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**Datasheet for the decision
of 12 November 2020**

Case Number: T 1483/16 - 3.3.09

Application Number: 10151491.7

Publication Number: 2359698

IPC: A23L1/22, A23L2/44, A23L2/56,
A23D9/00, A23L2/52, A23L2/58

Language of the proceedings: EN

Title of invention:
Compositions with a surfactant system comprising saponins, and
lecithin

Patent Proprietor:
Symrise AG

Opponent:
Sensient Technologies Europe GmbH

Headword:
Compositions with a surfactant system/SYMRISE

Relevant legal provisions:
EPC Art. 56, 100(a), 111(1)
RPBA 2020 Art. 13(2), 25(1), 25(3)

Keyword:

Inventive step - (no)

Admission of late filed experiments - (no)

Decisions cited:

Catchword:



Beschwerdekammern

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Case Number: T 1483/16 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 12 November 2020

Appellant: Sensient Technologies Europe GmbH
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 22 April 2016
rejecting the opposition filed against European
patent No. 2359698 pursuant to Article 101(2)
EPC.**

Composition of the Board:

Chairman A. Haderlein
Members: M. Ansorge
D. Rogers

Summary of Facts and Submissions

- I. The appeal was filed by the opponent (appellant) against the opposition division's decision rejecting the opposition.
- II. With its notice of opposition, the opponent had requested revocation of the patent in its entirety on the grounds for opposition under Article 100(a) EPC (lack of novelty and lack of inventive step), Article 100(b) EPC and Article 100(c) EPC.
- III. In the present decision, reference is made to the following documents:
- D4: WO 2007/026271 A1
D12: "National to Introduce Cracker/Snack Textures and Clean Label Beverage Emulsifier at IFT", internet publication, published 18 June 2008
D39: Comparative experiments
- IV. Claim 1 as granted reads as follows:
- "Composition comprising
- (i) an aqueous phase comprising
- water,
 - one, two or more co-solvents selected from the group consisting of propylene glycol, ethanol, triacetin, and glycerol, and
 - optionally one, two or more sugars, preferably selected from the group consisting of sucrose, fructose, and glucose,

(ii) a surfactant system comprising

- one saponin or a mixture of two, three or more saponins, wherein said saponin or one, two, three or all saponins of said mixture are selected from the group consisting of quillaic saponins, and
- lecithin,

and

(iii) an oil phase comprising (or consisting of)

- one, two, three or more substances selected from the group consisting of flavorants, vitamins, coloring foodstuffs, and polyunsaturated fatty acids,

wherein the composition does not comprise a polyglycerol [*sic*] fatty acid ester, and

wherein the composition is a microemulsion."

- V. The opposition division decided, *inter alia*, that the subject-matter of claim 1 as granted involved an inventive step in view of D4 as the closest prior art.
- VI. With the reply to the statement setting out the grounds of appeal, the patent proprietor (respondent) filed auxiliary requests 1 to 6.
- VII. In its letter dated 6 February 2018, the appellant raised objections in particular with respect to the auxiliary requests.
- VIII. On 31 January 2020 the parties were summoned to oral proceedings.

- IX. In preparation for the oral proceedings, the board issued a communication indicating its preliminary opinion.
- X. With a letter dated 12 October 2020, the respondent filed comparative experiments (D39).
- XI. On 12 November 2020 the oral proceedings took place before the board in the so-called "mixed mode", with the physical presence of the representative of the respondent and the representative of the appellant connected *via* video link.
- XII. The wording of the respondent's claim requests, in so far as relevant for the present decision, is as follows.

The claims of the main request are identical to the claims as granted. For the wording of independent claim 1 of the main request, see point IV above.

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that at the end of the claim the feature "and wherein the co-solvent is selected from the group consisting of propylene glycol and glycerol, and preferably comprises both propylene glycol and glycerol" is added.

Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that at the end of the claim the following feature is added:

"and wherein

- said flavorant is selected from the group consisting of flavor oils (essential oils), and mixtures thereof,

preferably the flavorant being citrus oil or a mixture of flavor oils including citrus oil,

and/or

- said polyunsaturated fatty acids are selected from the group consisting of omega 3 and omega 6,

and/or

- said vitamins are selected from the group consisting of vitamins A, D, E, and K, preferably the vitamin being vitamin E or a mixture of vitamins including vitamin E,

and/or

- said coloring foodstuffs are selected from the group consisting of carotenoids, luteins, paprika extract, turmeric, and mixtures thereof, preferably the coloring foodstuff being carotene or a mixture of coloring foodstuffs including carotene".

Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that at the end of the claim the feature "and wherein the weight ratio of the total amount of saponins to the total amount of lecithin is in the range of from 1:20 to 4:1, preferably in the range of from 1:10 to 2:1, more preferably in the range of from 1:5 to 1:1" is added.

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 3 in that at the end of the claim the feature "and wherein the weight ratio of the total amount of saponins and lecithin to the total amount of substances selected from the group consisting of

flavorants, vitamins, coloring foodstuffs, and polyunsaturated fatty acids is in the range of from 1:15 to 8:1, preferably in the range of from 1:8 to 4:1, more preferably in the range of from 1:4 to 2:1" is added.

Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 4 in that at the end of the claim the feature "and wherein the co-solvent comprises both propylene glycol and glycerol, and wherein the weight ratio of the total amount of propylene glycol to the total amount of glycerol is in the range of from 1:5 to 2:1, preferably in the range of from 1:3 to 1:1, more preferably in the range of from 1:2 to 1:1" is added.

Claim 1 of auxiliary request 6 differs from claim 1 of auxiliary request 5 in that directly after the feature "wherein the composition is a microemulsion", the feature "with an average particle size of the droplets of the oil phase dispersed in the aqueous phase of 140 nm or less" is added.

XIII. The appellant's arguments, in so far as relevant for the present decision, can be summarised as follows.

The microemulsion according to claim 1 of all requests does not involve an inventive step in view of D4 as the closest prior art. D39 should not be admitted into the proceedings.

XIV. The respondent's arguments, in so far as relevant for the present decision, can be summarised as follows.

The claimed microemulsion according to the main request as well as auxiliary requests 1 to 6 involves an

inventive step in view of D4 as the closest prior art. If the board finds the main request not to comply with the EPC, the case should be remitted to the opposition division.

XV. Requests

The appellant requested that the decision be set aside and the patent be revoked in its entirety.

The respondent requested that the appeal be dismissed (main request) or, alternatively, that the patent be maintained on the basis of one of auxiliary requests 1 to 6, all filed with the reply to the statement setting out the grounds of appeal.

Reasons for the Decision

MAIN REQUEST (patent as granted)

1. Inventive step
 - 1.1 Both parties agreed that D4 qualifies as an appropriate closest prior-art document in the present case. The board sees no reason to disagree.
 - 1.2 There was also agreement that the claimed microemulsion only differs from D4 by the surfactant system. While the surfactant system defined in claim 1 of the main request comprises at least one quillaic saponin and lecithin, D4 discloses a combination of a sugar ester of a fatty acid with lecithin as a surfactant system (see for instance claim 1 of D4).

1.3 The respondent argued that the effect resulting from the distinguishing feature is the improved stability of the claimed microemulsion over a broad pH range, particularly in an acidic pH range, temperature range and salt concentration range. In the respondent's view, the claimed microemulsion showed improved stability over a longer period of time (4 weeks; but typically even several months) compared to D4 (2 weeks). In this context, reference was made to paragraphs [0019] and [0073] of the patent.

1.4 The board does not agree with the respondent in this respect, since the microemulsion disclosed in D4 is also clear and thermally stable over at least two weeks (see page 9, lines 16 and 17 of D4). In the absence of comparative experiments reworking the microemulsion according to D4, a technical effect over D4 cannot be acknowledged. In particular, it cannot be acknowledged that there is an improvement over the microemulsion of D4, such as prolonged stability. The fact that the stability of the emulsion in D4 was measured after two weeks does not permit the conclusion that it was not stable after 4 weeks.

