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**Datasheet for the decision
of 20 June 2024**

Case Number: T 0376/22 - 3.3.09

Application Number: 11745512.1

Publication Number: 2595492

IPC: A23C3/037, A23C9/12, A23C9/142,
A23C9/15, A23C9/156

Language of the proceedings: EN

Title of invention:
LACTOSE-REDUCED MILK-RELATED PRODUCT AND A PROCESS FOR ITS
MANUFACTURE

Patent Proprietor:
Arla Foods Amba

Opponent:
Valio Ltd

Headword:
Lactose-reduced milk/ARLA FOODS

Relevant legal provisions:
EPC Art. 54(2), 56, 83, 84, 123(2)
RPBA 2020 Art. 13(2)

Keyword:

Auxiliary request 1: Added matter - (no); Clarity - (yes);
sufficiency of disclosure - (yes); novelty - (yes) inventive
step - (yes)

Decisions cited:

G 0003/14

Catchword:



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Case Number: T 0376/22 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 20 June 2024

Appellant: Arla Foods Amba
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted on
17 December 2021 concerning maintenance of the
European Patent No. 2595492 in amended form.

Composition of the Board:

Chairman A. Haderlein
Members: A. Veronese
A. Jimenez

Summary of Facts and Submissions

- I. The opponent and the patent proprietor filed appeals against the opposition division's decision that the European patent as amended according to auxiliary request 3, which had been filed with a letter of 22 October 2020, met the requirements of the EPC.
- II. With its notice of opposition, the opponent had requested revocation of the patent in its entirety on the basis of Article 100(a) (lack of novelty and lack of inventive step), Article 100(b) and 100(c) EPC.
- III. The documents submitted during the opposition proceedings included the following.
- D1: O. Tossavainen et al., *Milchwissenschaft*, 2008, vol. 63(3), p. 254-258
- D2: H. Kallioinen et al., *Milchwissenschaft*, 2008, vol. 63(4), p. 381-385.
- D3: WO 2009/000972 A1
- D4: A.J. van Asselt, *International Dairy Journal*, 2008, vol. 18, p. 531 -538
- IV. Concerning auxiliary request 3, the opposition division found as follows.
- Claim 1 did not contain originally undisclosed subject-matter.
 - The claimed subject-matter was clear.
 - The claimed invention was sufficiently disclosed.

- The subject-matter of claim 1 involved an inventive step starting from D3 as closest prior art; that of claim 5 involved an inventive step starting from D1 as closest prior art; and that of claim 8 involved an inventive step starting from D2 as closest prior art.

V. With its letter dated 12 March 2024, the patent proprietor filed a main request and auxiliary requests 1 and 2. The main request was withdrawn during the oral proceedings before the board.

VI. Claims 1 and 5 of auxiliary request 1 read as follows.

"1. A method of producing a packaged, lactose-reduced milk-related product, the method comprising the steps of:

- a) providing a lactose-reduced milk-related feed,*
- b) subjecting a milk derivative derived from said milk-related feed to a High Temperature (HT)-treatment, wherein the milk derivative is heated to a temperature in the range of 140 - 180 degrees C, kept in that temperature range for a period of at most 200 msec., and then finally cooled,*
- c) packaging a lactose-reduced milk-related product derived from the HT-treated milk derivative,*

which method furthermore involves a hydrolysis step where at least some of the lactose is hydrolysed into glucose and galactose and an enzyme inactivation step whereby the combined activity of plasmin and plasminogen of the treated liquid is reduced by at least 60% relative to the activity of the untreated liquid,

wherein deriving the milk derivative from the milk-related feed involves subjecting the milk-related feed to the enzyme inactivation step,

and

wherein the hydrolysis step is performed after subjecting the milk-related feed to the enzyme inactivation step,

or

wherein deriving the lactose-reduced milk-related product from the HT-treated milk derivative involves subjecting the HT-treated milk derivative to the enzyme inactivation step,

and

wherein deriving the lactose-reduced milk-related product from the milk derivative involves hydrolysing at least some of the lactose of the HT-treated milk derivative,

and

wherein the hydrolysis step is performed before or after subjecting the HT-treated milk derivative to the enzyme inactivation step."

