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**Datasheet for the decision  
of 3 November 2016**

**Case Number:** T 0646/14 - 3.3.09

**Application Number:** 04803326.0

**Publication Number:** 1694141

**IPC:** A23L2/39, A23L1/00

**Language of the proceedings:** EN

**Title of invention:**  
BEVERAGES AND THEIR PREPARATION

**Patent Proprietor:**

Unilever N.V.  
Unilever PLC

**Opponent:**

DuPont Nutrition Biosciences ApS

**Headword:**

**Relevant legal provisions:**

EPC Art. 83, 54(3), 56

**Keyword:**

Sufficiency of disclosure - (yes)

Novelty - (yes)

Inventive step - (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 0646/14 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 3 November 2016**

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**Decision under appeal:** **Interlocutory decision of the Opposition**  
**Division of the European Patent Office posted on**  
**8 January 2014 concerning maintenance of**  
**European patent No. 1694141 in amended form.**

**Composition of the Board:**

**Chairman**            W. Sieber  
**Members:**            N. Perakis  
                              D. Prietzel-Funk

## Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent against the interlocutory decision of the opposition division that European patent No. 1 694 141 in amended form met the requirements of the EPC.

II. Independent claim 1 as granted reads as follows:

"1. A process for making a powdered precursor for preparing an acidic beverage upon admixture of the powdered precursor with a liquid, the process comprising the steps:

(a) preparing a first slurry comprising a protein source and a stabiliser in a weight ratio of protein:stabiliser of 5:1 to 50:1, said first slurry having a pH below the isoelectric point of the protein or above the isoelectric point of the protein and said stabilizer being selected from pectins, carboxymethylcelluloses, soybean polysaccharides, glycol alginate esters and mixtures thereof.

(b) adjusting the pH of the first slurry, if necessary, to a value in the range of from 3.5 to 4.2; and

(c) spray drying the first slurry after step (a) or step (b)."

III. With the notice of opposition the opponent requested that the patent be revoked in its entirety on the grounds of Articles 100(a) (lack of novelty and of inventive step), 100 (b) and 100(c) EPC.

The documents filed during the opposition proceedings included:

D1: WO 2004/086879 A1;

D6: FR 2 397 162 A;

D7: JP Kokai Publication No. 62-242 (Application No. 60-136879); and

D8: English translation of D7 (in the present decision reference will only be made to D8).

The opposition division held that the claims filed as auxiliary request 1 with letter dated 20 September 2013 (and finally being the main request) met the requirements of the EPC. Independent claim 1 of this request reads as follows (amendments over claim 1 as granted highlighted):

"1. A process for making a powdered precursor for preparing an acidic beverage upon admixture of the powdered precursor with a liquid, the process comprising the steps:

- (a) preparing a first slurry comprising a protein source and a stabiliser in a weight ratio of protein:stabiliser of 5:1 to **12:1**, said first slurry having **a neutral or acidic** pH below the isoelectric point of the protein or above the isoelectric point of the protein and said stabilizer being selected from pectins, carboxymethylcelluloses, soybean polysaccharides, glycol alginate esters and mixtures thereof.

- (b) adjusting the pH of the first slurry, if necessary, to a value in the range of from 3.5 to 4.2; and
- (c) spray drying the first slurry after step (a) or step (b)

**wherein a second slurry is prepared comprising the protein source, a third slurry is prepared comprising the stabiliser and the second and third slurries are then mixed to form said first slurry."**

The opposition division decided that the invention underlying claim 1 of the main request was disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. Moreover, the subject-matter of claim 1 of the main request met the requirements of Article 123 EPC, was novel over the disclosure of D1 and involved an inventive step considering D8 as the closest prior art.

- IV. On 18 March 2014 the opponent (in the following: the appellant) filed notice of appeal against the opposition division's decision. The statement setting out the grounds of appeal was filed on 19 May 2014. The appellant maintained the objections of insufficient disclosure, lack of novelty and lack of inventive step.
- V. With letter dated 17 September 2014 the joint patent proprietors (in the following: the respondents) requested that the appeal be dismissed (main request) and filed eight auxiliary requests.
- VI. The board issued a communication on 6 September 2016 in preparation for the oral proceedings.
- VII. Oral proceedings were held on 3 November 2016 as scheduled.