1.5 Thus, the objective technical problem is the provision of an alternative microemulsion.

As correctly mentioned by the respondent, D4 itself does not mention quillaic saponin as a surfactant. Thus, the crucial question is whether a skilled person trying to find an alternative microemulsion would find a hint in the prior art to contemplate the use of a quillaic saponin in the microemulsion.

As can be taken from document D12, the quillaic saponin Q-Naturale is a known surfactant in the technical field

of the patent in suit. D12 teaches that Q-Naturale has excellent emulsification properties, including the ability to create high oil load emulsions (see the last paragraph on page 3 of D12). Since the objective to provide a high oil loaded emulsion is also aimed at in D4 (see for instance page 2, lines 27 to 33 of D4), a skilled person trying to find an alternative microemulsion would take D12 into consideration.

1.6 In the respondent's view, D4 teaches a closed surfactant system, since only the specific combination of a sugar ester of a fatty acid with lecithin is explicitly mentioned, but no additional surfactant. In addition, the respondent argued that page 4, lines 13 to 19 of D4 mentions that a large amount of surfactant in a microemulsion may be responsible for many drawbacks, such as off-notes, foaming and high viscosity. Essentially, the respondent argued that D4 taught away from contemplating the addition of a further surfactant or the replacement of a sugar ester of a fatty acid with another surfactant, such as the quillaic saponin mentioned in D12.

1.7 For the following reasons, the board does not agree.

Firstly, the board does not find that the surfactant system of D4 is necessarily limited to using only a sugar ester of a fatty acid with lecithin. While it is true that D4 only explicitly mentions a sugar ester of a fatty acid and lecithin as surfactants, it is noted that the open wording of, for example, claim 1 of D4 ("comprising") allows the presence of further components, including surfactants.

Secondly, the board is unable to see why the text passages on page 4, lines 13 to 19 and page 6, lines 1

to 6 of D4 should teach away from contemplating the addition of a further surfactant. D4 teaches that low amounts of surfactants may be used. However, when the addition of a minor amount of an additional surfactant is contemplated, the total amount of surfactant may still be low. The same applies for the case where a surfactant is replaced.

Thirdly, the board does not see any reason which would prevent a skilled person from contemplating the addition of a further surfactant such as the quillaic saponin Q-Naturale proposed in D12. Instead, as can be taken from the last paragraph on page 3 of D12, Q-Naturale leads to excellent emulsification properties, so a skilled person would consider this indication as a motivation to add it to the microemulsion of D4, in particular in view of the problem to be solved, i.e. the provision of an alternative emulsion. A skilled person would at least expect that a surfactant system comprising a sugar ester of a fatty acid, lecithin and Q-Naturale is equally suited to solve the objective technical problem. Moreover, the board is of the opinion that a skilled person would also be motivated by D12 to replace one of the surfactants mentioned in D4 with Q-Naturale, while expecting that the objective technical problem could still be solved. In this context, the board does not consider that a skilled person would only be taught by D12 to replace the whole surfactant system with Q-Naturale.

Thus, the subject-matter of claim 1 of the main request does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

2. Remittal to the opposition division

The respondent requested that the case be remitted to the opposition division if the subject-matter claimed in the main request were considered not patentable by the board.

Since all the grounds for opposition raised in the notice of opposition, including the question of inventive step, were dealt with in the opposition division's decision, the board sees no reason justifying remittal to the opposition division (Article 111(1) EPC).

AUXILIARY REQUEST 1

3. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that it limits the co-solvent to the group consisting of propylene glycol and glycerol.

Since D4 also teaches the use of glycerol or propylene glycol as co-solvent (see claim 8 of D4), the same reasoning as outlined for claim 1 of the main request applies.

Thus, the subject-matter of claim 1 of auxiliary request 1 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

AUXILIARY REQUEST 2

4. Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that it further limits the flavorants, vitamins, coloring foodstuffs and polyunsaturated fatty acids.

In so far as the alternative "flavorants" in claim 1 is concerned, it now specifies that the flavorant is selected from the group consisting of flavor oils (essential oils), and mixtures of them. Since D4 already discloses the addition of a flavor oil to the microemulsion (see claim 1 of D4), the same reasoning as outlined for claim 1 of auxiliary request 1 applies.

