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**Datasheet for the decision
of 10 March 2026**

Case Number: T 1105/24 - 3.3.09

Application Number: 15819836.6

Publication Number: 3236762

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A23C21/10, A23L29/212,
A23L29/281, A23L33/19,
A23L9/10, A23L35/00

Language of the proceedings: EN

Title of invention:

COMPOSITIONS COMPRISING WHEY PROTEIN, NATIVE STARCH AND SUGAR

Patent Proprietor:

Compagnie Gervais Danone

Opponent:

Fresenius Kabi Deutschland GmbH

Headword:

Whey protein composition/GERVAIS DANONE

Relevant legal provisions:

EPC Art. 54, 56, 123(2)

Keyword:

Novelty - (yes)

Inventive step - (yes)

Amendments - allowable (yes)

Decisions cited:

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1105/24 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 10 March 2026

Appellant: Fresenius Kabi Deutschland GmbH
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
1 July 2024 concerning maintenance of the
European Patent No. 3236762 in amended form.

Composition of the Board:

Chairman A. Haderlein
Members: A. Zellner
N. Obrovski

Summary of Facts and Submissions

- I. The opponent lodged an appeal against the opposition division's decision holding that the patent as amended according to the main request filed by letter dated 3 April 2024 met the requirements of the EPC (Article 101(3) (a) EPC).
- II. A notice of opposition was filed on the grounds of Article 100(a) EPC for lack of novelty and lack of inventive step (Articles 54 and 56 EPC), and of Article 100(c) EPC for extension of subject-matter beyond the content of the application as filed.
- III. The patent proprietor defended its patent in amended form. In the impugned decision, the opposition division held that the main request met the requirements of Article 123(2) EPC. It further concluded that the subject-matter of claim 1 was novel in view of the disclosure of documents D2, D3 and D11 and involved an inventive step. Document D6 was considered to be the closest prior art. An inventive step was also acknowledged starting from D4/D4a or D11.
- IV. Reference is made to the following documents:
- D1: WO 2016/102711 A1
 - D2: US 2009/0162509 A1
 - D3: WO 2013/101400 A1
 - D4: CN 104186917 A
 - D4a: Machine translation of CN 104186917 A
 - D6: US 2010/0196559 A1
 - D7: "Dairy Processing Handbook" published by Tetra Pak Processing Systems AB, Chapter 2
 - D8: Smith "Dried Dairy Ingredients" published by

Wisconsin Center for Dairy Research,
pages 13-15

D10: ADDITIONAL TEST RESULTS, submitted by the
respondent during the opposition proceedings
on 21 February 2023

D11: Yamul D.K., et al. "VISCOELASTIC PROPERTIES OF
WHEY PROTEIN CONCENTRATE GELS WITH HONEY AND
WHEAT FLOUR AT DIFFERENT pH", Journal of
Texture Studies 40 (2009) 319-333

D13: Goesaert, H., et al., "Wheat flour
constituents: how they impact bread quality,
and how to impact their functionality", Trends
in Food Science & Technology 16 (2005), 12-30

D16: DECLARATION, submitted by the appellant during
the opposition proceedings on 15 January 2024

D19a: DECLARATION, submitted by the respondent on
14 February 2025

V. Claim 1 of the main request reads as follows:

"An aqueous composition comprising:

- water,*
- at least 8.0% by weight of whey protein,*
- 0.1% to 1.0% by weight of non-pregelatinized
native starch, and*
- 5.0% to 15.0% by weight of sugar,*

wherein the pH is of from 5.0 to 9.0."

VI. The appellant's arguments may be summarised as follows:

- Claim 1 of the main request lacks a basis in the
application as filed.
- The subject-matter of claim 1 lacks novelty over
D2, D3 and D11. In particular, D2 and D3 disclose
the feature "at least 8% by weight of whey protein"

in combination with the remaining features, and D11 discloses the claimed amount of non-pregelatinised native starch.

