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Datasheet for the decision of 20 October 2009

Case Number: T 1277/05 - 3.3.09

Application Number: 98202536.3

Publication Number: 0897671

IPC: A23D 7/00

Language of the proceedings: EN

Title of invention:
Aqueous dispersions or suspensions

Patent Proprietor:
Unilever N.V., et al

Opponent:
RAISO BENECOL LTD.

Headword:
-

Relevant legal provisions:
EPC Art. 83, 54, 56

Relevant legal provisions (EPC 1973):
EPC R. 88

Keyword:
"Admissibility of appeal (yes)"
"Sufficiency of disclosure (yes)"
"Novelty (yes - all requests)"
"Inventive step (no - all requests)"
"No reformatio in peius"

Decisions cited:
G 0009/92, G 0004/93

Catchword:

-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1277/05 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 20 October 2009

Appellant: (Patent Proprietor 1)	Unilever N.V. Weena 455 NL-3013 AL Rotterdam (NL)
Representative:	Waldren, Robin Michael Marks & Clerk LLP 19 Long Acre London WC2E 9RA (GB)
Party as of right: (Patent Proprietor 2)	Unilever PLC Unilever House Blackfriars London Greater London EC4P 4BQ (GB)
Representative:	Waldren, Robin Michael Marks & Clerk LLP 19 Long Acre London WC2E 9RA (GB)
Respondent: (Opponent)	RAISIO BENECOL LTD. P.O. Box 101 FI-21201 Raisio (FI)
Representative:	Kirsch, Susan Edith Carpmaels & Ransford 43-45 Bloomsbury Square London WC1A 2RA (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted 15 July 2005 concerning maintenance of European patent No. 0897671 in amended form.**

Composition of the Board:

Chairman: P. Kitzmantel
Members: N. Perakis
W. Sekretaruk

Summary of Facts and Submissions

I. Mention of the grant of European patent No 0 897 671 in respect of European patent application No 98202536.3 in the name of Unilever N.V. and Unilever PLC, which had been filed on 29 July 1998 claiming a US priority of 22 August 1997 (US 916877), was announced on 25 September 2002 (Bulletin 2002/39). The patent, entitled "Aqueous dispersions or suspensions", was granted with 31 claims. Independent Claim 1 read as follows:

"1. A food selected from the group consisting of water-continuous spreads, fat continuous spreads, bicontinuous spreads, dressings, beverages, dairy products, milk, cheese, yoghurt, non-dairy coffee whiteners, confections and ice cream comprising an aqueous dispersion or suspension comprising

a) one or more high melting lipids having a mean size of 15 microns or lower, and
b) a non-sterol emulsifier, the w/w ratio of emulsifier to high melting lipid in said aqueous phase being less than 1:2,
wherein the high melting lipids impart structure to the food."

II. A Notice of Opposition was filed against the patent by Raisio Benecol Ltd. on 25 June 2003. The Opponent requested the revocation of the patent in its full scope, relying on Articles 100(a), (b) and (c) EPC.

The opposition was *inter alia* supported by the following documents:

D2 : US-A- 3 085 939
D5 : GB-A- 934 686
D6 : WO-A- 98/13023 (relevant under Article 54(3) EPC)
D8 : EP-A- 0 289 636
D15: US-A- 3 881 005
D17: Webster's Third New International Dictionary, 1971, p 1428
D19: Statement of I. Wester and P. Sievilä, dated 22 April 2005
D20: Photograph of Sunnuntai® bottle

III. By its interlocutory decision orally announced on 24 May 2005 and issued in writing on 15 July 2005 the Opposition Division maintained the patent in amended form. The Opposition Division considered that the subject-matter of auxiliary request IV (filed with letter dated 12 April 2005 and amended at the oral proceedings of 24 May 2005) met the requirements of the EPC.

The Opposition Division held, however, that the disclosure of D5 was novelty destroying for the subject-matter of the main request (granted claims) and auxiliary requests I to III (requests filed with letter dated 12 March 2004).

