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**Datasheet for the decision  
of 25 November 2014**

**Case Number:** T 2468/12 - 3.3.09

**Application Number:** 06706350.3

**Publication Number:** 1843668

**IPC:** A23L1/30

**Language of the proceedings:** EN

**Title of invention:**  
POWDER COMPOSITIONS

**Patent Proprietor:**  
DSM IP Assets B.V.

**Opponent:**  
Friesland Brands B.V.

**Headword:**

**Relevant legal provisions:**

EPC Art. 107, 56  
RPBA Art. 12(4)

**Keyword:**

Admissibility of appeal - (yes)  
Main request - Inventive step - (no)  
Auxiliary request 1 - admitted (no)

**Decisions cited:**

J 0014/03

**Catchword:**



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Case Number: T 2468/12 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 25 November 2014**

**Appellant:**  
(Patent Proprietor)

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**Representative:**

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**Respondent:**  
(Opponent)

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**Representative:**

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 6 November 2012  
revoking European patent No. 1843668 pursuant to  
Article 101(3) (b) EPC.**

**Composition of the Board:**

**Chairman**

W. Sieber

**Members:**

J. Jardón Álvarez

K. Garnett

## Summary of Facts and Submissions

I. This decision concerns the appeal filed by the proprietor of European patent No. 1 843 668, DSM IP Assets B.V., against the decision of the opposition division to revoke the patent.

II. The patent was granted with 13, claims, independent claims 1, 11 and 13 reading as follows:

"1. A powder composition having particle average diameters of about 50 to 500 microns which comprises droplets containing at least one long chain (LC) polyunsaturated fatty acid (PUFA) embedded in a matrix of a starch which has been modified with hydrophobic moieties and wherein the particles are **characterized by** a surface oil content of less than 0.5% (w/w)."

"11. A method of increasing the nutritional value of a food or food ingredient by the addition of at least one LC-PUFA, **characterized in that** a composition as claimed in any one of claims 1 to 10 is added to the food or food ingredient."

"13. A food or food ingredient, the nutritional value of which has been increased by the addition of at least one LC-PUFA, **characterized in that** it comprises a powder composition according to any one of claims 1 to 10."

Claims 1 to 10 and 12 were dependent claims.

III. The opponent, Friesland Brands B.V., had requested revocation of the patent in its entirety on the grounds that the claimed subject-matter was neither novel nor inventive (Article 100(a) EPC), and that the patent did

not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Article 100(b) EPC).

The documents cited during the opposition proceedings included:

D1: EP 0 972 513 A1;

D4: WO 2006/067647 A2;

D5: WO 2005/048998 A1;

D7: R. Partanen *et al.* "Encapsulation of Sea Buckthorn Kernel Oil in Modified Starches" *JAOCS*, Vol.79, no. 3 (2002), pages 219 to 223;

D10: EP 1 064 856 A2;

D11: EP 0 550 067 A1;

D13: WO 99/55819 A1; and

D14: A. Soottitantawat *et al.*, "Influence of emulsion and powder size on the stability of encapsulated D-limonene by spray drying", *Innovative Food Science and Emerging Technologies* 6 (2005), pages 107 to 114.

IV. The opposition division's decision was based on the granted claims. The patent proprietor had not submitted any substantive arguments and/or amendments to its case during the opposition proceedings. It had, in response to the communication of notice of opposition pursuant to Rule 79(1) EPC, merely requested "[a] decision on the record".

The opposition division held that the invention was sufficiently disclosed and that the claimed subject-matter was novel over the cited prior art, but revoked the patent because the claimed subject-matter lacked inventive step in view of D7, the closest prior-art document, alone or combined with D1.

- V. This decision was appealed by the patent proprietor (in the following: the appellant). With its statement of grounds of appeal filed on 14 March 2013, the appellant requested maintenance of the patent in unamended form (main request). It also filed four auxiliary requests and an experimental report:

D17: Experimental report dated 11 October 2006 (4 pages). [This internal report had already been filed on 28 February 2008 by the then applicant during the examination proceedings].

- VI. With its reply the opponent (in the following: the respondent) contested the admissibility of the appeal and requested its dismissal without dealing with the substantive issues of the case.
- VII. On 22 May 2014 the board issued summons to oral proceedings attaching a communication indicating that the appeal appeared to be admissible and granting a final extension of two months to the respondent to file any substantive arguments in reply to the statement of grounds of appeal.
- VIII. With letter dated 29 July 2014 the respondent filed a reply to the board's communication. It maintained its position that the invention was insufficiently

disclosed and that the claimed subject-matter lacked novelty and inventive step.