- The subject-matter of claim 1 lacks an inventive step starting from D4/D4a, D6, D11 or D14. A technical effect has not been demonstrated for the distinguishing features, or at least not across the entire claimed scope. The objective technical problem is therefore that of providing an alternative composition, which is solved in an obvious manner.

VII. The respondent's arguments may be summarised as follows:

- The requests are based on the application as filed.
- The claimed subject-matter is novel and involves an inventive step, as correctly held by the opposition division.
- The respondent is also relying on a synergistic effect.
- Arguments submitted for the first time with the grounds of appeal should not be admitted.

VIII. The appellant (opponent) requests that the impugned decision be set aside and that the patent be revoked.

IX. The respondent (patent proprietor) requests that the appeal be dismissed. As an auxiliary measure, the respondent requests that the patent be maintained in the form of one of auxiliary requests 1 to 34, filed

with the reply to the statement setting out the grounds of appeal.

Reasons for the Decision

Main request

Amendments (Article 123(2) EPC)

1. The appellant argued that the opposition division's conclusion that claim 1 of the main request was based on the disclosure of the application as filed was erroneous. The feature *"5.0% to 15.0% by weight of sugar"*, which was added from the description, was the result of a two-fold selection from the disclosure on page 6, lines 11 to 17 and the combination of the selected features. The appellant further argued that the limitation of the non-pregelatinised native starch to *"0.1% to 1.0% by weight"* led to a further combination of features which was not disclosed in the application as filed.

2. This argument is not persuasive for the following reasons.

2.1 Claims 1 and 4 of the application as filed (reference is made to the publication of the international application, WO 2016/102711 A1) have the following wording:

"1. An aqueous composition comprising:

- water,*
- at least 8.0% by weight of whey protein, and*
- non-pregelatinized native starch,*

wherein the pH is of from 5.0 to 9.0."

"4. The composition according to any one of the preceding claims, wherein the concentration of native starch is from 0.1% to 1.0%."

2.2 Claim 1 of the main request is thus based on a combination of claims 1 and 4 of the application as filed. Since claim 4 as filed is dependent on claim 1 as filed, a selection is not required.

2.3 Claim 1 further comprises the feature whereby the composition comprises "... 5.0% to 15% by weight of sugar ...". This feature is derived from page 6, lines 11 to 17 of the description as filed.

According to line 11, the composition preferably comprises sugar. Lines 13 to 16 explicitly disclose the end points of the claimed range, albeit as end points of different, more or less preferred ranges. According to established case law, forming a range by combination of end points of disclosed ranges is unequivocally derivable from the original disclosure and thus supported by the application as filed (see the Case Law of the Boards of Appeal, 11th edition 2025, Chapter II.E.1.5.1 (a)).

2.4 Finally, the combination of the selected range with the features of claim 4 as filed does not contravene Article 123(2) EPC either.

2.5 The board concludes that claim 1 has a basis in the application as filed, and that the main request meets the requirements of Article 123(2) EPC.

Novelty (Article 54 EPC)

3. The opposition division concluded that the aqueous composition according to claim 1 of the main request was novel in view of the disclosure of documents D2, D3 and D11. The appellant submitted that the claimed composition was disclosed in each of these documents.

Document D2

4. According to the appellant, document D2 also disclosed the combination of 8% whey protein and a pH within the range according to claim 1 of the main request. Concerning the pH, the appellant argued that no pH-altering ingredients were added to the (neutral) compositions disclosed in D2 and that the pH would thus inevitably be within the range according to claim 1 of the main request. The respondent argued that this was a new argument raised for the first time in the appeal proceedings, and was not to be admitted.
5. The appellant's line of argument is not convincing. Example 1 of D2 is the only disclosure of a specific pH value. While this value falls within the claimed scope, example 1 does not disclose a whey protein content of at least 8% by weight. The composition according to example 1 comprises 7.19% by weight of skimmed milk powder; however, the example does not specify any amount of whey protein as being at least 8.0% by weight. Example 1 does not disclose a composition comprising 5.0% to 15% by weight of sugar, since the sucrose content is only 3.94%. While it is correct that the description of D2 discloses whey protein as an example of a dairy protein, it is only disclosed in a list of several other possible sources (see paragraph [0033]). It is also correct that D2 discloses