Claim 1 of auxiliary request I is identical to Claim 1 of the main request. Claim 1 of auxiliary requests II and III reads as follows:

Auxiliary request II

"1. A food selected from the group consisting of water-continuous spreads, fat continuous spreads, bicontinuous spreads, dressings, beverages, dairy products, milk, cheese, yoghurt, non-dairy coffee whiteners, confections and ice cream comprising an aqueous dispersion or suspension comprising

a) one or more high melting lipids having a mean size of 15 microns or lower *wherein the high melting lipids have a melting point within the range of 75-200°C*, and
b) a non-sterol emulsifier, the w/w ratio of emulsifier to high melting lipid in said aqueous phase being less than 1:2,
wherein the high melting lipids impart structure to the food."
(emphasis by the Board in order to indicate the technical feature in addition to those of the main request)

Auxiliary request III

"1. A food selected from the group consisting of water-continuous spreads, fat continuous spreads, bicontinuous spreads, dressings, beverages, dairy products, milk, cheese, yoghurt, non-dairy coffee whiteners, confections and ice cream comprising an aqueous dispersion or suspension comprising

a) one or more high melting lipids having a mean size of 15 microns or lower *selected from the group comprising phytosterols which have not been esterified and their hydrogenated counterparts*, and

b) a non-sterol emulsifier, the w/w ratio of emulsifier to high melting lipid in said aqueous phase being less than 1:2,
wherein the high melting lipids impart structure to the food."
(emphasis by the Board in order to indicate the technical feature in addition to those of the Main Request)

The Opposition Division considered that the thickeners "gelatine" and "methyl cellulose" disclosed in D5 must be considered to be emulsifiers overlapping the broad definition of the term "non-sterol emulsifier" in the subject-matter of Claim 1 of all rejected requests. Additionally it considered that the orally administered, therapeutic preparations of D5 were suitable for use as a beverage.

With regard to the additional feature of Claim 1 of auxiliary request II, namely that the high melting lipids have a melting point of 75-200°C, it considered that this feature was implicit in D5, because of the disclosed sitosterol which has a melting point within this temperature range.

With regard to the additional feature of Claim 1 of auxiliary request III, namely that the high melting lipids are selected from the group comprising phytosterols which have not been esterified and their hydrogenated counterparts, it considered that the use of the term "comprising" did not provide any limitation and that the sitosterol disclosed in D5 fell within the alleged limitation.

IV. On 23 September 2005 the Patent Proprietor Unilever N.V (Appellant) lodged an appeal against the interlocutory decision of the Opposition Division and paid the appeal fee on the same day.

V. In the Statement setting out the Grounds of Appeal filed on 25 November 2005, the Appellant refuted the conclusions of the Opposition Division on lack of novelty in view of D5. Annexed to this Statement it filed additional technical evidence in order to show that according to D5 gelatine and methyl cellulose did not act as emulsifiers.

Furthermore, it argued that the claimed subject-matter involved an inventive step; it contended in particular that the skilled person would not consider either D15 or D2 to represent the closest state of the art. In support of the alleged significance of the feature in Claim 1 concerning the structuring effect it filed further technical evidence with a letter dated 6 June 2006.

With letter dated 15 September 2009, confirmed by letter dated 1 October 2009, Unilever N.V and Unilever PLC withdrew the request for oral proceedings and announced that they would not attend the oral proceedings before the Board of Appeal scheduled for 20 October 2009.

The sets of claims of the final requests of the Appellant, namely a main request and auxiliary requests I to III, were those appended to the letter dated 15 September 2009 which corresponded to those appended to the Statement of the Grounds of Appeal dated

25 November 2005. In comparison to the respective requests rejected by the Opposition Division, Claim 1 of all these requests remained unamended. Amendments concerned only Claims 5 and 23 of the requests submitted in appeal. Additionally Claim 27 of the rejected main request was deleted from the main request submitted in appeal.

VI. The Opponent initially appealed the decision of the Opposition Division (Notice of Appeal dated 15 September 2005 and Statement setting out the Grounds of Appeal dated 22 November 2005). However, with letter dated 29 January 2008 this appeal was withdrawn.

With a letter dated 23 March 2009 the Opponent announced that it would not attend the oral proceedings scheduled before the Board of Appeal.