VIII. The relevant arguments put forward by the appellant in its written submissions and during the oral proceedings regarding the main request may be summarised as follows:

Sufficiency

- The invention underlying claim 1 was not sufficiently disclosed at least because the term "slurry" did not have a clear meaning.
- Furthermore, the patent did not describe how to control the pH of the first slurry so that it remained below or above the isoelectric point of the protein, when the first slurry comprised a complex mixture of proteins with many isoelectric points to take into account or when unknown proteins were involved. A further concern was raised in view of the presence of a stabiliser in the first slurry, which could "disturb" the isoelectric point of the protein.
- The patent did not teach the skilled person how to carry out the invention over the entire scope of claim 1, since only pectin had been used as stabiliser in the examples of the patent.

Novelty

- The subject-matter of claim 1 lacked novelty in view of example 1 and of the process claims of D1, a document citable under Article 54(3) EPC.
- Example 1 did not disclose adjusting the pH of the protein/pectin slurry to values between 3.5 to 4.2, but this was an optional step of claim 1. In any



case, such an adjustment would have been unnecessary as the pH of the final slurry was 4.3, very close to the upper limit of the pH range of claim 1 and encompassed by the general teaching of D1, which disclosed an operational pH of 3.5 to 4.5 (page 4, lines 18-20).

- The combination of claims 12, 15, 18, 22 and 23 also did not disclose adjusting the pH of the protein/pectin slurry to values between 3.5 to 4.2, but this was an optional step of claim 1.

Inventive step

- The subject-matter of claim 1 lacked inventive step in view of D8, in particular the second aspect (second embodiment), as the closest prior art.
- The process of claim 1 differed from the process of D8 in terms of (i) the preparation of the protein/stabiliser slurry and (ii) the value of the weight ratio of protein:stabiliser in that slurry.
- The technical problem solved in view of D8 was not the one asserted by the respondents, namely the provision of a dispersible powder which was stable at very low pH values, because D8 had already solved that problem. Test example 4 disclosed a dispersible protein powder with a weight ratio of protein:pectin of 20:1 which was stable at pH 4.0.
- Moreover, such a problem had not been solved over the entire scope of claim 1, since only pectin was used in the examples of the patent in suit, which according to D8 was the most effective stabiliser (page 14, last paragraph).

- Regarding the three examples of the patent in suit which fell within the scope of claim 1, they did not show any effect resulting from the distinguishing features of claim 1.
- Thus a less ambitious problem had to be defined, which was the provision of more viscous end products while maintaining the stability at "reasonable" pH values.
- The skilled person starting from D8 would have considered it obvious to prepare the protein/pectin slurry by mixing two different slurries, one containing protein and another containing the pectin stabiliser, since in this way the mixing of the protein with the pectin would have been easier. He would also have considered it obvious to use a weight ratio of protein:stabiliser within the claimed range, since this would have been dictated by convenience, in particular since D6 disclosed that the amount of stabiliser (and thus the weight ratio of protein:stabiliser) depended on the desired taste, feel, texture and viscosity (page 3, lines 15-32).
- Regarding spray-drying, this was obvious since D8 disclosed the use of spray-drying in the context of the first aspect (first embodiment) without any technical prejudice against its use in the second aspect (second embodiment).

IX. The relevant arguments put forward by the respondents in their written submissions and during the oral proceedings regarding the main request may be summarised as follows:

Sufficiency

- The invention underlying claim 1 was sufficiently disclosed. The term "slurry" as used in claim 1 obviously concerned suspensions of proteins and/or stabilisers.
- All the appellant's arguments were speculative since not substantiated by technical evidence. Thus, the appellant had not demonstrated any difficulty in measuring the isoelectric point of the hypothetical complex protein mixtures. The patent in suit disclosed two methods, method A and method B, which taught the skilled person how to put the invention into practice across its entire scope without undue burden (paragraph [0027]).
- It was irrelevant whether substances such as stabilisers could "disturb" the isoelectric point of a protein, since step (a) referred to the isoelectric point of the protein and did not concern the isoelectric point of the protein in combination with other substances.
- Regarding the nature of the proteins used in the claimed invention, they were proteins digestible by humans and did not contain any "dark" protein, as alleged by the appellant. The isoelectric point of these proteins was typically at a pH within 4 and 6.
- Furthermore, the appellant, who bore the burden of proof, had not demonstrated that the claimed subject-matter was very broad in the sense that a skilled person using common general knowledge would

have been unable to carry out the invention for stabilisers other than pectin.

Novelty

- The subject-matter of claim 1 was novel over D1 both in view of example 1 and in view of the claims.
- The protein/pectin slurry of example 1 of D1 with a pH of 4.3 was different from the protein/stabiliser slurry of claim 1, which required a pH in the range of 3.5 to 4.2. Contrary to the appellant's assertions, the adjustment of the pH in this range according to step (b) of claim 1 was optional only when the pH of the protein/stabiliser slurry had not already achieved such a pH in step (a) of this claim.
- Also, the combination of claims 12, 15, 18, 22 and 23 of D1 did not disclose the subject-matter of claim 1. The appellant had arbitrarily combined alternatives from various lists in these claims, and in any case this arbitrary combination did not disclose a pH of the protein/pectin slurry between 3.5 and 4.2.

Inventive step

- The subject-matter of claim 1 involved an inventive step. The second aspect (second embodiment) of D8 was considered to represent the closest prior art.
- The subject-matter of claim 1 differed from D8 in terms of (i) the preparation of the protein/stabiliser slurry, (ii) the value of the weight

ratio of protein:stabiliser in that slurry and  
(iii) the drying of that slurry.

- The examples of the patent in suit showed that the acidic beverages prepared according to the claimed invention were stable at low pH values. Thus the technical problem in view of D8 was the provision of a powdered precursor which upon admixture with a liquid provided acidic beverages stable at low pH.
  
- The solution to the technical problem was not obvious, since the skilled person would not find anything in the prior art that would lead him towards the claimed invention. Neither D6 nor D8 suggested or implied that the distinguishing features of claim 1 could provide a dispersible powder stable at low pH. As regards D8, which disclosed that a stable solution was obtained at pH 4.0, it concerned the stability of the slurry before drying and not the stability of the solution after the reconstitution of the beverage. In reality, D8 showed that it was not possible to stabilise solutions at a pH below 4.0.

X. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

XI. The respondents requested that the appeal be dismissed (main request) or, alternatively, that the patent be maintained on the basis of the claims of any of auxiliary requests 1 to 8 submitted with letter dated 17 September 2014.

## Reasons for the Decision

Main request (claims found allowable by the opposition division)

1. Sufficiency of disclosure
  - 1.1 The appellant argued that the term "slurry" had no clear meaning and therefore the skilled person was unable to perform the claimed invention. However, the board agrees with the respondents' explanation provided during the oral proceedings that this term was typically used to define the suspension of a material such as a protein source, a stabiliser or mixtures thereof in a liquid. It is noted that the patent in suit explicitly refers to protein suspensions in the discussion of the prior art (paragraph [0002]). Thus there is no ambiguity over the meaning of the term "slurry" as used in the context of the claimed invention.
  - 1.2 The appellant also argued that the patent in suit did not provide any guidance to the skilled person on how to control the pH of the first slurry so that it is either above or below the isoelectric point of the protein when the slurry comprises a complex mixture of proteins, not to mention proteins which might at present be unknown.
    - 1.2.1 However, the patent in suit discloses in paragraph [0027] two general methods, namely method A and method B, which enable the skilled person to control the pH of the first slurry so that it is either above or below the isoelectric point of the proteins involved:

*"Method A: The pH is lowered to around 2.0, then the protein is added (at around 40°C), mixed in a high-shear mixer, the HM Pectin solution added (which has been dissolved at around 60°C to 80°C), carbohydrate is added followed by further mixing and then the pH is ground to 4.0. Preferably, the mixture is homogenised."*

*"Method B: The protein is dispersed in water, mixed in a high-shear mixer, then a pectin solution (which has been dissolved at around 60°C to 80°C) is incorporated in this mixture, with pH around 2, sugar is added followed by further mixing and the pH is adjusted to around 4.0. Preferably the mixture is homogenised."*

Thus, the skilled person has two options: either he would bring the pH of the slurry to an acid value below the lowest isoelectric point of the protein source, disperse and mix the protein source therein, then add and mix the stabiliser solution and adjust the pH or he would bring the pH of the slurry to an acid value above the highest isoelectric point of the protein source, disperse and mix the protein source therein, then add the stabiliser solution and adjust the pH.

1.2.2 In this context it is further noted that the appellant did not provide any technical evidence that the claimed invention could not be carried out following the instructions of the patent in suit when a particular complex protein mixture was used.

1.2.3 Regarding the isoelectric point of proteins not yet known, the board sees no convincing reasons why the skilled person should not be in a position to determine it and thus avoid protein precipitation based on the teaching of the patent in suit.

1.2.4 Regarding the type of proteins involved in the claimed invention, there is no "dark" protein mixture that could be used as the appellant implied. The term "protein" in the context of the claimed invention concerns proteins for beverages consumable by humans. This means that they are known proteins digestible by humans, whose isoelectric point typically varies in the pH range from 4 to 6, the latter being detectable by the methods disclosed in the patent in suit.

1.3 The appellant also argued that the presence of a stabiliser in the first slurry might disturb (displace) the isoelectric point of the protein.

However, this point seems irrelevant since the claimed invention merely requires that the skilled person controls the pH of the first slurry, so that it is different from the isoelectric point of the protein alone (either below or above it), and not of a combination of the protein with other substances.

1.4 Lastly the appellant argued that the respondents had not shown that the claimed invention could be carried out over the entire scope of claim 1 and made reference to the examples which used only pectin as stabiliser.

However, the appellant, who bears the burden of proof, had not submitted any technical evidence to substantiate its assertions.

1.5 In view of the above, the claimed invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.



2. Novelty

2.1 The appellant disputed the novelty of the subject-matter of claim 1 of the main request on the basis of the disclosure of D1, a prior-art document citable under Article 54(3) EPC.

D1 relates to a process for the production of a protein powder composition wherein the powder composition can be reconstituted to form a protein containing liquid with increased stability, said powder composition comprising from about 3 to about 30% (weight/weight) pectin of the protein content (page 1, lines 4-9; page 2, line 25, to page 3, line 12).

2.2 The appellant's objection is based on example 1 of D1 and on a combination of its claims.

2.3 The disclosure of example 1

2.3.1 Example 1 discloses a protein powder composition which is prepared from a homogenised pectin containing yogurt base by spray drying.

According to example 1, two (precursor) slurries are prepared in a first step:

- the first is prepared by dry-blending 102 g of high ester Grindsted<sup>®</sup> ADM 783, which is a commercialised pectin stabiliser, with 510 g of sucrose followed by mixing with 1500 g water at 80°C [this slurry corresponds to the third slurry of claim 1], and
- the second contains 20 kg of a non-fat yogurt base of 14.5% solid content, i.e. a protein source, obtained by fermenting concentrated milk to a

pH of 4.3 by means of a yogurt culture containing strains of *Lactobacillus bulgarium* and *Streptococcus thermophilus* [this slurry corresponds to the second slurry of claim 1].

In a subsequent step the two (precursor) slurries are blended under high agitation to form a final slurry [this slurry corresponds to the first slurry of claim 1].

The appellant stated during the oral proceedings that, in view of the disclosed amount of pectin (stabiliser) and the derivable amount of protein, the weight ratio of protein:stabiliser fell within the claimed range of 5:1 to 12:1. The actual value was 11.2:1. Although the protein amount was not explicitly disclosed in example 1, it could be calculated on the basis of the disclosed solid content of the non-fat yogurt and the typical protein content in these solids. This was not contradicted by the respondents.

Thus example 1 discloses step (a) of claim 1.

Moreover, the slurry of example 1 is spray-dried in a conventional spray drier, which means that example 1 also discloses step (c) of claim 1.

However, example 1 does not disclose that the pH of the slurry, which is 4.3, was adjusted to the pH range of 3.5 to 4.2 as required by step (b) of claim 1. Thus the subject-matter of this claim is novel in view of this difference.

- 2.3.2 The appellant argued that step (b) of claim 1 was optional and thus did not distinguish the claimed method from that disclosed in example 1 of D1.