"5. A lactose-reduced milk-related product having a shelf-life of at least 70 days, when kept at 5 degrees C, said lactose-reduced milk-related product comprising:

- 0.01-2% (w/w) galactose relative to the total weight of the lactose-reduced milk-related product,*
- 0.01-2% (w/w) glucose relative to the total weight of the lactose-reduced milk-related product,*
- at most 0.2% (w/w) lactose relative to the total weight of the lactose-reduced milk-related product, and wherein the milk-related product has a furosine value*

of at most 60 mg/100 g protein on day 49 after the production when kept at a temperature of 5 degrees C during storage, and where the milk-related product is obtainable by a method according to any one of claims 1-4."

VII. The **proprietor's arguments**, where relevant to the decision, may be summarised as follows.

- Auxiliary request 1 was filed to address unforeseen developments in the appeal case, namely new interpretations given to features characterising the claims in the board's preliminary opinion. The request differed from the previously filed ones only in that some claims were deleted. It addressed the new issues without raising new ones. Thus, it had to be admitted into the appeal.
- Claim 1 did not contain added subject-matter.
- The claimed invention was sufficiently disclosed for the skilled person to carry out the invention.
- Product-by-process claim 5 fulfilled the requirements of Article 84 EPC. The characteristics of the claimed product could not be defined by structural features.
- The subject-matter of claim 5 defined a product by process and was novel over the CFM milk of D1.
- The method of producing the milk product of claim 1 involved an inventive step over D3; the milk product of claim 5 involved an inventive step over the CFM milk of D1 and over the CRHM milk of D2.

VIII. The **opponent's arguments**, where relevant to the decision, may be summarised as follows.

- There were no exceptional circumstances justifying the filing of auxiliary request 1 at a late stage of the appeal proceedings. Thus, this request should not be admitted.
- Claim 1 contained added subject-matter. The combination of the features of a) lactose hydrolysis and b) enzyme inactivation, whereby the plasminogen and plasmin activity is reduced by 60%, was not disclosed in the application as filed.
- The subject-matter of claim 5 did not fulfil the requirements of Article 84 EPC, because it could be defined by structural features without resorting to a product-by-process claim formulation.
- The milk product of claim 5 was insufficiently disclosed. Examples III, IV and VI of the patent were not according to the invention, and did not provide evidence that a milk product having the claimed shelf life could be produced.
- The milk product of claim 5 was not novel over the CFM milk of D1.
- The method for producing the milk product of claim 1 did not involve an inventive step over D3 combined with D4. The milk product of claim 5 lacked an inventive step over the CFM milk of D1 and the CRHM milk of D2.

The requests

- IX. The patent proprietor requested that the decision under appeal be set aside and that the patent be maintained on the basis of one of auxiliary requests 1 and 2, as filed by letter dated 12 March 2024.
- X. The opponent requested that the decision under appeal be set aside and that the patent be revoked.

Reasons for the Decision

Auxiliary request 1

1. *Admission of auxiliary request 1*
- 1.1 Auxiliary request 1 was filed in response to the communication issued by the board in preparation for the oral proceedings. In that communication, the board had expressed the preliminary opinion that independent claim 5 of the previously filed auxiliary request 2 did not involve an inventive step over the cited prior art.
- 1.2 Auxiliary request 1 differs from the previously filed auxiliary request 2 in that claim 5 and its dependent claims 6 and 7 have been deleted.
- 1.3 The deletion of these claims constitutes an amendment to the party's case within the meaning of Article 13(2) RPBA. However, this amendment does not change the factual and legal framework of the appeal proceedings. It overcomes the inventive-step objection raised in relation to claim 5 of the previous request without raising any new issues. Thus, the amendment results in a significant simplification of the proceedings and is advantageous in terms of procedural economy.