In its written submissions the Opponent reiterated its objections under Articles 100(a) and (b) EPC concerning the main request and auxiliary requests I to III. The Opponent filed two technical reports: D21 for the issue under Article 100(b) EPC and D22 for the issue of novelty. It also filed two further prior art documents for the issue of inventive step:

D23: EP-A- 0 264 149
D24: EP-A- 0 375 027

VII. On 20 October 2009 oral proceedings were held before the Board in the absence of the parties.

VIII. The Patent Proprietors (Unilever N.V. as appellant and Unilever PLC as party as of right) had requested in

writing that the European patent be maintained on the basis of the main request or auxiliary requests I to III as filed with letter dated 15 September 2009.

The Opponent (Respondent) had requested in writing that the decision under appeal be set aside and the European patent be revoked. It further requested that the appeal of the Patent Proprietors be dismissed as inadmissible.

IX. The arguments put forward by the Patent Proprietors in their written submissions can be summarized as follows:

Admissibility of the appeal

- The Notice of Appeal erroneously referred to a decision of the Examining Division dated 15 July 2005 and not to the decision of the Opposition Division dated 15 July 2005.
- Correction of that error was requested under Article 88 EPC 1973. Furthermore it was clear, in the Patentees' view, that no other decision could have been meant or intended.
- Finally, there was no legal uncertainty for the public, since any interested party knowing the application number contained in the Notice of Appeal would immediately discover, from the public file of the EPO, which decision was contested. Further the Board could ascertain the contested decision from the file (see T 925/91).

Insufficiency of disclosure

- The technical report D21 of the Respondent Opponent, in which aqueous dispersions according to Examples 1 and 6 were formed with 70 to 75% moisture level,

demonstrated the sufficiency of the disclosure in the opposed patent.

- The fact that after centrifugation of the dressing of reworked Example 6, the Opponent could not identify stanol esters in the aqueous solution was not surprising because the centrifugation process broke the dispersion into a stanol ester layer and an aqueous solution.
- The aqueous dispersion before centrifugation with 70 to 75% moisture level in fact represented the aqueous phase of Claim 1. In the context of that claim "aqueous phase" did not mean "solution" but referred back to the "aqueous dispersion or suspension" in the preamble of the claim.

Novelty

- The disclosure of **D5** did not anticipate the subject-matter of Claim 1 of either the main or the auxiliary requests I to III.
- While it was accepted that the definition of the emulsifiers in Claim 1 could be regarded as rather broad, whether a substance of the state of the art was to be regarded as an emulsifier and fell within that definition was dependant on the actual performance of that substance according to the prior art disclosure. In that respect, whilst in some circumstances gelatine and methyl cellulose could act as emulsifiers, in the relevant compositions disclosed in D5 these substances did not behave as emulsifiers.
- This was proven by the Patent Proprietors' reproduction of these examples which established that no emulsification took place. Actually the

compositions in question turned out to be highly inhomogeneous.

- Therefore the finding of the Opposition Division was incorrect.
- Furthermore, the subject-matter of Claim 1 was novel over the disclosure of **D6**. The solid sitosterol particles in Example 21 would remain in the liquid oil phase of the margarine, a water-in-oil emulsion, during stirring. These particles would not be capable of transfer across the oil-water interface into the discontinuous water droplets of the margarine emulsion.
- The technical evidence D22 submitted by the Opponent failed to prove that Example 21 of D6 disclosed that sitosterol was present in the aqueous phase. The result obtained by the Opponent was again affected by the subsequent destructive centrifugation of the sample after mixing of the margarine constituents. It was in fact this destructive centrifugation which provided the driving force and pushed the sterol into the aqueous component.
- Furthermore, the Opponent's technical evidence did not provide information concerning the amount of emulsifier present in the aqueous dispersion/suspension prepared by destructive centrifugation.
- Finally the amount of emulsifier in the liquid margarine Sunnuntai® of Example 21 of D6 was 1% (see D19). This meant that the weight ratio emulsifier: sitosterol was 1:2, thus outside the claim of the opposed patent.
- Consequently Example 21 did not destroy the novelty of Claim 1.