The board does not agree. Step (b) requires adjustment of the pH in the range of from 3.5 to 4.2 if the pH of the first slurry is not already within this range. The wording of step (b) in claim 1 "adjusting the pH of the first slurry, if necessary, to a value in the range of from 3.5 to 4.2" does not describe an optional feature in the classical sense. This feature is optional and can be omitted only if the first slurry has a pH within the range of from 3.5 to 4.2. If this is not the case, step (b) is mandatory. This reading of claim 1 is corroborated by paragraph [0012] of the patent in suit:

*"If the first slurry has a pH outside the target range of from 3.5 to 4.2, then before spray drying in step (c), in step (b) its pH is adjusted by conventional means".*

Thus, the process of example 1 of D1, which involves a slurry with a pH of 4.3 and which does not disclose adjustment of the pH to the range of from 3.5 to 4.2, is different from the claimed process.

2.3.3 The appellant also argued that the pH value of 4.2 in step (b) of claim 1 was directly and unambiguously derivable from D1 since example 1 simply disclosed a road map of how to operate the invention of D1 and since according to the general teaching of D1 the pH could vary within 3.5 to 4.5 (page 4, lines 19 to 20). Furthermore, the pH value of 4.3 in example 1 of D1 was very close to the claimed value of 4.2, so that the skilled person did not need to adjust the pH.

The board does not agree with the appellant on this point either. Example 1 of D1 discloses a pH of 4.3, which is obviously different from the claimed pH of 4.2. Furthermore, example 1 discloses a specific pH for

a specific set of ingredients. Whether the pH might vary according to the general disclosure is irrelevant for this specific example.

2.4 The combination of claims

2.4.1 The appellant argued that the subject-matter of claim 1 was directly and unambiguously derivable from the combination of independent process claim 12 with dependent claims 15 to 18, 22 and 23 of D1.

Claim 12 discloses a process for the preparation of a protein powder composition which may be reconstituted to form a protein liquid and which comprises the steps of:

- providing at least one pectin (stabiliser), which according to dependent claims 15 and 16 is in the form of a slurry [this corresponds to the third slurry of claim 1];
- providing at least one protein base, which according to dependent claim 23 can be in the form of a slurry, since this is one of the various alternative forms of the protein in claim 23 (i.e. milk, juices, yogurts) [thus, a first selection is necessary to arrive at the claimed protein slurry];
- mixing the pectin slurry and the protein slurry to provide a slurry containing both protein and pectin [this is the first slurry of claim 1];
- drying the slurry by applying spray-drying, since this is one of the various alternative drying methods of claim 22 [thus, a second selection is

necessary to arrive at the spray-drying of claim 1].

The claimed weight ratio of protein:pectin of 5:1 to 15:1 in the slurry before drying is a selection from the value range of this weight ratio derivable from dependent claim 18, which discloses that the pectin content is from about 5 to about 15% (weight/weight) of the protein content and which gives a weight ratio of protein:pectin between 6.67:1 and 20:1 [thus a third selection is necessary to arrive at the weight ratio protein:stabiliser of claim 1].

Regarding the pH of the slurry of D1, this is not disclosed in the claims. The skilled reader thus has to turn to the general teaching of D1, in particular page 4, lines 18-20, which discloses a pH of below 7 with the most preferred pH range from 3.5 to 4.5 [this corresponds to the acidic pH of the slurry before adjustment of claim 1].

D1 does not disclose any pH adjustment to values from 3.5 to 4.2, and thus the pH range of 3.5 to 4.2 (which does not require adjustment according to claim 1 of the main request) corresponds to a further selection from the disclosure of D1.

In view of the numerous selections which are required to arrive at the subject-matter of claim 1, its novelty over D1 is acknowledged.

2.4.2 The appellant argued that spray-drying was not selected from the alternative drying methods of dependent claim 22 of D1 since it was the preferred drying method according to the general teaching of D1 (page 6,

line 38). The board does not agree since the cited passage:

*"However, for certain embodiments spray-drying are to be preferred"*

relates only to certain embodiments which are not specified. Thus the appellant's assertion is not substantiated.

2.4.3 The appellant also argued that all protein base alternatives of dependent claim 23 should necessarily be slurries in order to be able to be mixed with the pectin suspension. The board does not agree. Independent claim 12 does not require that the pectin is in the form of a suspension; but even if it were, then some of the protein base alternatives of claim 23 (not all) are suitable for being easily mixed with the pectin suspension. There are, however, some protein base alternatives which do not appear to be suitable for that purpose, such as meats. Indeed, neither claim 23 nor the general disclosure of D1 provides support for the assertion that meat protein should be in a suspension form. Like soyas, oats and wheys, meats could simply be in a powder form.