1.4 For these reasons, there are exceptional circumstances for admitting auxiliary request 1 into the appeal proceedings (Article 13(2) RPBA).

2. *Amendments*

2.1 The opponent argued that the expression in claim 1 "*which method furthermore involves a hydrolysis step where at least some of the lactose is hydrolysed into glucose and galactose and an enzyme inactivation step whereby the combined activity of plasmin and plasminogen of the treated liquid is reduced by at least 60% relative to the activity of the untreated liquid*" (emphasis by the board) had no basis in the application as filed.

2.2 The opponent noted that, according to page 28, lines 18 to 21 of the application as filed, an "*enzyme inactivation step should preferably reduce the combined activity of plasmin and plasminogen of the treated liquid by at least 60% relative to the activity of the untreated liquid*".

2.3 In its opinion, the amendment of the wording "should preferably reduce" in the application as filed to "is reduced" created originally undisclosed subject-matter. This original wording related to a desirable activity, or to a "non-technical wishful expression", which left open whether the reduction was obtained or not. Conversely, claim 1 specified that the reduction was indeed achieved.

2.4 This argument fails to persuade. The skilled person reading the application as filed will understand that the passage on page 28, lines 18 to 21 is not merely a

"desideratum", but rather that it provides an indication of a preferred degree of reduction of the enzymatic activity achieved by the enzyme inactivation step. Specifying that this preferred degree of reduction is achieved does not create new subject-matter.

2.5 The opponent also submitted that the combination of the hydrolysis step and the inactivation step defined in claim 1 was not disclosed in the application as filed. It argued that according to claim 1 both the hydrolysis step and the enzyme inactivation step contributed to the 60% reduction in the plasmin and plasminogen activity. This teaching could not be found in the application as filed, which taught that the 60% reduction in enzymatic activity was induced exclusively by the enzyme inactivation step.

2.6 These arguments are not persuasive either.

2.7 The application as filed discloses both the hydrolysis and the enzyme inactivation step characterising the claimed method: see claims 1, 2, 4, 8, 9, 11, 12, 15 and 16 as filed. Moreover, claims 8, 9, 15 and 16 as filed teach that these steps can both be carried out, and the passage on page 28, lines 18 to 21 teaches that the enzyme inactivation step can reduce the combined activity of plasmin and plasminogen by 60%.

2.8 This passage provides the basis for the claimed method. Reading claim 1, the skilled person will understand that the specified 60% reduction in enzymatic activity is induced by the enzyme inactivation step only, irrespective of whether there is some further reduction in enzymatic activity during the hydrolysis step. Hence, the subject-matter of claim 1 is disclosed in

the aforementioned passages of the application as filed. The opponent's argument that according to claim 1 the 60% reduction in enzymatic activity is the result of both the lactose hydrolysis step and the enzyme inactivation step is not convincing.

2.9 Thus, claim 1 complies with Article 123(2) EPC.

3. *Clarity and conciseness*

3.1 Claim 5 indicates that the claimed milk product is obtainable by the method according to any of claims 1 to 4. This indication was added to the claim during the opposition proceedings. Thus, claim 5 should be examined to determine whether this amendment complies with Article 84 EPC (G 3/14, Catchword).

3.2 The opponent argued that, according to established case law, product-by-process claims are only allowable if it is impossible to define the claimed product by structural features. Otherwise, they are considered not to fulfil the requirement of clarity and conciseness under Article 84 EPC. In the opponent's opinion, the subject-matter of claim 5 can be defined in structural terms, so this claim is not allowable.