Inventive step

- The claimed subject-matter was not obvious in view of the cited state of the art.
- The Opposition Division had erroneously considered that the only difference between the subject-matter of Claim 1 and the disclosure of D15 was the particle size of the high melting lipids.
- However, there was a further technical difference, namely that the sitosterol of D15 was in the form of a spray-dried dispersible powder, whereas the high melting lipid of the opposed patent was incorporated into the food in the form of an aqueous dispersion or suspension comprising a non-sterol emulsifier.
- The objective technical problem starting from D15 was to provide a structuring composition to be incorporated into foodstuffs.
- The technical value of the structure imparted to foods by the aqueous dispersion of the claimed invention was demonstrated in Examples 5 and 6 of the opposed patent. According to this evidence food could be prepared with reduced levels of non-desirable ingredients.
- The additional experimental evidence (see letter dated 6 June 2006) demonstrated the structuring effect provided by the aqueous dispersion in Examples 5 and 6.
- The skilled person starting from D15 had to take the following steps before arriving at the claimed invention: (i) he had to choose D15 as starting point despite the fact that it was not the closest state of the art, (ii) he had to ignore the teaching of D15, that 20 microns sitosterol had a minimal effect on taste and mouth feel, and to further reduce the size

of the sitosterol particles to less than 15 microns, even though this would require considerable energy input and might lead to dispersion problems, and (iii) he had to ignore the fact that drying of the aqueous dispersion of sitosterol was necessary before its incorporation into a food product, which drying made the product considerably easier to handle.

- Admittedly D23 and D24 suggested that smaller fat particles were advantageous. Nevertheless, these documents would motivate the skilled person to use smaller sitosterol particles only as part of a spray-dried powder. Furthermore, these documents did not disclose the steps required to arrive at the claimed invention.
- The claimed solution was also not obvious in view of D2. This document could not be considered as the closest state of the art because it was not concerned with the provision of structure to foodstuffs. It would not therefore motivate the skilled person to modify the disclosed emulsion in order to use it as a foodstuff structurant. Nor did it contain any teaching relating to a specific particle size suitable for structuring.

X. The arguments put forward by the Respondent/Opponent in its written submissions can be summarized as follows:

Admissibility of the appeal

- The requirements of Rule 64(b) EPC 1973 (Rule 99 EPC 2000) were not met. Whilst the Notice of Appeal referred to a decision dated 15 July 2005, it incorrectly referred to a decision of the Examining Division and requested that the decision to refuse the application be revoked. Thus the Appellant had

not adequately provided the extent to which amendment or cancellation of the decision of the Opposition Division was requested.

Insufficiency of disclosure

- The alleged invention according to the main request and the auxiliary requests I to III could not be carried out by a skilled person across the entire scope of each Claim 1.
- The examples of the opposed patent comprised phytosterols as "high melting lipid". However, according to the patent (see paragraph [0036]) the term "high melting lipid" contained further components, such as sterol esters and stanol esters. They were soluble in fat and would automatically be located in the fat phase of a product rather than in the aqueous phase. Consequently the required aqueous dispersion could not be manufactured using such fat-soluble high melting lipids.
- In this context, the opposed patent did not disclose how it was possible to manufacture a food product comprising an aqueous dispersion having the required ratio of "emulsifier: high melting lipid", when the high melting lipid was fat-soluble, in particular a sterol or stanol ester.
- The above objections were supported by the technical report D21.
- Finally, the lack of clarity surrounding the terms "high melting lipids" and "non-sterol emulsifiers" and the requirement to "impart structure to the food" made it impossible for the skilled person to know when he was working in the forbidden area of the claims.