- IX. On 25 November 2014 oral proceedings were held before the board. During the oral proceedings the appellant withdrew its auxiliary requests 2 to 4.
- X. The claims of the main request are the granted claims (see point II above).

Compared with claim 1 of the main request, claim 1 of auxiliary request 1 requires the more restricted particle average diameters of granted claim 2. It reads as follows:

"1. A powder composition having particle average diameters of about 50 to 150 microns which comprises droplets containing at least one long chain (LC) polyunsaturated fatty acid (PUFA) embedded in a matrix of a starch which has been modified with hydrophobic moieties and wherein the particles are characterized by a surface oil content of less than 0.5% (w/w)."

- XI. The arguments of the appellant, insofar as they are relevant for the present decision, may be summarised as follows:

- The request of a decision on the record during the opposition proceedings could only be interpreted as a decision to maintain or to revoke the patent. To interpret it as request to revoke the patent would be too a harsh decision. As regards the revocation of a patent at the behest of the proprietor, the practice of the European Patent Office requires an explicit request that the proprietor no longer approves the granted text.

- Starting from D7 as closest prior art document the patent in suit aimed to provide PUFA compositions, as additive to food, having at the same time an excellent sensory profile, a fine particle structure and a high oil loading. This was achieved by the claimed compositions having a small average particle diameter of 50 to 500 microns. The food products including the compositions of the invention showed excellent sensory properties even after one year's storage. The finding that the claimed compositions had a very low surface oil content in spite of its small particle diameter was indeed unexpected. In fact, documents D7 and D14 suggested that a lower stability should be expected.
  
- Auxiliary request 1 should be admitted into the proceedings. It merely included the subject-matter of granted claim 2 into claim 1 and such subject-matter had already been contested by the opponent during the opposition proceedings. There was no new subject-matter for the opponent to consider and it eventually overcame the objections for the refusing of the main request.

XII. The arguments of the respondent may be summarised as follows:

- During the opposition proceedings the appellant had requested a decision on the record. The appellant had not expressed its wish to maintain the patent as granted. Consequently, it could not be adversely affected by the decision of the opposition division. The respondent relied on decision J 14/03 in support of its arguments.



- The invention was insufficiently disclosed and the subject-matter of claim 1 of the main request was anticipated by D4, D5 and/or D7 and it lacked inventive step in view of D7 alone or in combination with any of D10, D11 and/or D13.
  
- Auxiliary request 1 should not be admitted into the proceedings. The appellant had deliberately chosen not to defend its patent in the opposition proceedings and it should not be allowed to shift its case into the appeal proceedings.

XIII. The appellant requested that the decision under appeal be set aside and the patent be maintained as granted or alternatively on the basis of the claims of auxiliary request 1 as filed on 14 March 2013 with the statement of grounds of appeal.

The respondent requested that the appeal be dismissed.

## **Reasons for the Decision**

### *1. Admissibility of the appeal*

1.1 The respondent argued that the appeal was inadmissible because the patent proprietor was not adversely affected by the decision of the opposition division. In its view the requirements of Article 107 EPC were not met, because the sole request of the appellant during the opposition proceedings was to obtain a "decision on the record" and its request had been granted.

1.2 It is correct that the only submission of the patent proprietor during the opposition proceedings, filed with letter dated 5 May 2011, reads:

"In response to the Communication of notice of opposition pursuant to Rule 79(1) EPC, dated January 5, 2011, decision on the record is requested."

1.3 It is, however, not correct to infer from that letter that the appellant was not adversely affected by the decision of the opposition division.

1.3.1 The board cannot accept the interpretation of the respondent that the request for a decision on the record should be understood literally as a request to obtain any decision, no matter what it might be.

1.3.2 The board agrees with the interpretation of the appellant that, in the absence of an explicit request for revocation of the patent, the request for "a decision on the record" should be understood as an implicit request for the maintenance of the patent as granted.

Rule 79(1) EPC gives a patent proprietor the opportunity to file his observations and to amend, where appropriate, the description, claims and drawings within a period to be specified. The response of the proprietor quoted in point 1.2 above informed the opposition division that the patent proprietor would not be filing any arguments or amendments in response to the grounds of opposition and, in this situation, the request for a decision can only reasonably be understood as a request "for the maintenance of the patent in unamended form".

