

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

**Datasheet for the decision
of 20 March 2012**

Case Number: T 0985/10 - 3.3.09

Application Number: 00974532.4

Publication Number: 1231846

IPC: A23L 1/317, A23L 1/314,
A23L 1/308, A23J 3/22

Language of the proceedings: EN

Title of invention:
Meat emulsion product

Patentee:
Societe des Produits Nestle S.A.

Opponent:
Mars, Incorporated
Deurerer Swiss AG

Headword:
-

Relevant legal provisions:
EPC Art. 56, 123(2)
RPBA Art. 13(1)

Keyword:
"Admissibility of late-filed request - yes"
"Amendments - added subject-matter - no"
"Inventive step - yes"

Decisions cited:
T 0002/81

Catchword:
-



Case Number: T 0985/10 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 20 March 2012

Appellant: SOCIETE DES PRODUITS NESTLE S.A.
(Patent Proprietor) Case postale 353
CH-1800 Vevey (CH)

Representative: Lock, Graham James
Fry Heath & Spence LLP
The Gables
Massetts Road
Horley
Surrey RH6 7DQ (GB)

Respondent 01: Mars, Incorporated
(Opponent 01) 6885 Elm Street
McLean, Virginia 22101 (US)

Representative: James, Anthony Christopher W.P.
Carpmaels & Ransford
One Southampton Row
London WC1B 5HA (GB)

Respondent 02: Deurerer Swiss AG
(Opponent 02) Rickenstraße 25
CH-8337 Gommiswald (CH)

Representative: Twelmeier, Ulrich
Twelmeier Mommer & Partner
Westliche 56-68
D-75172 Pforzheim (DE)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 22 February 2010
revoking European patent No. 1231846 pursuant
to Article 101(3)(b) EPC.

Composition of the Board:

Chairman: W. Sieber
Members: J. Jardón Álvarez
K. Garnett

Summary of Facts and Submissions

I. The grant of European patent No. 1 231 846 in respect of European patent application No. 00974532.4, in the name of SOCIETE DES PRODUITS NESTLE S.A., which had been filed on 8 November 2000 as international application PCT/EP2000/011238, was announced on 16 May 2007 (Bulletin 2007/20). The granted patent contained 11 claims, claim 1 reading as follows:

"1. A method for producing a meat emulsion product having a realistic meat-like image comprising the steps of:

forming a meat emulsion containing protein and fat;
comminuting and heating the meat emulsion to a temperature of at least 132°C;
introducing the emulsion into a processing zone and subjecting the meat emulsion to a pressure of at least 100 psi. (698kPa); and
discharging the meat emulsion from the zone."

Claims 2 to 11 were dependent claims.

II. Two notices of opposition were filed against the patent by Mars, Incorporated (opponent 01) on 8 February 2008; and by Deurer Swiss AG (opponent 02) on 13 February 2008.

Both opponents requested revocation of the patent in its entirety, on the grounds of Article 100(a) EPC (lack of novelty and inventive step).

The documents cited during the opposition proceedings included the following:

D1: US 4 200 041 A;

D2: US 4 418 086 A;

D3: JP 64-43159 A;

D3a: English translation of D3;

D4: US 3 968 269 A;

D14: US 3 496 858 A; and

D16: M. Thiébaud *et al.*, "Influence of Process Variables on the Characteristics of a High Moisture Fish Soy Protein Mix Texturized by Extrusion Cooking" *Lebensm.-Wiss u.-Technol.*, 29, (1996), pages 526-535.

III. By its decision announced orally on 13 January 2010 and issued in writing on 22 February 2010, the opposition division revoked the patent.

The opposition division in its decision acknowledged novelty of the subject-matter of the proprietor's main request filed with letter dated 5 December 2008 over the cited prior art, but revoked the patent because in its opinion the claimed subject-matter lacked inventive step in view of the disclosure of any of D1, D2, D3a, D4, D14 or D16.

Claim 1 of the main request before the opposition division read as follows:

"1. A method for producing a meat emulsion product having a realistic meat-like image comprising the steps of:

forming a meat emulsion containing protein and fat;
comminuting and heating the meat emulsion to a temperature of 140°C to 154°C;
introducing the emulsion into a processing zone and subjecting the meat emulsion to a pressure of 150 psi to 450 psi (1034 kPa to 3103 kPa); and discharging the meat emulsion from the zone."