Novelty

- The subject-matter of the main request and the auxiliary requests I to III lacked novelty over **D5** as correctly concluded by the Opposition Division.
- There was no distinction between the compositions of D5 and those of Claim 1 of the rejected requests.
- The definition of the emulsifiers was broad and did not exclude gelatine or methyl cellulose.
- The argument of the Patent Proprietors, that gelatine and methyl cellulose did not within the context of D5 perform as emulsifiers, was not supported by the technical evidence submitted by them.
- The reason for this conclusion was that the technical evidence submitted by the Patent Proprietors could not be relied upon because the reproduction of the examples of D5 was inaccurate.
- Furthermore the subject-matter of Claim 1 lacked novelty over the disclosure of **D6** (example 21), a document cited under Article 54(3) EPC. The liquid margarine used, Sunnuntai®, contained in the light of D19 and D20 a weight ratio of a non-sterol emulsifier, which was the mono- and diglyceride emulsifier E471, to a high melting lipid, which was sitosterol, of 1:2.5. The mean particle size could be deduced from the general disclosure of D6 to be below 15 microns.
- The Opposition Division did not accept lack of novelty over D6, apparently because it had not been unambiguously established that the sitosterol and the emulsifier were present in the aqueous phase. This problem no longer existed in view of the Opponent's reworking of this example according to D22 which clearly demonstrated that the sitosterol was present in the aqueous phase.

Inventive step

- D15 should be considered to represent the closest state of the art. D15 disclosed aqueous dispersions containing high melting lipids which inevitably conferred structure on the food product.
- The distinguishing feature of the subject-matter of Claim 1 was the use of a high melting lipid having a mean particle size of 15 microns or lower rather than a mean particle size of 20 microns as disclosed in D15.
- According to the patent one of its objectives was to minimize the use of saturated fats as structure-imparting ingredients in food. However, at the same time the claimed subject-matter encompassed food items without such fats for which this objective was immaterial.
- Furthermore, the high melting lipids of the claim encompassed saturated fats. Therefore the desired beneficial technical effect could not be achieved across the entire scope of the claim.
- No evidence was provided in the opposed patent concerning any technical benefit associated with using a high melting lipid having a mean particle size of 15 microns or lower rather than a mean particle size of 20 microns.
- The objective technical problem was then merely to provide an alternative aqueous dispersion containing high melting lipids for use in a food product.
- The reduction of the mean particle size of the high melting lipid from 20 microns to 15 microns was an obvious modification for the skilled person to make.

- All the more, as it was well known that the particle size of foodstuff components having a high melting point (ie not melting at body temperatures) should be sufficiently small. A small particle size provided the desired smooth feel avoiding a grainy or sandy feel in the mouth (see D23 and D24) in spite of the solid state of the particles.
- Furthermore, it was known in the art (see D5) that the optimum anti-sclerotic effectiveness of the high melting lipid sitosterol was provided when administered with a mean size of from 1 to 10 microns.
- Additionally, the subject-matter of Claim 1 was obvious over D2 when this was considered to represent the closest state of the art.
- This document disclosed an oil-in-water emulsion for oral administration as a pharmaceutical in the treatment of elevated blood cholesterol levels involving (cf. Example 3) the formation of an aqueous dispersion comprising emulsifiers and micronized sitosterol, a high melting lipid, in a ratio of 1:200. The term "micronize" meant "to pulverise into particles a few microns in diameter" (see dictionary D17).
- Accordingly, the only feature distinguishing the subject-matter of Claim 1 from the disclosure of D2 was the use of a high melting lipid having a mean particle size of 15 microns or lower.
- As set out above with regard to D15, it was, however, known in the art that high melting materials used in foodstuffs should have a small particle size in order to avoid an adverse texture; it was furthermore known that sitosterol should have a particle mean size of from 1 to 10 microns in order to benefit most from its anti-sclerotic activity (D5).

– Consequently the skilled person would find it obvious to use in D2 as "micronized sitosterol" a sitosterol having a mean size of less than 10 microns.

Reasons for the Decision

1. *Admissibility of the Appeal*

The Notice of Appeal dated 26 September 2005 filed by Unilever N.V. referred to a decision of the Examining Division dated 17 July 2005 refusing the application 98202536.3.

With letter dated 6 June 2006 Unilever N.V. acknowledged that in the Notice of Appeal reference was erroneously made to "the decision of the Examining Division dated 15 July 2005" rather than to "the decision of the Opposition Division dated 15 July 2005". Therefore it requested correction of this error under Rule 88 EPC 1973.