Thus, the subject-matter of claim 1 of auxiliary request 2 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

AUXILIARY REQUEST 3

5. Admission of D39

- 5.1 The respondent filed comparative experiments (D39) one month before the oral proceedings, the admission of which was contested by the appellant.
- 5.2 The respondent argued that D39 was produced in reaction to the negative assessment of inventive step for auxiliary requests 3 to 6, which was first given in the communication pursuant to Article 15(1) RPBA 2020.
- 5.3 The board does not agree, since this lack-of-inventive-step objection in view of D4 had already been raised by the appellant in its letter dated 6 February 2018. Filing D39 in response to the preliminary opinion of the board is not a direct reaction to the appellant's inventive-step attack which it had raised more than two years previously.
- 5.4 The filing of D39 does not fall under the "exceptional circumstances" stipulated in Article 13(2) RPBA 2020,

applicable in the present case (see Article 25(1) and (3) RPBA 2020).

A reaction to a preliminary opinion of the board which merely assesses objections raised a long time ago does not represent exceptional circumstances within the meaning of Article 13(2) RPBA 2020. Furthermore, the opinion of the respondent that filing D39 would not be an amendment to its case within the meaning of this provision is unconvincing. Presenting the board and the opposing party with an entirely new set of facts, such as comparative experiments, amounts to an amendment to a party's appeal case within the meaning of Article 13(2) RPBA 2020. The argument that the preparation of D39 was delayed by the Covid-19 pandemic cannot be accepted as an excuse for filing these experiments so late, since the respective inventive-step objection had been known to the respondent for more than 2 years, i.e. long before the outbreak of Covid-19.

In view of the above, D39 is not admitted into the proceedings (Article 13(2) RPBA 2020).

6. Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the weight ratio of the total amount of saponins to the total amount of lecithin is limited to the range of from 1:20 to 4:1.

No effect resulting from this weight ratio is shown in view of D4. Adjusting the weight ratio of these surfactants is an arbitrary selection which cannot support the presence of an inventive step.

Thus, the subject-matter of claim 1 of auxiliary request 3 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

AUXILIARY REQUEST 4

7. Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 3 in that the weight ratio of the total amount of saponins and lecithin to the total amount of substances selected from the group consisting of flavorants, vitamins, coloring foodstuffs and polyunsaturated fatty acids is limited to the range of from 1:15 to 8:1.

No effect resulting from this weight ratio is shown in view of D4. Adjusting this weight ratio is also an arbitrary selection which cannot support the presence of an inventive step.

Thus, the subject-matter of claim 1 of auxiliary request 4 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

AUXILIARY REQUEST 5

8. Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 4 in that it limits the co-solvent to one comprising both propylene glycol and glycerol, wherein the weight ratio of the total amount of propylene glycol to the total amount of glycerol is in the range from 1:5 to 2:1.

D4 also teaches the use of a mixture of glycerol and propylene glycol as co-solvent (see claim 8 of D4). Adjusting the weight ratio of the total amount of propylene glycol to the total amount of glycerol to the

claimed range is an arbitrary selection which cannot support the presence of an inventive step either.

Thus, the subject-matter of claim 1 of auxiliary request 5 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

AUXILIARY REQUEST 6

9. Claim 1 of auxiliary request 6 differs from claim 1 of auxiliary request 5 in that it specifies that the microemulsion has an average particle size of the droplets of the oil phase dispersed in the aqueous phase of 140 nm or less.

In this context, it is noted that the respondent itself interpreted the term "microemulsion" in such a manner that it implicitly has an average particle size of the droplets of the oil phase falling within the claimed range. It follows from the respondent's own interpretation of the droplet size of microemulsions that D4 necessarily discloses a microemulsion having the required droplet size. Thus, the feature inserted into claim 1 of auxiliary request 6 does not lead to a further difference over D4, so the same reasoning as given for claim 1 of auxiliary request 5 applies.

Thus, the subject-matter of claim 1 of auxiliary request 6 does not involve an inventive step in view of D4 as the closest prior art in combination with D12.

10. In view of the above, none of the requests on file is allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



A. Nielsen-Hannerup

A. Haderlein

Decision electronically authenticated