. More particularly, the invention relates to a complex coacervation process for the preparation of microcapsules which are suitable for incorporation into "Halal" or

¹ An oral hearing was held on November 13, 2007.

“Kosher” certified foods. The process of the invention is based on the use of type B gelatin as the positively charged polymeric wall material. (Spec. 1, ll. 5-14). Claim 1 is illustrative:

1. An improved process for the preparation of microcapsules comprising a hydrophobic core material, which process comprises the steps of:
 - a) mixing gelatin with a negatively charged high molecular weight colloid;
 - b) emulsifling or dispersing a hydrophobic core material in the mixture;
 - c) subjecting the emulsion or dispersion obtained under b) to water dilution and/or pH adjustment to achieve coacervation;
 - d) cooling the coacervate obtained under c) to provide wall-formation of microcapsules; and
 - e) adding a hardening agent;wherein the improvement comprises using a positively charged high molecular weight type B gelatin and adjusting the pH of the mixture obtained in a) to a value comprised between 3.0 and 4.7 before step b).

The Examiner relies on the following reference in rejecting the appealed subject matter:

Maeda US 5,700,397 Dec. 23, 1997

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Maeda.

We REVERSE.

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). In order to establish a prima facie case of obviousness, the Examiner must

show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988)). “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (*quoted with approval in KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)).

The Examiner has not established obviousness in this case.

The Examiner asserts that Maeda teaches a process for the preparation of microcapsules comprising a hydrophobic core, the process comprising: mixing water-soluble soybean hemicellulose (high molecular weight polyanionic colloid) and gelatin (polycationic colloid) (see col. 2, l. 67; col. 5, ll. 26-27); adding ground sardine (hydrophobic core material); adding hot water; adjusting the mixture to pH 4.2 to form a coacervate; cooling the coacervate to 5°C to prepare the microcapsules (see col. 15, ll. 23-32). The Examiner asserts that Maeda is silent with respect to the type of gelatin used. However, the Examiner concludes that it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that using type A gelatin or type B gelatin would have been determined depending upon the user’s preference and intended use including the other parameters of the mixture, such as pH, at the time the gelatin is added into the mixture. (Answer 4).

Appellants emphasize that Maeda is silent on the type of gelatin used as a polycation colloid and that Maeda does not teach or suggest adjusting the pH before the addition of the hydrophobic.

The Examiner acknowledges that Maeda teaches adjusting the pH of the colloid mixture after addition of the core material (Examples 18 and 21) but maintains that Maeda also teaches adjusting the pH before addition of the core material (Example 1). (Answer 4). However, as properly argued by Appellants (Br. 7-8), Maeda's Example 1 teaches the addition of orange oil (the hydrophobic core material) before adjusting the pH to 4.0 with citric acid. Moreover, Example 1 does not include the use of gelatin. Thus, Maeda does not teach or suggest adjusting the pH prior to the emulsifying step as required by the claimed invention. The Examiner has not adequately refuted Appellants' discussion of Example 1.

The Examiner also has not adequately addressed Appellants' arguments regarding the type gelatin most likely used in the coacervation process of Maeda. The Examiner has not identified evidence that type B gelatin was recognized as a suitable alternative for type A gelatin in coacervation processes of the type disclosed by Maeda and defined by the claims.

In light of the foregoing, we cannot sustain the Examiner's § 103 rejection of claims 1-10 as unpatentable over Maeda.

ORDER

The decision of the Examiner is reversed.

REVERSED

PL Initials
sld

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