The Board considers that the correction of this error is allowable. Rule 88 EPC 1973, first sentence, stipulates that "(l)inguistic errors, errors of transcription and mistakes in any document filed with the European Patent Office may be corrected on request". The Board is satisfied that Unilever N.V has fulfilled the above requirement by filing a request for correction together with the corrected version. Furthermore the Board considers that no other "decision" could have been meant or intended in the Notice of Appeal than the decision of the Opposition

Division because: (i) it referred to the correct application number of the patent concerned and (ii) in view of its date no other decision adversely affecting Unilever N.V could possibly have been appealed.

The Board therefore decides that the appeal of Unilever N.V. was admissible. Consequently, the second Patent Proprietor Unilever PLC is party to the appeal proceedings as of right (Article 107 EPC 1973, second sentence).

2. *Sufficiency of disclosure*

The Respondent Opponent reiterated the objection under Article 100(b) EPC raised before the Opposition Division and provided experimental evidence, D21, in order to demonstrate that aqueous dispersions containing sterol or stanol esters in the aqueous phase could not be produced.

Contrary to the arguments of the Respondent Opponent, the Board, in agreement with the Patent Proprietors, considers that the patent specification, in particular the Examples, provide the skilled person with sufficient information which would allow him to manufacture the claimed foodstuff. This is factually confirmed by the experimental evidence submitted by the Opponent. This evidence discloses a water layer which is siphoned from the bottom of the beaker and which is a dispersion, which falls under the claimed subject-matter.

As the Patent Proprietors have noted, the conflicting position of the Respondent Opponent stems from the

subsequent centrifugation used to concentrate the aqueous phase. It is apparent that under the conditions applied by the Respondent Opponent, the centrifugation led to destruction of the dispersion with the consequence that the sterol/stanol esters could not be identified in the aqueous phase. Under these circumstances the objection of insufficiency boils down to the argument that the centrifugation conditions applied in the patent in suit (see Example 1) are not specified to the extent required. In the Board's judgment the absence of such information does not render the disclosure insufficient because the person skilled in the art using his average technical skills is in the position to choose concentration conditions appropriately adapted to avoid destruction of the dispersion. The fact, shown by the Respondent's reworking of Example 6 of the patent, that one could also choose conditions which break the stable dispersion is no proof of the insufficiency of the patent's disclosure.

The Board hence concludes that the patent discloses the claimed invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

3. *Claim 1 - Novelty over D5*

3.1 Claim 1 of the main and the auxiliary requests I to III concerns a food comprising an aqueous dispersion or suspension comprising **a non-sterol emulsifier**.

3.2 The Opposition Division in its interlocutory decision considered that D5, which discloses gelatine and methyl

cellulose in compositions suitable for use as a beverage, anticipated the subject-matter of Claim 1 of these requests. The argument of the Opposition Division was that the definition of the non-sterol emulsifier in Claim 1 was very broad and that it therefore comprised the use as emulsifiers of the gelatine and methyl cellulose, which though not explicitly disclosed in D5 as emulsifiers, nevertheless acted as such.

3.3 The Board, however, concurs with the Patent Proprietors who have argued that D5 does not anticipate the subject-matter of Claim 1 because gelatine and methyl cellulose do not fall within the definition of non-sterol emulsifiers, at least under the conditions as used in D5.

3.3.1 The Board notes that the opposed patent does not provide any definition of the claimed non-sterol emulsifiers. It can, however, be derived from it that gelatine and methyl cellulose should not be considered as such. Indeed, paragraphs [0038] and [0039] of the originally filed application relate to the compulsory constituents of the aqueous dispersion or suspension: (a) high melting lipids and (b) non-sterol emulsifiers. At the same time the subsequent paragraph [0040] relates to optional ingredients, among which figures gelatine. Furthermore paragraph [0047] discloses that other optional structuring agents could be used in conjunction with the aqueous dispersions of the invention. In this respect the paragraph makes reference to WO 92/09209, stating that the disclosure of this document is incorporated by reference. Among the ingredients disclosed in that document (see page 13,

lines 27-34) are listed gelatine and microcrystalline cellulose.

As the Board reads it, the opposed patent thus makes a clear distinction between the claimed non-sterol emulsifiers and gelatine or methyl cellulose.