1.4 Decision J 14/03 cited by the respondent does not support its arguments. In J 14/03 the receiving section had invited the applicant to remedy a particular deficiency within a time limit. However, the deficiency was not remedied in due time resulting in a "Noting of loss of priority rights". In that case the board concluded that "the decision which was issued by the Receiving Section was quite simply the inevitable consequence of the appellant's own actions and inactions, namely seeking a decision in the absence of any request while failing to make any case whatsoever, even when invited to do so. In those circumstances it is impossible to conclude that the appellant has been adversely affected. Accordingly, the appeal is inadmissible and must for that reason be dismissed." (See point 19 of the Reasons). This situation is completely different from the present situation, where, as explained above, the appellant is adversely affected.

1.5 The board comes thus to the conclusion that the patent proprietor is indeed adversely affected by the decision of the opposition division revoking the patent and that the appeal is therefore admissible.

#### MAIN REQUEST

2. As stated under point VIII above, the respondent raised substantive objections against the claims of the main request under Articles 83, 54 and 56 EPC. There is, however, no need for the board to state or give reasons for its conclusions on the issues in relation to sufficiency of disclosure and novelty, since, as set out below, the main request is not allowable due to lack of inventive step.

3. *Inventive step*

3.1 The invention deals with the problem of stabilizing long chain polyunsaturated fatty acids (in the following: PUFAs) against oxidative degradation and development of a fishy smell and taste. At the same time it aims at providing powder compositions comprising PUFAs having an excellent sensory profile, a fine particle structure and a high oil loading (see paragraphs [0001] and [0005] of the patent specification).

Claim 1 is directed to a powder composition with the following features:

- a) having particle average diameters of 50 to 500 microns, comprising
- b) droplets containing at least one long chain PUFA,
- c) embedded in a matrix of starch which has been modified with hydrophobic moieties and wherein
- d) the particles are characterized by a surface oil content of less than 0.5% (w/w).

3.2 Closest prior art

3.2.1 Document D7 was agreed by the parties to represent the closest prior-art document. It is concerned with the encapsulation of CO<sub>2</sub> extracted sea buckthorn kernel oil, an oil rich in the polyunsaturated fatty acids linoleic acid and  $\alpha$ -linolenic acid (see page 219, right column, lines 23 to 25), i.e. PUFAs as required by the patent in suit. The aim of D7 is to protect the extracted oil from oxidation by atmospheric oxygen, to stabilize the

extracted compounds and to avoid off-flavour development during storage (see page 219, right column, lines 25 to 32).

3.2.2 This objective is achieved by encapsulation of the oil by spray-drying after emulsification. Emulsification of the PUFA is made using gum arabica, maltodextrin and the cornstarch octenyl succinate derivative HiCap 100 (paragraph bridging pages 219 and 220), HiCap 100 being a starch modified with hydrophobic moieties (feature (c) of claim 1). The emulsified oil droplets (feature (b) of claim 1) are then spray-dried to produce powder particles (see two first paragraphs of RESULTS AND DISCUSSION starting on the bottom of page 220). Although no numerical value for the surface oil content for the HiCap encapsulated is given in D7, the surface oil content is said to be very low and independent of the oil content of the powder up to 40% oil content (page 221, left column, lines 15 to 17). From figure 1 it can be seen that the value is below 1% (feature (d) of claim 1).

3.2.3 D7 is silent about the particle average diameter of the powder compositions therein obtained (feature (a) of claim 1).

3.3 Problem to be solved and its solution

3.3.1 The appellant accepted that the subject-matter of claim 1 differs from the disclosure of D7 in the particle size, and saw the problem to be solved due to this difference as being the provision of powder compositions having excellent sensory properties and still good stability when stored.

- 3.3.2 This problem is solved by the claimed powder compositions that differ from those of D7 by having a particle average diameter in the range of 50 to 500 microns.
- 3.3.3 The board is satisfied that this problem has been credibly solved by the claimed compositions. The application examples in the patent show that no significant sensory difference could be observed when the PUFA dry powder compositions of the invention were added to chocolate milk, pudding, bread or whole milk, when compared to a reference sample without PUFA. Moreover, no fishy taste or smell was detectable after 12 months storage (see [0056]) to [0059]). This finding was not contested by the respondent.
- 3.4 Obviousness
- 3.4.1 It remains to be decided whether, in view of the available prior art documents, it would have been obvious for the skilled person to solve the above problem by the means claimed, namely by the use of particles having particle average diameters of 50 to 500 microns.
- 3.4.2 In the board's judgement, the skilled person would indeed find the required motivation for providing 50-500 micron-sized particle in either one of D10, D11 and/or D13.