3.3 As already decided by the opposition division, the opponent's objection is not well founded. The patent makes it credible that the steps of the method defined in claim 1 significantly influence the properties and in particular the stability of the resulting milk product: the milk product obtained by the claimed method has a significantly lower furosine content than that of D3, which is obtained by carrying out essentially the same steps, but on separate streams. The significant impact that the conditions during milk

processing have on the properties of milk products is confirmed by D4, figure 7. This shows that the sensory properties of milks subjected to different heating temperatures and times vary considerably.

- 3.4 Milk is a complex mixture comprising a considerable number of organic compounds, such as sugars and other bioactive molecules including enzymes and other proteins. These compounds are modified and/or react with each other during milk processing, and in particular during heating. The reactions include denaturation, hydrolysis, modification and recombination of various molecules. The exact composition and the organoleptic and sensory properties of the final mixture cannot be precisely defined. For this reason, the claimed composition cannot be better defined than by referring to the method used for its manufacture.
- 3.5 Therefore, the opponent's argument that the claimed product could be defined by reference for example to the content of hydrophobic peptides or the plasmin/plasminogen activity or other structural characteristics is not convincing. Even if some characteristics such as enzymatic activity could be quantified or correlated with some other properties of the claimed product, they certainly do not provide a definition suitable for replacing that given by a product-by-process claim.
- 3.6 For these reasons, claim 5 complies with the requirements of Article 84 EPC.

4. *Sufficiency of disclosure*

4.1 The opponent argued that the product of claim 5 was not sufficiently disclosed, because the methods of examples III, IV and VI were not according to claim 1. These examples did not show that the claimed product could actually be made. Example III did not show that the plasmin activity was reduced by 60% either.

4.2 These arguments are not convincing. The patent describes the steps which are necessary to carry out the claimed method and describes at least some examples, namely examples II and V, according to the claimed invention.

4.3 The opponent has not provided any evidence that, simply by following the instructions given in the patent and by common general knowledge, the skilled person would not have been able to carry out the steps of the method defined in claim 1 of the opposed patent and to obtain the product defined in claim 5. Nor can such evidence be found in the available documents. Accordingly, the board considers that, relying on the technical information presented in the section of the patent "Detailed description of the invention", on the figures and on examples II and V, which fall within the scope of the claims, and the other examples, which provide additional technical information, the skilled person would have been able to carry out the invention at the relevant date.

4.4 For these reasons, the requirement of sufficiency of disclosure is fulfilled.

5. *Novelty of claim 5*

5.1 Claim 5 defines a product obtainable by carrying out the method defined in claims 1 to 4.

5.2 The opponent considered that the milk product of claim 5 was not novel over the CFM milk of D1.

5.3 As mentioned above when discussing the clarity of claim 5, milk is a complex mixture comprising a considerable number of organic compounds, such as sugars and other bioactive molecules including enzymes and other proteins. These compounds are modified and/or react with each other during milk processing. The composition, the structure and the properties of the milk product defined in claim 5 are therefore determined by the processing steps of the method defined in claim 1. The complexity of the reactions involved in milk processing also makes it reasonable to assume that milks subjected to significantly different processing steps differ in terms of composition and properties.

5.4 This is confirmed by the findings in the patent and in figure 7 of D4, already mentioned above when discussing clarity.

5.5 The milk product according to claim 5 is produced with a very short heat treatment lasting for at most 200 ms at a temperature within a range of 140-180°C. During the oral proceedings held before the board, the opponent did not contest that the CFM milk of D1 was subjected to a different heating step, namely a UHT treatment at a temperature of 141°C lasting for 1 second, i.e. at least five times the maximum time

specified in claim 1; see page 254, right-hand column and the cross-referenced document (12).

5.6 Nor did the opponent contest that this makes it credible that, due to the different conditions used during the heat-treatment step, the composition and the organoleptic properties of the milk product of claim 5 differ from those of the CFM milk described in D1.