3.3.2 Beside these considerations, D5 does not directly and unambiguously disclose that gelatine and methyl cellulose act as emulsifiers. What in fact D5 discloses is that they are typically considered as thickeners (page 2, lines 25-28 and 37-41). It also discloses that these compounds under the specific conditions of D5 contribute to the formation of "thinly liquid suspensions to paste which no longer show a noticeable thixotropy" (page 2, lines 18-24).

In addition to this, the Board notes that the Opponent himself acknowledged in the Notice of Opposition dated 25 June 2003 (see page 10) that gelatine and methyl cellulose in the context of D5 were both protective colloids. Contrary to the allegation of the Opponent, the Board is not convinced that protective colloids and emulsifiers are one and the same thing because emulsification and colloid stabilisation involve different physico-chemical interactions. This is also reflected by the state of the art which makes a clear distinction between protective colloids and emulsifiers. Thus D2 (column 1, lines 60-71), filed by the Opponent, discloses that for the manufacture of aqueous dispersions of sitosterol protective colloidal material and emulsifiers are utilized and cites methyl cellulose as an example of protective colloidal material.

Under these circumstances the Board concludes that D5 does not directly and unambiguously disclose that gelatine and methyl cellulose act as emulsifiers in the sense this is to be understood by the patent in suit.

3.4 Consequently the disclosure of D5 does not anticipate the subject-matter of Claim 1.

4. *Claim 1 - Novelty over D6*

4.1 Claim 1 of the main and the auxiliary requests I to III concerns a food comprising an aqueous dispersion or suspension comprising also one or **more high melting lipids having a mean size of 15 microns or lower**.

4.2 The Respondent Opponent has argued that the subject-matter of Claim 1 lacked novelty in view of the disclosure of D6, Example 21, read in the light of D19 and D20. The Board does not concur with this argument.

4.3 A compulsory requirement in the subject-matter of Claim 1 is that the high melting lipids have a mean size of 15 or lower. However Example 21 of D6 does not mention the mean particle size of the sterol used. Such information cannot be found either in D19 or D20, which are said to relate to the specific liquid margarine Sunnuntai® of example 21 of D6.

4.4 The Opponent actually based its argument concerning this feature on the general disclosure of D6, apparently page 4, second paragraph. However, there is no direct and unambiguous disclosure that the mean particle size of the Sunnuntai® lipid particles will necessarily be of 15 microns or lower. The Board notes

that D6, page 4, lines 3-12, discloses volumetric mean particle sizes of less than 35 microns, preferably less than 30 microns and more preferably less than 25 micrometers. Only the most preferably particle size could be for example lower than these values and about 4 to 15 microns. There is however no information in D6 or elsewhere which would allow the skilled person to conclude that the Sunnuntai® lipid particles used in Example 21 had a mean particle size in this smallest size range.

4.5 It follows that D6 fails to comprise a direct and unambiguous disclosure of the claimed subject-matter.

5. *Claim 1 - Inventive step*

5.1 Closest state of the art

5.1.1 The Board in agreement with the Opposition Division and the Respondent Opponent considers D15 to represent the closest state of the art since it discloses foodstuffs comprising dispersions of high melting lipids. This conclusion takes account of the fact that Claim 1 covers beverages, ie aqueous compositions which comprise suspended/dispersed particles of high melting lipids having a mean particle size of 15 microns or lower and also comprising a non-sterol emulsifier in certain amounts with regard to the lipid content. The fact that according to D15 the beverages are prepared by dispersing a lipid powder derived from a suspension is not of any distinguishing significance (see below).

5.1.2 More particularly, D15 (column 1, lines 7-10 and 51-57; column 4, lines 26-43; Example 1) discloses a beverage

comprising a reconstituted aqueous dispersion of sitosterols, ie high melting lipids according to Claim 1, and polyoxyethylene (20) sorbitan monostearate, ie a non-sterol emulsifier in a w/w ratio emulsifier to high melting lipid of 1:37.5.

5.1.3 Therefore the food of Claim 1 of the main and auxiliary requests I to III differs from the disclosure of D15 only in the size of the sitosterols mean particle size. As regards the claimed food, the mean particle size is 15 microns or lower whereas according to D15 it is disclosed to be 25 microns or below, the specific value given in Example 1 being 20 microns.