compositions comprising up to 8% of protein; however, this value is not disclosed in combination with whey protein (see paragraph [0011]). Furthermore, the general description of D2 does not disclose any pH value whatsoever. The board notes that the pH of the composition according to example 1 had to be checked and corrected (see paragraph [0057]). It is thus not directly and unambiguously derivable from D2 that the pH values of the compositions disclosed in this document are within the claimed range. The board concludes that document D2 does not disclose an aqueous composition according to claim 1 of the main request. In view of this, it is not necessary to address the admittance of this argument into the appeal proceedings.

Document D3

6. The appellant contested the opposition division's conclusion that document D3 did not disclose a composition which also comprised the feature "*at least 8.0% by weight of whey protein*". With reference to paragraphs [0071], [0072] and [0074] of D3, the appellant submitted that only a single selection had to be made, i.e. the selection of "*whey protein*" from the list of suitable proteins disclosed in paragraph [0072].
7. The appellant's argument is not convincing. The appellant in particular referred to paragraph [0072] for the disclosure of a preference for whey protein concentrate, and to paragraph [0071] for the disclosure of the amount of it in the composition. According to paragraph [0072], however, particularly preferred protein sources include skimmed milk, including condensed skimmed milk, and whey protein concentrate,

alone or in combination. The selection of a combination of skimmed milk and whey protein concentrate, and the combination of it with the total protein content disclosed in paragraph [0071], does not necessarily lead to the contested feature, i.e. at least 8% by weight of whey protein, because D3 does not disclose the relative amounts of skimmed milk and whey protein concentrate in the combination. The selection of skimmed milk alone does not lead to the contested feature either, since even the maximum amount of 30% total protein concentration does not lead to the contested feature in view of the amount of only 20% of whey protein in overall milk protein (see D7: page 23, Table 2.5; D8: page 13, first paragraph). Therefore, the feature "*at least 8.0% by weight of whey protein*" is not directly and unambiguously derivable from D3. The document thus does not disclose an aqueous composition according to claim 1 of the main request, and the opposition division's assessment in this respect is therefore correct.

Document D11

8. The appellant concurred with the opposition division that document D11 disclosed, in the point entitled "*Rheology*" on page 321, a composition which initially comprises more than the claimed amount of 0.1% to 1.0% by weight of non-pregelatinised native starch; however, in particular with reference to pages 324, 328 and 331 as well as figure 7 of D11, the appellant submitted that the higher initial amount of starch would decrease during the heat treatment, and would finally reach a level within the range according to claim 1 of the main request. This was contested by the respondent, which also submitted that this argument was new in the appeal

proceedings.

9. The opposition division's finding in point 3.3.4.1 of the impugned decision is correct. The composition disclosed in D11 does not comprise 0.1% to 1.0% by weight of non-pregelatinised native starch, but, if wheat flour is present at 10%, between 7 and 7.5% by weight of starch (see document D13: page 12, right-hand column, lines 10 to 11). Although, as submitted by the appellant, the composition disclosed in document D11 may alter with respect to the relative amount of its components over time or with heat treatment, the appellant's argument that D11 disclosed a composition comprising starch within the range according to claim 1 of the main request is not persuasive, as there is no evidence that the starch content would eventually drop to a level within the claimed range. It is thus not necessary to address the question of admitting this argument into the appeal proceedings.
10. For these reasons, the board concludes that the main request meets the requirements of Article 54 EPC.

Inventive step (Article 56 EPC)

11. The opposition division considered D6 to be the closest prior art and identified the distinguishing feature as the presence of non-pregelatinised starch in an amount of 0.1% to 1.0% by weight. According to the opposition division, the technical effect was to control the gelling of the composition. This effect was demonstrated by the examples of the patent in dispute. The opposition division did not rely on the experimental data from D11, since, in its opinion, the question of whether a synergistic effect of sugar and starch was present did not have to be addressed. The

technical problem was considered to be that of providing an aqueous composition comprising a high amount of whey protein, wherein the gelling of the protein was postponed upon heating of the composition. Neither document D6 nor any of documents D2, D4/D4a or D11 prompted the skilled person to solve this problem according to claim 1 of the main request. Furthermore, the opposition division also acknowledged the presence of an inventive step if either of documents D4/D4a or D11 was considered to be the closest prior art.

12. The appellant presented arguments in particular based on the disclosure of document D6 as the closest prior art, and concurred with the opposition division concerning the distinguishing feature. The technical problem was only to provide an alternative aqueous composition, since only one concentration of pregelatinised starch was tested in example 1 of the contested patent, and only for one specific pH value. The absence of a particular technical effect was confirmed by document D16, and was not rebutted by the respondent's experimental data provided in documents D9a and D10. Even if the technical problem was considered to be that of providing an aqueous composition with postponed gel formation, the solution according to claim 1 was obvious in the light of the technical teaching of documents D2, D4, D11 or D14. Furthermore, there was a lack of inventive step starting from any of documents D4/D4a, D11 and D14 as the closest prior art.

13. The board comes to the following conclusions:

Patent in dispute

14. The patent relates to food compositions comprising high amounts of whey protein, native starch and sugar (see paragraphs [0001] and [0017]). It addresses the problems of gelling, which can occur in particular for compositions comprising high amounts of whey proteins (see paragraph [0003]). The patent aims to prevent gelling or fouling of equipment, in particular upon heat treatment of whey protein compositions (see paragraph [0054]), and suggests compositions according to claim 1.

Closest prior art

15. The board concurs with the opposition division that document D6 can be considered to be the closest prior art (see D6: paragraph [0030]). This document discloses an aqueous composition comprising water, at least 8.0% (5-12%) by weight of whey protein, 5.0% to 15.0% (6-15%) by weight of sugar, and wherein the pH is from 5.0 to 9.0 (6.6-8.2) (see paragraphs [0013], [0015] and [0031]). Both parties agreed that D6 is a suitable starting point for evaluating inventive step.

Distinguishing features

16. The parties also agreed that the difference between the claimed composition and the composition disclosed in document D6 is that it comprises non-pregelatinised starch in an amount of 0.1% to 1.0% by weight. The board sees no reason to deviate from this.

Technical effect

17. The parties disagreed as to whether the distinguishing feature leads to a particular technical effect.
18. The contested patent discloses that the presence of a certain amount of non-pregelatinised native starch in a composition comprising 12.2% whey protein, 8 or 11% sugar and water, and having a neutral pH, leads to an increased time before gel, measured under the conditions of example 1 (see paragraphs [0113] to [0117]). In particular, for compositions comprising water, 12.2% by weight of a whey protein preparation, 0.2% trisodium phosphate, 0.75% non-pregelatinised native starch 8.0 or 11.0% of crystal sugar, and at a pH of around 7, a time before gel of 27 to 37 minutes results using a device and under conditions according to paragraph [0114] of the contested patent (see Table 1, examples 1.3 to 1.5). By contrast, compositions without non-pregelatinised starch exhibit times before gel of 15 to 20 minutes. Document D10 provides additional data demonstrating that the presence of sugar also leads to an increased time before gel.
19. The appellant argued, in particular with reference to document D16, that the experimental setup of the examples in the contested patent, as well as documents D10 and D19a, did not allow time before gel to be measured, and was thus not suitable for supporting the alleged technical effect.

According to the appellant, the respective examples were carried out using a device referred to in paragraph [0114] and under conditions which did not allow for a visual inspection to monitor gel formation over time due to the fact that the lid of the cooking

device had to be removed to observe the composition. This was, however, only done at particular points in time, twice at most according to document D19a.

On the contrary, the experimental data submitted by the appellant (D16) were the result of a more systematic and reproducible approach, provided comprehensive documentation, additionally by way of photographs, and were thus more credible. In addition, sampling did not lead to a significant drop in temperature, as argued by the respondent. The data clearly demonstrated that the alleged technical effect could not be observed.