The opposition division did not admit an auxiliary request filed during the oral proceedings because the amendments were *prima facie* questionable under Article 123(2) EPC.

IV. On 22 April 2010 the patent proprietor (appellant) lodged an appeal against the decision of the opposition division and paid the appeal fee on the same day.

In the statement of grounds of appeal filed on 5 July 2009, the appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims of a new main request or on the basis of amended claims as specified in auxiliary requests 1 to 29, all requests filed with the statement of grounds of appeal.

The appellant also filed the following experimental evidence in support of its appeal:

- A1: Test results showing that, at the claimed temperature of 132°C or above, a remarkably better product is produced having long, linear, bundled fibre development;
- A2: Test results showing that, at the claimed pressure of 100psi or above, a remarkably better product is produced having long, linear, bundled fibre development;
- A3: Test results showing that, with the claimed protein content of 29% by weight or above, a remarkably better product is produced having long, linear, bundled fibre development;
- A4: Test results showing that, with the claimed fat content of 4% to 7% by weight, a remarkably better product is produced having long, linear, bundled fibre development;
- A5: Test results showing that, with the claimed moisture content of 49% to 53% by weight, a remarkably better product having long, linear, bundled fibre development is produced compared to products having lower moisture content;
- A6: Test results showing that products produced by the process of the invention have a remarkably superior appearance compared to products produced by the process of D1;

A7: Test results showing that products produced by the process of the invention have a remarkably superior appearance compared to products produced by the process of D2;

A8: Test results showing that products produced by the process of the invention have a remarkably superior appearance compared to products produced by the process of D3 or D3a; and

A9: Test results showing that products produced by the process of the invention have a remarkably superior appearance compared to products produced by the process of D4.

V. Replies to the statement of grounds were filed by opponent 02 (respondent 02) on 10 November 2010 and by opponent 01 (respondent 01) on 3 December 2010. Both respondents disputed the arguments submitted by the appellant and requested that the appeal be dismissed.

Respondent 01 also filed the following documents and experimental evidence:

D17: JP-3-147772 A;

D17A: English translation of D17;

A10: Experimental Report describing processes according to Example 3 of D3; and

A11: Experimental Report describing processes according to Example 2 of D1.

- VI. On 27 October 2011 the board dispatched a summons to attend oral proceedings. In the attached communication the board outlined the points to be discussed during the oral proceedings.
- VII. On 20 January 2012 the appellant withdrew its previous auxiliary requests 3, 4, 8, 9, 13, 14, 18, 19, 23, 24, 28 and 29. The main request was maintained and the remaining auxiliary requests were renumbered as auxiliary requests 1 to 17.
- VIII. On 20 February 2012 both the appellant and respondent 01 filed further submissions.
- IX. Oral proceedings were held on 20 March 2012. During the oral proceedings, after the board had indicated its conclusions on the main, the first and second auxiliary requests, the appellant filed a new third auxiliary request. At the end of the oral proceedings the appellant withdrew all its claim requests on file except the third auxiliary request filed during the oral proceedings, which then became its sole request. An accordingly adapted description was also filed.

Claim 1 reads as follows:

"1. A method for producing a meat emulsion product having a realistic meat-like image comprising the steps of:

forming a meat emulsion containing at least 29% by weight protein and 4 to 7% by weight fat and 49% to 53% by weight moisture;

comminuting and heating the meat emulsion to a temperature of 140°C to 154°C;
introducing the emulsion into a processing zone and subjecting the meat emulsion to a pressure of 200 psi to 350 psi (1379 kPa to 2413 kPa); and discharging the meat emulsion from the zone."

Claims 2 to 10 were dependent claims.