In this context it should be noted that: (i) Claim 1 of the main and the auxiliary Request I is identical to granted Claim 1, (ii) Claim 1 of auxiliary request III cannot be distinguished from them because the additional feature is so defined that it does not provide any limitation, and (iii) Claim 1 of auxiliary request II comprises a specific range of the melting point of the high melting lipids, which includes the melting point of the sitosterols disclosed in D15.

5.2 The technical problem to be solved

5.2.1 The originally filed patent application (see paragraphs [0021] and [0022]) addresses the problem of how to impart structure to food products which have an aqueous phase. It argues that the addition of phytosterol(s) and other high melting lipids to these products leads to the solution of that problem. Insofar as the purpose of "imparting structure" to a beverage has any meaning at all (and in the absence of any explanation in the

patent in this respect it is rather doubtful what it could mean) D15 must - at least to some extent - implicitly address the same phenomenon. Since evidence is missing for an enhancement of this effect due to the reduction of the lipid particle size from 20 to 15 microns, this effect cannot be considered to belong to the problem underlying the claimed invention vis-à-vis D15.

5.2.2 The Patent Proprietors have also argued that the technical problem to be solved relates to the reduction of the levels of non-desired ingredients in the food products (see originally filed application, paragraph [0023]).

However, the claimed subject-matter is defined in a very broad manner. The wording "a food comprising an aqueous dispersion or suspension comprising a) and b)" and the broad term "high melting lipids" do not exclude the presence of non-desired ingredients from the claimed food composition. Thus the Board cannot accept that, on an objective basis, the possibility of reduced levels of undesired ingredients can be considered to be part of the technical problem to be solved.

5.2.3 Furthermore, the Board does not consider that the technical problem can be defined on the basis of any other surprising technical effect related to the mean particle size of 15 microns. The patent specification does not contain any technical evidence in this respect, nor have the Patent Proprietors submitted such technical evidence in the course of the present opposition and/or opposition appeal proceedings.

5.2.4 The technical report filed by the Patent Proprietors with letter dated 6 June 2006 is of no relevance in this respect as it does not provide a comparison of the choice of a lipid mean particle size of 15 microns or lower compared to a lipid mean particle size in excess of 15 microns.

5.2.5 Consequently the definition of the objective technical problem is considered to be the provision of an alternative food product comprising an aqueous dispersion containing high melting lipids.

5.2.6 According to the claimed subject-matter the solution of this technical problem consists in a food product comprising suspended/dispersed particles of one or more high melting lipids having a mean particle size of 15 microns or lower.

Though the experimental part of the opposed patent does not disclose the mean size of the phytosterols in the aqueous dispersions, the Board has no doubt that the skilled person would be able to manufacture such dispersions. Such mean size phytosterol particles already belonged to the state of the art (see D5: page 1, lines 24-28; D6: page 4, lines 7-9).

5.3 Obviousness

In the Board's judgment, the skilled person starting from D15 and seeking to formulate alternative food compositions would certainly consider the use of lipids of lower particle size. Since it was known from D24 (page 3, lines 38-40) that a lower particle size of higher melting lipids provides better organoleptic

properties, and moreover that aqueous dispersions of melting lipids of a mean particle size between 1 and 10 microns have been known to exhibit an improved anti-sclerotic effectiveness (D5: page 1, lines 24-28), using a lower lipids particle size even appears to offer distinct advantages. This constitutes an incentive for the person skilled in the art to reduce the mean particle size used according to D15. Consequently, the reduction of the mean particle size of the high melting lipid from 20 microns to 15 microns or lower is an obvious modification for the skilled person.

5.4 Under these circumstances the Board considers that the subject-matter of Claim 1 of the main and auxiliary requests I to III does not involve an inventive step.

6. *No reformatio in peius*

The Respondent has requested that the opposed patent be fully revoked. However, with letter dated 29 January 2008 it withdrew its appeal. The consequence is that under the doctrine of *no reformatio in peius* as expressed in the Case Law of the Board of Appeals (G 9/92 and G 4/93 both OJ 1994, 875), the decision of the Opposition Division concerning Auxiliary Request IV cannot be set aside. Therefore this request of the Respondent is rejected.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

C. Eickhoff P. Kitzmantel