20. The board does not follow the appellant's line of argument.

According to paragraph [0114] of the contested patent, the experiments are performed in a Thermomix MT31. The board is convinced that the device can be operated in a manner allowing the time before gel to be determined within the accuracy given in Table 1 of the contested patent and D10 (see points 5 to 9 of document D9a). It is noted that the time before gel of examples according to claim 1, i.e. examples 1.3 to 1.5 and 1.8, is between 27 and 37 minutes, whereas the corresponding values for examples outside the scope of claim 1, i.e. examples 1.1c, 1.2c, 1.6c and 1.7c, are between 15 and 20 minutes. It is also noted that the measurement could be taken without significant cooling of the sample (see point 9 of D19a).

Document D16, provided by the appellant, does not reproduce the experiments of the patent and does not follow the experimental procedure. Instead, gel formation was assessed visually and the time at which gel appears was noted; for the visual check a small

sample was taken from the reactor with a long Pasteur pipette and pipetted onto a plastic tray (see point 4.h. of D16). Even if, as submitted by the appellant, these experiments were conducted in a reproducible way, they cannot negate the respondent's experimental results. In particular, withdrawing a small sample with a pipette and putting it onto a plastic tray will inevitably lead to a greater difference in temperature than the measurement method according to the patent, i.e. visual inspection in situ. Even if they are reproducible, the results are thus not necessarily more reliable and meaningful than the respondent's results.

21. The board concludes that the results demonstrated in the examples of the contested patent and in document D10 are credible, and cannot be negated by the experimental data provided by the appellant in D16.
22. The appellant further argued that a technical effect has not been demonstrated over the entire claimed scope. It was not necessary to provide experimental evidence, since scientific considerations led to the conclusion that the effect relied upon could not be achieved under all of the conditions according to claim 1.

In particular, the appellant argued that it was not credible that gelation could be postponed over a pH range from 5.0 to 9.0. An effect was only demonstrated for a pH around 7 in the examples of the patent. It was known in the art (page 22 of D7; paragraph [0007] of D4a) that denaturation of proteins was heavily dependent on pH as a result of its change in net electric charge at the isoelectric point. At this particular pH, which was around 5 for whey protein, gel formation proceeded markedly faster, thereby

jeopardising the alleged effect.

Furthermore, the examples of the patent did not demonstrate an effect for a starch concentration other than 0.75% by weight, which was almost one order of magnitude higher than the lowest limit of 0.1% according to claim 1. It was not credible that similar results could be achieved for lower concentrations. This reasoning also applied with respect to the amount of sugar.

Finally, the appellant argued that no data was available for high whey concentrations, although the maximum amount of whey protein was not limited.

23. The board is not convinced.

It may well be the case that gel formation may proceed at different rates depending on pH; however, this does not contradict the fact that adding a specific type and amount of starch still leads to the alleged effect, which may even occur close to the isoelectric point of the protein. The same applies to concentrations of starch and sugar other than those tested in the examples. It is also noted that the example was not carried out close to the limits of the claimed ranges. Without any evidence to the contrary, the ranges in claim 1 can thus be considered a reasonable generalisation of the examples provided in the patent.

24. In summary, the board concludes that the technical effect caused by the distinguishing feature is as indicated in paragraph [0054] of the contested patent, i.e. postponing gelling of the composition upon heat treatment. The question of whether there is a synergistic effect, disputed by the appellant,

therefore does not need to be addressed.

Technical problem

25. The objective technical problem may thus be considered to be that of providing an aqueous composition comprising a certain amount of whey protein, wherein the gelling of the protein is postponed upon heating of the composition.

Claimed solution

26. According to claim 1 of the main request, the technical problem is solved by providing an aqueous composition comprising at least 8.0% by weight of whey protein and non-pregelatinised starch in an amount of 0.1% to 1.0% by weight.