As pointed out by the respondent, these documents are all in the closely-related field of fragrance and flavouring oil encapsulation, and pursue the goal of providing an excellent sensory profile and preventing (oxidative) degradation of the encapsulated oil.

Thus, D10 teaches in example 2 the use of Capsul<sup>®</sup> in an emulsion spray-drying process to obtain a powder having a particle size of 142 microns and surface oil content of <0.1 wt%. D11 discloses a process for encapsulation of oils by spray-drying an aqueous emulsion comprising a lipophilically modified starch, such as substituted succinate starch (page 3, lines 8 to 10 and 30 to 57) and in comparative example 1 and in example 4 the use of Capsul<sup>®</sup> to obtain 75 micron particles having a surface oil content of 0.1 wt% and 0.4 wt%, respectively. Lastly, D13 specifically teaches that 50-500 micrometer-sized (83% of distribution) encapsulated oil particles having a surface oil content of 0.10 wt% can be obtained by spray-drying from an aqueous emulsion containing Capsul<sup>®</sup> (cf. Example 4).

It would therefore be clear for the skilled person from studying these documents that embedded compositions with a low surface oil content and a particle diameter within the claimed range were usual. He would have found ample incentive in either one of D10, D11 or D13 to apply this teaching to the PUFAs of D7 and thus arrive at the claimed compositions without any inventive skill.

- 3.4.3 The appellant, referring to D7 and D14, argued that there would be a technical prejudice against the use of particles with the small average particle diameter claimed. The skilled person would rather expect an increase in the surface oil content with a decrease in the powder particle size, thus giving rise to bad taste and low stability of the compositions. It argued further that D10, D11 and D13 would not hint to the claimed subject-matter because they were not in the field of fish oil.

3.4.4 However, these arguments are unconvincing. It is correct that D7 states that the oil droplets on the surface may be less protected against atmospheric oxygen and that in D14 it is mentioned that large powder particles exhibit a better protection against oxidation (page 113, left column, lines 8 to 11), but this does not amount to a technical prejudice. As discussed in point 3.4.2 above, D10, D11 and D13 convincingly demonstrate that Capsul<sup>®</sup>-embedded oil particles having the claimed diameter and surface oil content were well-known and certainly not discouraged in the art.

There is also no reason not to combine D7 with any of D10, D11 or D13 even though the later documents do not specifically relate to PUFAs. The skilled person would be well aware that the two fields are closely related as they concern the protection of oils by encapsulation. The skilled person would have looked at these documents when looking for encapsulation methods of other oils, such as PUFAs.

3.5 In summary, taking into account that the powder compositions of D7 already show good stability, no inventive step can be seen in the provision of further powder compositions having a particle average diameter in the range of 50 to 500 microns when starting from D7 as closest prior art. Such average particle diameters are usual when encapsulating similar oils to avoid (oxidative) degradation and to provide an excellent sensory profile.



AUXILIARY REQUEST 1

4. *Admissibility*

4.1 Auxiliary request 1 was filed by the appellant for the first time with the statement of grounds of appeal. In accordance with Article 12(4) RPBA the board may hold requests inadmissible which could have been presented in the first instance proceedings.

4.2 The subject-matter of claim 1 of auxiliary request 1 differs from the subject-matter of claim 1 of the main request in that the particles of the powder composition have particle average diameters of 50 to 150 microns (instead of 50 to 500 microns). The appellant has not provided any reason for filing this request only at the appeal stage. In fact, the appellant was completely non-active during the opposition proceedings. Moreover, there is no evidence on file relating to the cruciality of this feature or showing how this reduced range would overcome the reasons for the board's finding of lack of inventive step of claim 1 of the main request. Thus, the appellant in effect wishes to shift into the appeal phase issues which could and should have been resolved at first instance.

4.3 Under these circumstances, the board exercised its discretion not to admit auxiliary request 1 into the proceedings (Article 12(4) RPBA).

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated