

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is not binding precedent of the Board.

Paper No. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ERIC JEAN-LUC PERRIER and ALAIN R. HUC

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Appeal No. 1997-2436  
Application 08/232,014

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HEARD: JULY 11, 2000

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Before WILLIAM F. SMITH, Administrative Patent Judge, McKELVEY, Senior  
Administrative Patent Judge, and ROBINSON, Administrative Patent Judge.

ROBINSON, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 3-50, which are all of the claims pending in the application. Claims 23, 24, and 36 are illustrative of the claims on appeal and read as follows:

23. A process for the production of nanocapsules or nanoparticles, said nanocapsules or nanoparticles having a size of less than 800 nM, with crosslinked protein-based walls, which comprises preparing a nanoemulsion of at least one acylatable group-containing protein, said emulsion comprising a water phase, an oil phase, defining an

interface between said water phase and said oil phase either of a water-in-oil emulsion or an oil-in-water emulsion, and forming said nanocapsules or nanoparticles from said nanoemulsion, wherein an interfacial crosslinking reaction is carried out, between said protein and a crosslinking agent having reactive groups capable of reacting at said interface with said acylatable groups of said protein, so as to yield said nanocapsules with crosslinked protein-based walls.

24. A process for the production of nanocapsules, with cross-linked protein-based walls, which comprises preparing a nanoemulsion of said proteins comprising an oil phase and a water phase, defining an interface between said water phase and said oil phase either of a waste-in-oil emulsion or of an oil-in-water emulsion and forming said nanocapsules from said nanoemulsion, wherein an interfacial cross-linking reaction is carried out between said proteins and a cross-linking agent selected from the group consisting of an acid dichloride, an acid anhydride and a dibasic or polybasic carboxylic acid, as to yield said nanocapsules, with cross-linked protein-based walls.

36. A nanocapsule or nanoparticle having a size of less than 800 nM comprising a crosslinked outer wall having been obtained from a nanoemulsion by an interfacial crosslinking reaction between at least one protein having acylatable groups and a crosslinking agent having reactive groups capable of reacting with said acylatable groups of said protein to form interfacial crosslinking.

The reference relied upon by the examiner is:

Huc et al. (Huc)	5,395,620	March 7, 1995 (Filed June 8, 1993)
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#### **Grounds of Rejection**

Claims 3-7, 11, 14-17, 21-29, 31, 34, 36-44, 46, and 47 stand rejected under 35 U.S.C. § 102 (e). As evidence of anticipation, the examiner relies upon Huc.

Claims 3-50 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner relies upon Huc.

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Claims 21, 22, and 36-43 stand rejected under the judicially created doctrine of obvious-type double patenting over claims 1-4 and 6-9 of Huc.

We vacate all of the rejections in view of the new ground of rejection under 37 CFR § 1.196(b) set forth infra.

### **Background**

The applicants describe the invention at page 4 of the specification as being directed to a process for the production of capsules or particles of very small dimensions, called nanocapsules or nanoparticles, having crosslinked protein-based walls, which comprises preparing a very fine emulsion of the protein, either of the water-in-oil or oil-in-water type, and forming said nanocapsules by carrying out an interfacial crosslinking reaction with a crosslinking agent having reactive groups capable of reacting with the reactive groups of the protein. The nanocapsules or nanoparticles thus formed are stated to be useful in cosmetic, pharmaceutical and food compositions and provide a slow or delayed release of the active principle encapsulated therein.

### **Discussion**

#### Opinion

In considering the issues raised by this appeal we have carefully considered the positions of the examiner as set forth in the Examiner's Answer and the applicants' position as set forth in the principal Appeal Brief and the subsequently filed Reply Brief. In addition, it became apparent during the presentation at the oral argument of

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July 11, 2000 that counsel was reading the claims in a manner which was new to this record. In reviewing the record in light of the arguments made by counsel, we have determined that a material issue of claim interpretation is present, which must be resolved before the merits of the parties' positions can be properly considered. Accordingly, we take the following action.

New Ground of Rejection

Under the provisions of 37 CFR § 1.196(b) we enter the following new ground of rejection.

Claims 3-50 are rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention.

Representative claim 24 is directed to a process of producing nanocapsules having cross-linked protein-based walls. Interpretation of the claim requires a determination as to the meaning of the phrase "nanocapsules." Applicants' representative, at the oral argument, urged that the phrase "nanocapsules" as used in claim 24 and the range of particle or capsule sizes present in other claims should be read as indicating a "mean" value and not as setting specific size limitations for the particles or capsules. It is not readily apparent that the specification supports this interpretation. In describing the nanocapsules of the invention there is no explicit reference in the specification to a "mean" value for the size of particles or capsules of the type encompassed by the claim 24. At

page 4 of the specification applicants describe the invention as directed to "the production of particles or capsules of submicron dimensions, i.e. with a size of less than 1 $\mu$ m and especially of between about 100 and 800 nanometers." Similarly, we note Example 6 at page 11 of the specification which states "This gives nanocapsules with dimensions of between 200 and 800 nanometers." The only reference to a "mean" value comes at page 13 of the specification which describes "type A microcapsules containing PABA\* (mean size 50  $\mu$ m,)" and this relates not to the claimed invention but to a comparison with prior art particles which are microcapsules.

Thus, if we give credence to the representations by applicants' representative at oral argument, it would appear that the term "nanoparticles", as used in claim 24 has two plausible interpretations: 1) all of the capsules or particles are of a size less than 1 micron; or 2) at least some of the particles are less than 1 micron, but some are larger than 1 micron, with the mean value of the size of the particles being less than 1 micron. Reference to the specification does not clarify this ambiguity since it fails to offer an explicit definition of what applicants intended by the use of this term. Applicants' representative, at the oral argument, urged that one skilled in this art would know that the use of the terminology in the claim and the specification was intended to reflect "mean" dimensions and not absolute values. However, applicants' representative has not called our attention to any convincing documentation or evidence in this record which would

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support that proposition.

It is well established that "definiteness of the language employed must be analyzed, not in a vacuum, but always in light of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art." In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). We note that the purpose of the second paragraph of Section 112 is basically to insure, with a reasonable degree of particularity, an adequate notification of the metes and bounds of what is being claimed. See In re Hammack, 427 F.2d 1378, 1382, 166 USPO 204, 208 (CCPA 1970). When claim 24 is viewed in light of this authority, it does not reasonably appear that one skilled in the art would be capable of determining the metes and bounds of claim 24 even when read in light of the specification. The remaining claims do not clarify this ambiguity. Therefore, we reject representative claim 24, and claims 3-23 and 25-50 under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter which the applicants regard as their invention.

The rejections under 35 U.S.C. § 102/103 and obvious double patenting

For reasons stated infra in our new ground of rejection under 37 CFR § 1.196(b),

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we are of the opinion that claims 3-50, fail to satisfy the requirements of 35 U.S.C. § 112, second paragraph. Since the metes and bounds of the claim are unclear, we do not reach the rejections of the claims under 35 U.S.C. § 102, 35 U.S.C. § 103, or under the judicial doctrine of obvious double patenting. In making a patentability determination, “[a]nalysis begins with a key legal question -- what is the invention claimed?” since “[c]laim interpretation . . . will normally control the remainder of the decisional process,” Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567-68, 1 USPQ2d 1593, 1597 (Fed. Cir.), cert. denied, 481 U.S. 1052 (1987). Where as here, a reasonable interpretation of the claim can not be made, it follows that it is impossible to compare the claimed invention with the prior art. See Graham v. John Deere Co., 383 U.S. 1,17, 148 USPQ 459, 467 (1966)(“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.”). In order to compare the claimed subject matter with the relevant prior art we would first have to speculate or make assumptions as to what is intended by the claim. However, since a rejection under 35 U.S.C. § 102 or 35 U.S.C. § 103, and similarly the rejection as to obvious double patenting, can not be based on speculations and assumptions, (See In re Steele, 305 F.2d 859, 862-63, 134 USPQ 292, 295-96 (CCPA 1962) and In re Wilson,

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424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)), we vacate the prior art rejections as well as the rejection under the judicially created doctrine of obvious-type double patenting. Should further prosecution occur, we would urge the applicants and examiner to work together to determine what the appropriate interpretation of the claim should be. The applicants may wish to avail themselves of this opportunity to document or provide other evidence which would reasonably establish that one skilled in this art at the time of filing of the application would have recognized that a composition comprising nanoparticles, or particles of a stated size, would be recognized as reflecting mean values rather than specific size limits. When the proper interpretation of the claims has been made, it will then be appropriate to compare the claimed subject matter with the relevant prior art.

#### **SUMMARY**

To summarize, we enter a new ground of rejection under the provisions of 37 CFR § 1.196(b) of claims 3-50 and vacate the rejection of claims 3-7, 11, 14-17, 21-29, 31, 34, 36-44, 46, and 47 under 35 U.S.C. § 102(e), the rejection of claims 3-50 under 35 U.S.C. § 103, and the rejection of claims 21, 22, and 36-43 under the judicially created doctrine of obvious-type double patenting.

#### **TIME PERIOD FOR RESPONSE**

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This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)).

37 CFR § 1.196(b) provides, "[a] new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the applicants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner . . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record . . . .

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

**VACATED and 37 CFR § 196(b)**

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William F. Smith  
Administrative Patent Judge

Fred E. McKelvey  
Senior Administrative Patent Judge

Douglas W. Robinson  
Administrative Patent Judge

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