Success of the claimed solution

27. For the reasons given above, the board is convinced that the technical problem is solved by the presence of non-pregelatinised starch in an amount of 0.1% to 1.0% by weight (see points 17. to 24. above).

Non-obviousness of the claimed solution

28. The appellant referred to document D2. This document relates to a sterilised nutritional beverage containing protein, fat, carbohydrates and water (see paragraph [0001]). It specifically addresses the problem of storage stability, in particular under tropical conditions (see paragraphs [0005] to [0010]). The document does not provide any teaching with respect to adding non-pregelatinised starch in order to postpone the gelling of whey protein comprising compositions

upon heating of the composition.

29. As submitted by the appellant, it is correct that paragraph [0019] of the document refers to resisting gelatinisation to give a low viscosity to assist flow through the plant, and mentions that native starch can be employed to stabilise the nutritional beverage in question. Although this effect is attributed to the starches, which allows them to be added to protein compositions, D2 does not suggest adding them in order to postpone gel formation of aqueous compositions comprising at least 8% by weight of whey protein. Paragraphs [0007] to [0009] disclose that stabilisation refers to the stability of the final product. This effect therefore does not relate to the formation of a gel during the preparation of the nutritional product, but to a later stage, i.e. throughout the shelf life of the product (see paragraph [0007]).
30. Furthermore, document D2 discloses that modified starches were preferred in UHT-processed dairy food, since they resist gelatinisation to assist flow through the plant. The document thus discourages the skilled person from using non-modified, i.e. natural, starches, which is mandatory according to claim 1 of the main request.
31. It is also noted that the nutritional beverage disclosed in D2 comprises 0.5 to 8% by weight of protein, which is at or below the lower end of the amount in the compositions according to claim 1 of the main request. It is thus questionable whether the problem addressed by the contested patent is even an issue in D2.

32. For these reasons, the board concludes that D2 does not suggest adding 0.1% to 1.0% by weight of non-pregelatinised native starch to the composition disclosed in D6.
33. The appellant also referred to document D4/D4a and argued that the skilled person would consult the document in order to solve the technical problem. According to the appellant, example 5 of this document disclosed adding 1% by weight corn starch, i.e. non-pregelatinised starch, to a composition comprising the remaining components of claim 1 of the main request. The skilled person would thus be directly led to the claimed aqueous compositions.
34. This argument ignores the fact that the objective technical problem to be solved is that of providing an aqueous whey protein-containing composition in which gelling of the protein is postponed upon heating; however, document D4/D4a does not disclose adding non-pregelatinised corn starch in order to postpone gelling upon heating.
35. Documents D11 or D14, which are also referred to by the appellant, do not suggest adding non-pregelatinised starch in an amount of 0.1% to 1.0% by weight in order to postpone the gelling of the protein upon heating of the composition either.
36. The appellant also put forward arguments on the basis of document D4/D4a as the closest prior art. According to paragraph [0009] of this document, however, the authors are seeking to obtain a product having high gel strength, which contradicts the aim of the contested patent. Furthermore, the addition of starch is reported in the context of providing a whey protein gel with

high strength and good water holding capacity (see paragraph [0009]). This document does not prompt the skilled person to add 0.1% to 1.0% by weight of native pregelatinised starches to the composition disclosed in D6 in order to postpone gelling upon heating of the composition.

37. During the written proceedings, the appellant also put forward arguments on the basis of either of documents D11 or D14 as the closest prior art. These documents are less suitable as the closest prior art since they relate to different technical purposes and problems (see the abstracts). It is thus not credible that the skilled person would start from the disclosure of these documents and modify the compositions they disclose in order to provide aqueous compositions in which the gelling of the protein is postponed upon heating of the composition.

Conclusion on inventive step

38. For these reasons, the board's conclusion is that the main request meets the requirements of Article 56 EPC.

Conclusion

39. Since the arguments put forward by the appellant do not prejudice the maintenance of the patent on the basis of the main request, which complies with Articles 123(2), 54 and 56 EPC, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



K. Götz-Wein

A. Haderlein

Decision electronically authenticated