X. The arguments presented by the appellant in its written submissions and at the oral proceedings, insofar as they are relevant for the present decision, may be summarised as follows:

- The request filed during the oral proceedings should be admitted into the proceedings. It was based on an auxiliary request filed with the statement of grounds of appeal and the only amendment made was the deletion of the wording objected to by the board in relation with Article 123(2) EPC.
- The amendments made to the claims were fully supported by the application as filed. The pressure values were explicitly disclosed on pages 9 and 10 and the skilled person would understand that these values could be combined with the general statements on page 3 of the description describing a meat emulsion product. The amounts of the components were all disclosed in the original specification and the claims respectively.

- Starting from the disclosure of D1 as closest prior art document, the appellant saw the problem to be solved by the claimed subject-matter as being to find a process to provide an improved meat emulsion. The evidence submitted with the statement of grounds of appeal showed that this problem had been credibly solved by the claimed method. Meat emulsion products having realistic fibrous appearance were obtained only when working within the values claimed. Moreover this evidence showed that such products could not be obtained using the methods of the prior art documents D1 to D4. The prior art gave no hint to the claimed process parameters and it would not be a simple matter of routine to arrive at the claimed invention.

XI. The arguments of the respondents may be summarised as follows:

- The request filed during the oral proceedings should not be admitted into the proceedings as it was late filed. Requests filed at such a late stage should only be admitted if they did not raise issues concerning Articles 123(2) EPC and 84 EPC, which was not the case here. Moreover, the appellant was aware of the objections against the requests on file and should have filed any further request before the oral proceedings.
- The amendments to claim 1 were not supported by the application as filed. The values for the pressure were disclosed in the application as filed only in combination with other specific

process features not present in the amended claim. Similar objections applied to the amounts of components in the starting emulsion which were not disclosed in combination in the application as filed.

- The claimed subject-matter lacked inventive step starting from D1 or D3a as closest prior art. The evidence filed by respondent 01 showed that no improvement over the prior art was achieved by the combination of measures taken. The claimed ranges for the temperature and the pressure, as well as the selected amounts of starting materials, were already used in the prior art processes for the preparation of meat emulsions. The claimed method was merely an optimization of features generally known from the prior art and therefore lacked inventive step.

XII. The appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of the request filed during the oral proceedings.

The respondents requested that the appeal be dismissed.

Reasons for the Decision

1. The appeal is admissible.
2. *Admissibility of the appellant's request*
 - 2.1 The appellant filed what became its sole request during the oral proceedings, after the board had indicated its negative conclusion having regard to the amendments made to the claims of the main, first and second auxiliary requests then pending, that is to say, at a late stage of the proceedings. The appellant justified the late filing as resulting from the board's finding on the previous requests. The new request removed the wording objected by the board under Article 123(2) EPC. The new request replaced all the previous auxiliary requests on file and did not bring any new issue into the proceedings.
 - 2.2 According to Article 13(1) of the Rules of Procedure of the Boards of Appeal any amendment to a party's case after it has filed its grounds of appeal may be admitted and considered at the board's discretion. The discretion has to be exercised in view of *inter alia* the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.
 - 2.3 The appellant's new request is based on auxiliary request 17 on file, which is identical to auxiliary request 27 filed with the statement of grounds of appeal, and the amendment made overcomes the objections of the board concerning the failure of the previous requests. The claim is no longer directed to a method

with separate steps for the temperature and pressure treating, which method claim was present in the previous requests. The request is also not very different from the only request which was before the opposition division, but with the further limitations of the process pressure and the composition of the meat emulsion with regard to the amount of protein, fat and moisture.

- 2.4 The board cannot accept the objections raised by the respondents that the new request brought up new issues under Article 123(2) EPC concerning the limitation of the pressure and the amount of the components of the meat emulsion. As indicated in the previous paragraph, these amendments were already present in auxiliary request 27 filed with the statement of grounds of appeal.
- 2.5 Thus, taking into account that the amendments made did not give raise to any matter which could have taken the respondents or the board by surprise, the board decided to admit the request into the proceedings.

3. *Amendments*

- 3.1 Claim 1 is based on claim 1 as granted (point I above), which itself is identical to claim 13 as filed with the following amendments:

- the temperature has been limited to the range of 140°C to 154°C, disclosed as the preferred range for carrying out the method for producing the meat emulsion on page 9, lines 13 and 26 and on page 10,

line 3 [all page references to the application as filed];

- the pressure has been limited to the preferred range of 200 to 250 psi (1379 to 2413 kPa) disclosed on page 9, line 16 and on page 10, line 6; and
 - the components of the meat emulsion formed in the first step of the process are specified as:
 - "at least 29% by weight protein" as disclosed on page 3, line 12 and on claim 17 as filed;
 - "4 to 7% by weight fat", disclosed in claim 17 as filed in combination with page 3, lines 27-28; and
 - "49% to 53% by weight moisture" as disclosed on page 3, lines 30 and page 7, line 34.
- 3.2 The respondents objected to the amendments concerning the pressure and the amount of the components of the meat emulsion as these features were disclosed in the application as originally filed only in combination with other features not present in the amended claims. Consequently, the subject-matter of claim 1 was the result of an unallowable intermediate generalization.
- 3.3 However, in the board's judgement, this argument is devoid of merit. There is support in the application as filed for the combination of these features as presented in claim 1.
- 3.3.1 Thus, the specification as filed discloses on page 9, lines 10 to 19 an embodiment of the process wherein a preferred pressure of 200 to 350 psi is disclosed. In

the next two paragraphs (page 9, line 20 to page 10, line 12) preferred equipment for carrying out the process is disclosed. In this embodiment also the preferred pressure varies from 200 to 350 psi. In view of these disclosures, the skilled person would have readily recognized that the use of a higher pressure within the claimed range is not closely associated with a specific equipment but is a preferred range that applies to all embodiments of the invention. In other words, the skilled reader of the application as filed would clearly and unambiguously recognize that this preferred pressure range generally applies.

The same is true for the temperature range of 140 to 154°C now required in claim 1. On page 9, lines 10-14, the treating of the meat emulsion is described in its broadest aspect. Within this broad aspect, 140 to 154°C is presented as the preferred range. The same preferred range is found on page 10, lines 2-3 where a specific process of the claimed invention is described. Again, the skilled reader would immediately recognize that the preferred temperature range generally pertains to all embodiments of the invention.

- 3.3.2 As regards the disclosure of the amounts of fat, protein and moisture, the claimed process is directed to the preparation of a "meat emulsion product" wherein in the first step a "meat emulsion" is formed. According to page 7, lines 29-30 of the specification, "the resultant meat emulsion product should have a substantially similar profile to that of the starting ingredients". It follows from this sentence that the values disclosed in the application as filed for the "meat emulsion product" are also those of the meat emulsion formed in the first step.

This interpretation of the original disclosure was questioned by respondent 01, who noted that the application also disclosed that "if gravy or broth is added to the product, this profile could change due to the moisture, protein and/or fat content of the gravy/broth" (page 7, lines 30-31). However, this sentence relates to the possible addition of gravy or broth to the final meat emulsion product after it has been prepared by the method of claim 1 and not to a meat emulsion product obtained from the process of claim 1.

Specific support for the protein amount and for the upper limit of the fat range is found in claim 17 as filed and on page 3, line 12 of the application. The lower limit of the fat range, 4%, is disclosed on page 3, lines 27-28. Concerning the combination of end-values of the higher and the lower fat ranges, such combination of a preferred narrower range and one of the part-ranges lying within the disclosed overall range is unequivocally derivable from the original disclosure (see, for instance, T 2/81 OJ EPO, 1982, page 394 as discussed on Chapter III A.7.1 of the Case Law of the Boards of Appeal of the EPO 6th edition 2010).

Finally, the value for moisture of the meat emulsion is disclosed on page 3, lines 29 and 30 and on page 7, line 34.

- 3.3.3 As pointed out by respondent 01, on page 7, lines 26-28 of the application the amount of fat is disclosed in combination with 29 to 31% by weight protein. However, this is not the only place where the amount of fat is

disclosed. As indicated above, a fat content of 4% to 6% by weight which is the basis for the lower amount of fat in claim 1 is disclosed on page 3, lines 27-28 independently of the protein amount and thus fully supports the amendment to claim 1.

3.4 The respondents did not raise any objection under Article 123(2) EPC against the remaining claims, i.e. dependent claims 2 to 10. The board too sees no reason to do so.

3.5 The amendments also clearly restrict the scope of the claims. The claims are now limited to a method using specific amounts of fat, protein and moisture and working with narrower ranges of temperature and pressure. Hence, the subject-matter of the claims fulfils the requirements of Articles 123(2) and (3) EPC.

4. *Novelty*

4.1 The opposition division acknowledged novelty of the subject-matter of the claims then pending, which were broader in scope than the present claims. No novelty objections were raised by the respondents against the present claims. The board sees no reason to raise an objection on its own.

5. *Inventive step*

5.1 The present invention relates to the production of a meat emulsion product having a meat-like appearance and texture. It is based on the finding that by selecting specific process parameters (such as the amounts of the starting components, temperature and pressure) better

fibre development, that is to say, linear alignment with smaller, finer long fibres, is achieved (see [0032]).

5.2 The prior art cited during the proceedings includes several documents disclosing similar processes for the preparation of meat-like emulsion products. Documents D1 and D3a were cited by the respondents during the oral proceedings as representing the closest prior art. The appellant also relied on D1 as the closest prior art document.

5.2.1 Document D1 discloses a process for producing large diceable chunks of protein material having a fibrous texture closely simulating that of natural meat by an extrusion process (col. 2, lines 59-62 and figures). The process uses high pressure steam which is injected into the protein slurry. Pressures in the range of 80 to 150 psi (552 kPa to 1034 kPa), preferably 110 to 120 psi (758 kPa to 827 KPa), are preferred (col. 5, lines 14-17). The temperature used ranges from 310 to 350°F (154 to 176°C), preferably 325 to 330°F (163 to 166°C) (col.5, lines 19-26). The protein material employed in the process must contain at least 70% protein on a solids basis to achieve a product possessing the requisite texture and mouth feel (col. 4, lines 28-31). The amount of fat and moisture are not specified in D1. The composition used in example 2 has a calculated composition of: 54,8% moisture, 39,0% protein and 4,4% fat (cf. A11, page 2, first paragraph of "Results & Discussion").

5.2.2 Document D3a discloses also an extrusion process for the preparation of products having a meat-like image

(page 4, lines 8-12). The process is carried out using a biaxial extruder at a temperature between 80 and 180°C and a pressure not specified (page 4, lines 50-52). The composition of the meat emulsion is also not specified in D3a but it has been calculated by respondent 01 for example 3 as being: 57,4% moisture, 26.7% protein and 6,0% fat (cf. A10, page 2 under "Results").

5.3 Having regard to this prior art, the appellant saw the problem underlying the present invention as to find a method for providing an improved meat emulsion product.

The respondents, on the other side, saw the problem underlying the invention merely in the provision of a further method of making textured meat products.

5.4 The question whether the claimed method provides an improved product or merely an alternative product to the known prior methods is the key point of the present case and was hotly disputed during the proceedings. The appellant and respondent 01 filed experimental evidence during the appeal proceedings (cf. documents A1 to A9 and A10, A11 respectively), including the repetition of the teaching of prior art documents D1 and D3a, in order to support their arguments.

5.5 The board, after having carefully considered the arguments and experiments filed, concludes that the evidence on file shows that the claimed process indeed produces improved products over the prior art documents D1 and D3a, for the following reasons:

5.5.1 The appellant reproduced the conditions described in example 1 of D1 (cf. A6) and concluded that the conditions described in this example did not produce any fibres which could be described as long, linear and in bundles (see Figure 1 of A6).

This finding was contested by respondent 01, who maintained that example 1 was not the closest individualised disclosure in D1 as its composition did not contain meat. Respondent 01 then repeated example 2 of D1 which uses a mixture of vegetable protein and chicken meat (A11) and concluded that it is possible to make meat emulsion products having a realistic meat appearance using the process of D1.

However, the conclusion of respondent 01 is not based on the repetition of example 2 of D1, as is apparent from document A11. The repetition of the recipe of example 2 of D1 gave a mixture which could not be conveyed into the steam pipe (cf. A11 Results & Discussion, wherein it is concluded that "no products derived from this trial"). Only a modification of the recipe used in example 2 enabled respondent 01 to achieve a product with typical meat-like fibres (A11, trial 3). However, this experiment was made by replacing the soy protein with wheat gluten. Consequently, this experiment does not represent the true teaching of example 2 of D1, which uses soy protein, a preferred feature of D1 which is used in all the working examples (see also col. 4, lines 31-32).

Thus, the experimental evidence provided by both parties confirms that the products of a re-working of examples 1 and 2 of D1 are of inferior meat-like

appearance to the products obtained by the method of claim 1 of the patent in suit.

- 5.5.2 The appellant also repeated example 3 of D3a and was unable to prepare a product similar to meat (cf. A8, conclusions).

Respondent 01 criticized the appellant's reproduction of example 3 of D3a and carried out an own repetition of example 3 of D3a obtaining a product having a realistic meat-like image (cf. A10).

Here again respondent 01 modified the teaching of D3a using a high shear screw configuration. In A10 the screw speed ranged from 200 to 400 rpm, well above the values preferred in D3a (page 4, lines 53-53). Thus, the repetition of example 3 of D3a by respondent 01 is not a repetition of the example, the teaching of document D3a having been modified in a way going away of the teaching of D3a. Consequently, the results of the appellant were not effectively challenged.

- 5.5.3 Additionally, annexes A1 to A5 show that working within the claimed ranges of temperature, pressure, protein content, fat content and moisture content, results in remarkably improved meat emulsion products having long, linear, bundled fibre development. The results in A1 to A5 also show that working outside the claimed ranges results in products with no long, linear, fibre development.

- 5.6 In view of the conclusions above, the technical problem underlying the patent in suit is seen in the provision of a method for providing an improved meat product.

5.7 As a solution to this problem, the patent in suit proposes the process of claim 1 wherein a meat emulsion containing specific amounts of protein, fat and moisture is first formed and then treated at a temperature of 140°C to 154°C and a pressure of 200 psi to 350 psi (1379 kPa to 2413 kPa).

5.7.1 The experimental evidence filed during the appeal proceedings discussed in paragraph 5.5 above shows that this problem has been credibly solved by the claimed measures.

5.8 Obviousness

5.8.1 It remains to be decided whether, in view of the available prior-art documents, it would have been obvious for the skilled person to solve the above-defined technical problem by the claimed combination of technical features.

5.8.2 There is no hint to this solution in the prior art cited by the respondents.

Although some of the ranges for the parameters of claim 1 overlap with the values known from the prior art, there is no hint in the prior art documents that by selecting the claimed values, improved meat-like products could be obtained. Unexpectedly good results are obtained only when working within the values claimed. Thus, for instance, annex 4 shows that long linear bundled fibre development is achieved when using 4 to 7% fat content, but not when working slightly outside of the claimed range (cf. examples using 3% and

9% fat). Similar considerations apply to the other parameters, which give excellent results only working above certain values (cf. annexes A1-A3 and A5).

The fact that some of the parameters now claimed are encompassed by the ranges used in the prior art processes does not mean that it would have been obvious for the skilled person to combine them purposively with the aim of solving the existing technical problem. This combination is not merely the result of an optimisation within the competence of the skilled person, since in the prior art the values now used are not mentioned in relation to the problem now to be solved.

Also, the fact that some of the examples provided by the appellant also show improved properties outside the claimed ranges cannot bring into question the inventiveness of the selected ranges. They merely show that good results could also be obtained even if one of the parameters is outside the claimed range.

5.9 In view of the above, the board concludes that the person skilled in the art would not have arrived in an obvious manner at the subject-matter of claim 1. Consequently, the subject-matter of claim 1 and, by the same token, the subject-matter of dependent claims 2 to 10, involves an inventive step within the meaning of Article 56 EPC.

6. At the oral proceedings the appellant provided a description adapted to the claims of its sole request. No objection was raised by the respondents against these amendments to the description, and the board does not have any of its own.

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 on the basis of:
 - (a) claims 1 to 10 according to the main request filed during the oral proceedings;
 - (b) the amended description pages numbered 2 to 6 as filed during the oral proceedings;
 - (c) figures 1 to 3 as granted.

The Registrar

The Chairman

G. Röhn

W. Sieber