5.7 For these reasons, the milk product of claim 5 is novel over the CFM milk disclosed in D1.

6. *Inventive step of claim 1*

6.1 The opponent submitted that claim 1 lacked an inventive step over D3, considered as the closest prior art, in combination with the teaching of D4.

Closest prior art and characterising features

6.2 It was not contested that D3 can be considered the closest prior art for assessing the inventive step of the method of claim 1. D3 discloses a method for producing a "well-preserving" low-lactose or lactose-free UHT milk product. The method involves inactivation of the plasmin enzyme system and possibly hydrolysis of lactose. According to D3, this prevents the occurrence of undesired proteolysis and of the Maillard reaction; paragraphs [0022] to [0024].

6.3 The opponent referred in particular to the preparation of the lactose-hydrolysed UHT milk described in example 3 of D3. It was not disputed that the method of this example includes the following steps:

- providing a lactose-reduced milk-related feed by combining a UF retentate (2) and an NF permeate (2) obtained from a skim milk
- heat treating (HT) the combined feed at 146°C for 4 seconds
- maintaining that feed at 65°C for 2 hours, to inactivate at least some of the plasmin and plasminogen activities
- hydrolysing the lactose in a lactose-containing fraction

6.4 However, as submitted by the patent proprietor, the method of claim 1 differs from that in example 3 of D3 in that:

- the steps of enzyme inactivation, lactose hydrolysis and heat treatment are performed sequentially, on one single stream derived from milk which contains both the protein and the carbohydrate fractions
- the enzyme inactivation is at least 60%
- the heat treatment is shorter, at most 200 ms

6.5 Concerning the first point, the skilled person reading claim 1 would understand that all the steps, namely the heat treatment, the lactose hydrolysis and the enzyme inactivation, are carried out sequentially on one single stream derived from a lactose-reduced milk-related feed. This is clear from the wording and the structure of claim 1 and from the words "after" and "before" used to define the sequence of the claimed steps. This wording would be meaningless if the steps were carried out on separate streams. The sequential structure of the claimed method is confirmed by figures 1 to 11 of the opposed patent.

- 6.6 D3 does not disclose a method like that in claim 1. The method of D3 involves the fractionation of the milk into different streams which are subjected to separate treatments: i) a lactose-containing stream, which is subjected to lactose hydrolysis and heat treatment; and ii) a protein-containing stream, which is subject to enzyme inactivation and heat treatment. These separately processed streams are then recombined to obtain the final milk-related product.
- 6.7 Concerning the second point, the opponent argued that table 2 of D3 (relating to example 1, in which the fractions were maintained in a column for 3 hours at 65°C) provided evidence that the combined activity of plasmin and plasminogen was reduced by at least 60% when the protein and the sugar fractions of example 3 were maintained in a tank at 65°C for 2 hours.
- 6.8 This argument is not convincing. Table 2 of D3 compares the tyrosine content of a "normal lactose-hydrolysed milk" and a composition obtained by the method in example 1 of D3. The method involves elution of a protein fraction and a sugar fraction through a column at 65°C for 3 hours. The tyrosine content is said to correlate with the progress of hydrolysis.
- 6.9 As noted by the proprietor, D3 does not state whether the milk of the "normal lactose-hydrolysed milk" used as a reference was the same as the starting material for the process of example 1. Thus, it cannot be established whether their composition was the same, in particular as regards the initial content of plasmin and plasminogen. Furthermore, even assuming that the progress of hydrolysis correlates directly with the degree of enzyme inactivation, it cannot be assumed that the rate of inactivation observed in example 1 -

during elution through a column at 65°C for 3 hours - is the same as that occurring in a tank at 65°C for 2 hours, as in example 3. The treated compositions, the environment and the duration of the heating steps differ substantially. Moreover, as argued by the proprietor, the results in table 8 of D3, which focus specifically on the effect of heating on plasmin and plasminogen activity, raise serious doubts that a treatment at 65°C for 2 hours would induce a 60% reduction in the combined plasmin and plasminogen activity: in fact, after 70 minutes the activity of plasmin is unaffected, and that of plasminogen is still 82%.