2.5 In view of the above, the subject-matter of claim 1 is novel over the disclosure of D1.

3. Inventive step

3.1 The invention underlying claim 1 of the main request concerns a process for making a protein powdered precursor for preparing acidic beverages upon admixture of the powdered precursor with a liquid. The acidic beverage (drinkable composition) has low viscosity,

avoids the drawbacks of coagulation, precipitation and phase separation of protein particles in a wide acidic range (patent in suit, paragraphs [0006] and [0009]).

- 3.2 The board agrees with the parties that D8 is the closest prior-art document. D8 lies in the same technical field, namely in the field of protein powdered precursors for preparing acidic beverages, and discloses a process with the most features in common with the process of claim 1. D8 also discloses similar properties of the reconstructed beverages such as stability with no precipitation or good taste with no glue-like feeling (page 2, last full paragraph).

D8 discloses in principle two embodiments (two aspects) for the preparation of such powdered compositions. While the first embodiment does not comprise any stabiliser, the second does comprise one and thus is the more relevant. According to the second embodiment, an acid solution is added to an aqueous solution of aqueous alkaline milk protein which contains a substance that disturbs milk protein from precipitating at an isoelectric point, and adjusts the pH of the liquid from 4.00 to 5.50. Pectin is one of the preferred substances that disturb the milk protein from precipitating (see page 6, lines 19-25, and paragraph bridging pages 6/7). Test example 4, carried out according to embodiment 2, discloses the preparation of a slurry from a solution containing 10 wt% of sodium caseinate (a protein) to which pectin (a stabiliser) is added in a amount of 0.5 wt%. The weight ratio protein:stabiliser in the slurry is thus 20:1. The addition of acid adjusts the pH down to 4.00 and stabilises the slurry. The slurry with pH 4.30 is freeze-dried and powdered, and the powder is added to a

yogurt drink having pH 4.30 to prepare a high-protein yogurt drink.

Thus D8 does not disclose the preparation of a separate slurry containing the stabiliser to be mixed with the protein slurry as required by claim 1. Instead, the stabiliser is added in solid form to the protein slurry (first difference). Furthermore, D8 discloses a weight ratio protein:stabiliser of 20:1, whereas claim 1 requires a weight ratio of 5:1 to 12:1 (second difference). Lastly, D8 discloses freeze-drying the protein slurry, whereas claim 1 requires spray-drying (third difference).

3.3 The technical effect of the claimed process is the stabilisation of the reconstructed acidic beverage at low pH values. This is demonstrated by the examples of the patent in suit.

Reference is made to table 1, examples T2, T5 and T6, which were carried out according to claim 1. Thus, a first slurry was made by mixing a slurry of soy protein with a slurry of HM pectin so that the weight ratio of protein:stabiliser was respectively 10:1, 12:1 and 12:1. The pH of the slurry was adjusted to 3.9 by citric acid addition and spray-dried to give a powder. The stability of the acidic beverages reconstructed from these powders was given in table 3, where it is shown that they were stable at a pH of 3.61, 3.67 and 3.86, respectively.

Reference is also made to table 4, examples 6 and 7, carried out according to claim 1. Thus a first slurry was made by mixing slurries of soy protein with SB pectin and slurries of pea protein with HM pectin, respectively. In both cases the weight ratio of



protein:stabiliser was 7:1 (considering that the "biopolymer" component cited in this table is pectin) and the pH 3.9. After spray-drying the powdered composition was suspended in a liquid and the beverage after reconstruction was stable at a pH of 3.8 and 3.5, respectively.

Table 4 contains example 2, which is a comparative example. It shows that a reconstructed acid beverage from a first slurry with a weight ratio protein:stabiliser (soy protein:Blanose 7LF (SCMC 7)) of 15:1 is stable only at pH 4.16. Examples 2, 6 and 7 are comparable despite the different stabiliser used, since they fall within the scope of claim 1 and since the appellant did not show that there is a different effect based on the chemical nature of the stabiliser.

Lastly, reference is made to table 6, examples A2 and A2.2, carried out according to claim 1, since the first slurry was made by mixing soy protein and HM pectin in a weight ratio protein:stabiliser of 12:1 followed by spray-drying. The reconstructed beverages were stable at pH 3.83 and 3.8, respectively.