- 6.10 Therefore, example 3 of D3 does not directly and unambiguously disclose a step in which the combined activity of plasmin and plasminogen is decreased by 60%, as specified by claim 1.

Technical effect

- 6.11 The results of the experiments in examples II, III and V of the opposed patent, shown in figures 14 to 16, indicate the following.

The amount of furosine in a product obtained from a single stream derived from a lactose-reduced milk-related feed subjected to a combination of the following steps:

- lactose hydrolysis
- enzyme inactivation and
- heat treatment

is significantly reduced compared to that in a product obtained by the method according to example 3 of D3.

- 6.12 As shown in those figures, the amount of furosine increases steadily during long-term storage of milk products. Since furosine is a product of the Maillard reaction, the results make it credible that milk products obtained by a combination of the three claimed processing steps are more stable and less subject to degradation resulting from the Maillard reaction during long-term storage.
- 6.13 The opponent has argued that the patent itself did not provide evidence that the combined activity of plasmin and plasminogen in the treated liquid was reduced by at least 60%. In its opinion, the statements that the "plasmin system was effectively inactivated" or "considerably reduced" or reduced below 20 μ U/ml were not sufficient to render this effect credible.
- 6.14 While this argument appears to be related to sufficiency of disclosure, the effect in question being a feature of claim 1, this argument is not convincing. A heating step at a temperature of 85°C or 90°C for 120 s was carried out in the methods of examples II, III and V. The opponent did not provide any evidence that the enzyme was not inactivated in these conditions. Furthermore, the results in table 8 of D3, and those in D4, table 3, make it credible that at 85°C both plasmin and plasminogen are inactivated in a short time.
- 6.15 The opponent also argued that an effect was only shown in relation to what it identified as "embodiment A" of claim 1, i.e. a method in which the order of the steps was: lactose-reduced milk-related feed -> enzyme inactivation -> heat treatment -> lactose hydrolysis. Examples II and V related to this embodiment, but

example III did not, and did not fall under the scope of claim 1 either.

6.16 This argument is not convincing. Although the method of example III might not fall under the scope of claim 1, it shows that the order of the three claimed steps is not critical for obtaining the desired results. Hence, it makes it credible that the crucial point for minimising the Maillard reaction during long-term storage is that the three claimed steps are carried out sequentially, irrespective of their order. The opponent has not provided evidence that performing the relevant steps in an order other than that specified in claim 1 will not achieve the relevant effect.

6.17 For these reasons, the examples in the patent make it credible that the method defined in claim 1 produces a product which is less subject to degradation and has a longer shelf life than that defined in D3.

Underlying technical problem

6.18 Starting from D3, the underlying technical problem is the provision of a method for preparing a long shelf-life lactose-reduced milk-related product which reduces the occurrence of the Maillard reaction upon long-term storage.

Non-obviousness of the claimed solution

6.19 The opponent argued that the skilled person would have considered modifying the method of D3 by replacing the heating step described in this document with the ISI heat treatment described in D4, and that in so doing it would have arrived at the claimed invention.

6.20 This argument fails to persuade. The method described in D3, like the claimed method, aims at preventing the occurrence of the Maillard reaction in a low-lactose milk-related product during long-term storage; paragraphs [0018], [0023], [0027] and [0064]. However, as already mentioned above, the peculiarity of the disclosed method is that the feed obtained from milk is separated into two streams, one containing the sugars and the other the proteins. These streams are subjected to separate treatments and are only then recombined to obtain the final product. The logic behind this appears to be that the sugars and the proteins must be kept separate during processing. Therefore, as argued by the proprietor, it is highly surprising that conducting all three steps of enzyme inactivation, lactose hydrolysis and HT heating on a single stream, as specified by claim 1, results in a product which, even after long-term storage, contains fewer products of the Maillard reaction. It would be against the teaching of D3 to carry out the process without separating the protein and the carbohydrate fractions.

6.21 Nor would the skilled person have replaced the heat treatment of D3 at 146°C for 4 s with that of D4. D4 describes a treatment involving heating at 150-180°C for 0.2 s in combination with a pre- or post-heating step at 80°C for 200-300 s, which inactivates plasmin activity.

6.22 However, D4 does not mention the Maillard reaction. Furthermore, figure 7 of D4 teaches that the milk obtained by the method disclosed therein has a stronger cooked, burnt, caramelised taste and cooked smell than a normal reference UHT milk. These are probably caused by products of the Maillard reaction. Thus, to the extent that the skilled person might have decided to

take D4 into account, they would have been discouraged from carrying out the steps described in this document - all the more so because the method of D4 involves a pre-heating step, and paragraph [0014] of D3 teaches away from carrying out pre-heating steps, which are likely to favour the Maillard reaction.

6.23 Moreover, unlike claim 1, D4 does not relate to a method for producing a product containing lactose-hydrolysed milk. Since paragraph [0018] of D3 teaches that the production of such milk is problematic, because the products of hydrolysis are likely to favour the Maillard reaction, the skilled person would have had further reason not to combine the teaching of D3 with that of D4.

6.24 For these reasons, the subject-matter of claim 1 involves an inventive step over D3 combined with D4.

7. *Inventive step of claim 5*

7.1 Claim 5 defines a product obtainable by carrying out the method defined in claims 1 to 4.

7.2 The opponent considered that the milk product of claim 5 did not involve an inventive step over the CFM milk disclosed in D1 or over the CRHM milk of D2. There is no reason not to consider these documents, which disclose lactose-reduced UHT and ESL milk products having a long shelf life, as the starting point for discussing inventive step.

7.3 As already established above when dealing with novelty, because of the different conditions used to carry out the heating step the composition and organoleptic properties of the milk product of claim 5 differ from

those of the CFM milk obtained by the process described in D1.

7.4 The CRHM milk of D2 is an extended shelf-life milk (ESL) obtained by carrying out a heating step at 132°C for 1 second. This means that the milk is heated to a significantly lower temperature and for a significantly longer time than those specified in claim 5. Thus, for the same reasons as discussed when dealing with D1, it is credible that the composition and the organoleptic properties of the milk product of claim 5 differ from those of the CRHM milk of D2. This was not disputed by the opponent during the oral proceedings before the board.

7.5 Although the claimed product differs from the CFM and CRHM products described in D1 and D2, there is no evidence that this product has improved properties in terms of shelf life or organoleptic characteristics.

Underlying technical problem

7.6 Accordingly, starting from D1 or D2, the underlying technical problem is the provision of an alternative shelf-stable, lactose-reduced milk-related product.

Non-obviousness of the claimed solution

7.7 The opponent has not presented any arguments showing that, confronted with this problem, the skilled person would have considered replacing the heat-treatment steps described in these documents - which last for 1 second - with the much shorter heating step - lasting for at most 200 ms - which is used to prepare the milk product of claim 5.

7.8 In the absence of any reason for such a significant modification to the methods described in D1 and D2, it is concluded that the milk product defined in claim 5 involves an inventive step.

8. *Adaptation of the description*

8.1 The description of the opposed patent has been adapted to the claims of auxiliary request 1.

8.2 The opponent did not have any objection to these amendments. Neither does the board.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division with the order to maintain the patent in the following version:
 - claims 1 to 6 of auxiliary request 1 filed with the letter of 12 March 2024
 - description: paragraphs 1 to 357 of the "Druckexemplar" annexed to the decision under appeal, with paragraphs 16 and 262 to 264 deleted
 - figures of the patent specification

The Registrar:

The Chairman:



L. Stridde

A. Haderlein

Decision electronically authenticated