Compared to the technical evidence of the patent, D8 discloses in test example 4 that the reconstructed acidic milk beverage from a freeze-dried powder was stable at pH 4.30 (page 14, line 6 from the bottom).

The appellant argued that examples T5, T6, A2 and A2.2 did not fall within the scope of claim 1 because the weight ratios of protein:stabiliser were 12.2, 12.2, 12.1 and 12.1 respectively, and thus higher than the claimed 12:1. The board does not agree. As pointed out by the respondents, when ascertaining error margins in numerical values, the general convention in scientific

and technical literature is that the last decimal place of a numerical value indicates its degree of accuracy. On this basis, since the claimed ratios are specified as whole numbers (i.e. no decimal places), this is the degree of accuracy that should be applied when calculating the ratio of protein:stabiliser in the examples. Thus the examples of the patent cited above are all according to claim 1.

- 3.4 In view of the technical evidence in the patent in suit, the technical problem underlying the invention of claim 1 in view of D8 is the provision of a process for making a powdered precursor for preparing an acidic beverage upon admixture of the powdered precursor with a liquid which is stable at very low pH values.

The technical evidence of the patent (see above, point 3.3) shows that the technical problem has been solved, namely that the reconstructed acidic beverages according to the claim are stable at a lower pH compared with the reconstructed beverages of D8.

The board does not agree with the appellant that the technical problem had not been solved over the entire scope of claim 1, since this had only been shown for pectin as stabiliser. The appellant, which bears the burden of proof, did not submit any technical evidence to substantiate its assertions, which are thus considered unjustified.

Furthermore, the board does not agree with the appellant that the claimed subject-matter solves two independent technical problems, namely how to better solubilise the stabiliser (by using a separate slurry) and how to stabilise the reconstructed beverage at lower pH (by adapting the protein:stabiliser ratio).

The appellant's assertions are based on hindsight and do not objectively take into account the disclosure of D8, which principally aims at stabilising the slurry before drying (see claims 1 and 3; page 2, lines 4-11 and 30-35) and incidentally report the stability of the reconstructed beverage after spray-drying (page 14, last paragraph).

- 3.5 The skilled person starting from the disclosure of D8 and looking for a process for making a protein powdered precursor for preparing an acidic beverage upon admixture of the powdered precursor with a liquid which is stable at very low pH values will not find in D8 or any other prior-art document any hint towards the preparation of two separate slurries, one for the protein source and another for the stabiliser, the control of the weight ratio of protein:stabiliser in the range of 5:1 to 12:1 and the spray-drying of the slurry with a pH adjusted from 3.5 to 4.2.

D6, to which reference was made by the appellant, simply discloses that the amount of stabiliser is defined by the desired aroma, consistency and texture of the beverage (page 3, lines 21-23). D6 does not disclose the claimed weight ratio of protein:stabiliser and most importantly does not concern the issue of beverage stabilisation at low pH values; it is therefore irrelevant.

- 3.6 The appellant asserted that the choice of the claimed ratio and the use of different slurries for the protein and the stabiliser in order to make the first slurry were matters of convenience. These assertions appear to be based on an over-simplification of the technical situation underlying the claimed invention, ignoring the technical effects resulting from the choices made,

which led to the technical effect of stabilisation of the reconstructed acidic beverage at very low pH values. As pointed out by the respondents, the issue was not whether the skilled person could modify the process of D8 and arrive at the claimed process, but whether he would do so in order to achieve the desired result. There is certainly nothing in the prior art which indicates that he would do so.

- 3.7 The appellant also asserted that claim 1 did not contain any feature relating to the reconstitution of the beverage and that the arguments on this matter were beyond the scope of claim 1 and thus irrelevant. However, the wording of the claimed process includes the indication that the powdered precursor is intended to be used for preparing an acidic beverage upon admixture with a liquid. This is understood to mean that the advantageous properties of the reconstructed beverage, namely stability at low pH values, are associated with the claimed process of making the powdered precursor.
- 3.8 In view of the above, the subject-matter of claim 1 of the main request is not obvious and claim 1 involves an inventive step.
4. Dependent claims 2 to 13 relate to particular embodiments of the process of claim 1 and thus fulfil the requirements of the EPC *mutatis mutandis*.

**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated