

Internal distribution code:

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

DECISION
of 28 October 2003

Case Number: T 0628/99 - 3.3.2

Application Number: 93117042.7

Publication Number: 0595194

IPC: A23L 1/238

Language of the proceedings: EN

Title of invention:

A process for the production of a seasoning sauce from bread

Patentee:

Bestfoods

Opponent:

Société des Produits Nestlé S.A.

Headword:

Seasoning sauce from bread/BESTFOODS

Relevant legal provisions:

EPC Art. 54(1)(2); 56

Keyword:

"Main request: novelty (no): The process of claim 1 does not confer novelty on the products obtained"

"Auxiliary request: novelty (yes): The use of bread was not disclosed together with the process features of claim 1"

"Inventive step (no): The process results from an obvious combination of the prior art knowledge"

Decisions cited:

-

Catchword:

-



Case Number: T 0628/99 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 28 October 2003

Appellant: Société des Produits Nestlé S.A.
(Opponent) 55, Avenue Nestlé
CH-1800 Vevey (CH)

Representative: Andrae, Steffen, Dr.
Andrae Flach Haug
Balanstrasse 55
D-81541 München (DE)

Respondent: Bestfoods
(Proprietor of the patent) International Plaza
700 Sylvan Avenue
Englewood Cliffs
New Jersey 07632-9976 (US)

Representative: Wurfbain, Gilles L.
Unilever N.V.
Patent Department
Olivier van Noortlaan 120
NL-3133 AT Vlaardingen (NL)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
15 April 1999 concerning maintenance of
European patent No. 0595194 in amended form.

Composition of the Board:

Chairman: U. Oswald
Members: M. Ortega Plaza
C. Rennie-Smith

Summary of Facts and Submissions

- I. European patent No 0 595 194 based on the application 93 117 042.7 was granted on the basis of 9 claims.

Independent claim 1 as granted read as follows:

"1. A process for the production of a seasoning sauce, in which an enzyme-containing, fungus-covered substrate is initially mashed with water containing sodium chloride, the mash is subjected to fermentation for a prolonged period of time and then clarified by squeezing, pasteurizing and filtration, wherein:

- a) the substrate comprises bread containing wheat gluten;
- b) the mashing is carried out with salt water, so that the salt content in the mash is from 4 to 12% by weight; and
- c) the fermentation is carried out in three steps at decreasing temperatures for a period of from 8 to 12 weeks."

Independent claim 9 as granted read as follows:

"9. The product produced from the process of claim 1."

- II. Opposition was filed and revocation of the patent in its entirety was requested pursuant to Article 100(a) EPC. The opposition was substantiated only on the grounds of lack of inventive step.

III. The following documents *inter alia* were cited in the proceedings:

- (1) JP-A-52 76488 (English translation)

- (6) Hirofumi Motoi, Journal of the Japan Soy Sauce Research Institute, vol. 8, No. 2, 68-74, 1982, (English translation)

- (7) R. Takeda, Journal of the Japan Soy Sauce Research Institute, vol. 5, No. 5, 215-220, 1979 (English translation).

IV. The appeal lies from an interlocutory decision of the opposition division maintaining the patent in amended form under Article 102(3) EPC.

The opposition division considered that the subject-matter of the amended set of claims (claims 1 to 5 as filed during the oral proceedings held on 11 March 1999 and claims 6 to 9 as granted) met the requirements of the EPC.

Without any detailed explanation, the opposition division considered the method claimed in claim 1 novel over the cited prior art.

As regards inventive step, the opposition division considered document (1) to represent the closest prior art.

It defined the problem as to produce a seasoning sauce similar to soy sauce, but which has a lighter colour, a high glutamate content, a less roasty flavour and which has the lowest possible salt content.

The opposition division stated that the differences between the claimed method and the method disclosed in document (1) relied upon the nature of the starting material and the fermentation process, which was carried out in three steps.

The opposition division stressed that it was common ground between the parties that to perform the fermentation process in two or three steps was not crucial for the claimed method.

However, the opposition division considered that none of the further documents taught the use of bread made of from 20% to 80% wheat gluten in a process for the production of a seasoning sauce. This content of wheat gluten was far beyond that contained in normal bread.

The opposition division decided that the product claim 9 was novel and also involved an inventive step, since the process of production gave the seasoning sauce specific features. However, the opposition division failed to mention which features.

- V. The appellant (opponent) lodged an appeal against that decision. It filed an additional document (document 7)).

- VI. A communication of the Board was sent as annex to the summons for oral proceedings. The attention of the parties was drawn to the fact that the set of claims on which the decision of the opposition division was based contained two independent claims (process claim 1 and product claim 9) which would require separate analysis.
- VII. The respondent (patentee) filed with its letter of 26 September 2003 an auxiliary set of claims based on the main request with the product claim 9 deleted.
- VIII. Oral proceedings were held before the Board on 28 October 2003.

The respondent maintained its main request, which served as the basis for the opposition division's decision and its auxiliary request as filed during the written appeal proceedings.

Independent claim 1 of the main and auxiliary requests differs from claim 1 as granted in that:

"the substrate comprises bread **made of from 20-80%** wheat gluten".

The wording of independent claim 9 of the main request corresponds to that of claim 9 as granted.

The auxiliary request did not contain a product claim.

- IX. The appellant's arguments with respect to the product claim 9 of the main request may be summarised as follows:

The opposition division simply assumed, without any reasoning, that the product obtained by the process of claim 1 had certain characteristics conferred by the process which resulted in the patentability of the subject-matter claimed.

The product claim 9 does not contain product features and only refers, as definition for the product, to its production by the process of claim 1. Additionally, claim 1 does not contain any features concerning specific characteristics in the end product apart from the fact that it is a seasoning sauce. The definition concerning the substrate as starting material only provides for the presence of bread in the substrate, i.e. as porous solid material. Moreover, only one of the bread ingredients, wheat gluten, is defined. When the bread is made of 20% wheat gluten, then there is up to 80% of other ingredients in the bread such as wheat flour, leguminous flour, etc., as shown in column 3, lines 47 to 52 of the patent in suit. Soy bean flour is a leguminous flour.

Furthermore, as shown *inter alia* by document (1), wheat gluten was a conventional constituent for the substrate for seasoning sauces with low salt content, obtained by fermentation.

Therefore, in the appellant's view, there were no distinguishable features from the process of claim 1 suitable for characterising the product of claim 9 as a patentable product (i.e. novel and inventive) vis-à-vis known seasoning sauces.

The appellant also stated that the problem as defined by the respondent was not plausibly solved by the subject-matter of the product claim 9.

As regards the process claimed in claim 1 of both requests the appellant's arguments may be summarised as follows:

Document (1) was the closest prior art. This document disclosed the production of seasoning sauces similar to soy sauce with low salt content. The process of document (1) required a similar time period than that of the process of the invention. Document (1) also disclosed the use of wheat gluten as a component of the substrate.

Since one could not (in view of the claim wording) reliably define a technical effect in the products, references to product quality could not be taken into account for the definition of the problem to be solved.

The problem was to provide an alternative process for preparing a seasoning sauce similar to soy sauce with low salt content.

The solution related to the feature of having a certain bread-like texture, in terms of porosity, in the koji. The word bread used in the claim had to be understood in its broadest sense as produced either by baking or by cooking extrusion. This was confirmed by the description in column 3, lines 54 to 55 of the patent in suit (apart from the obvious translation mistake).

Document (6) which also concerned the production of a seasoning sauce similar to soy sauce taught that a porous structure increased enzyme activity. Document (6) recommended the use of an extruded starting material, since a porous structure in the substrate was advantageous for the process.

Therefore the solution claimed was obvious to the skilled person.

- X. The respondent requested that document (7) be considered as filed too late.

The respondent observed that the appellant had not contested the novelty of the product claim in the first instance proceedings.

It stated that the object of the present invention was to produce a seasoning sauce similar to soy sauce, but which had a lighter colour, a high glutamate content, a certain flavour profile (harmonious taste) and a low salt content.

Questioned by the Board about the characterising features of the product claimed in claim 9, the respondent stated that the process features conferring novelty to the seasoning sauce prepared by the process were to use a substrate comprising bread made of from 20-80% wheat gluten treated in the manner defined by features b) and c) of the process claim 1. This resulted in a product lighter in colour, with high glutamate and less salt content.

The respondent, however, confirmed that the word "comprises" was used in claim 1 in its conventional meaning in patents, i.e. the substrate may contain other components. However, the skilled person in the art would know how to find the further conventional ingredients for the substrate in order to prepare the claimed product.

In the respondent's view, the process claimed was novel over the cited prior art since none of the documents disclosed all the process features defined in claim 1.

The respondent stated that document (1) could be considered as closest prior art. It further acknowledged that document (1) disclosed a process for the production of a seasoning sauce by digesting koji. However the respondent stressed that although document (1) disclosed a great number of possible substrates, *inter alia* wheat gluten, it did not disclose or suggest the use of a special bread, i.e. a bread made of from 20-80% wheat gluten, for that purpose.

The respondent stated that document (1) did not explicitly disclose the time for fermentation, but it did not dispute that the time required for the process of document (1) was similar to that of the process according to the claimed invention.

In the respondent's view, the problem to be solved was to provide a process for the production of an improved product over the prior art products in terms of flavour, colour and low salt content. This problem was solved, as shown by the examples of the patent in suit.

The respondent argued that there was no hint in document (1) to use bread as a solution to the problem. Moreover, the skilled person would not have considered document (6) without hindsight. Furthermore, document (6) merely disclosed the increase of enzyme production but did not provide any information how to achieve the improvements of the invention of the patent in suit by using bread as a component of the substrate under the conditions defined in features b) and c) of claim 1. Additionally, document (6) concerned sauces with a higher salt content.

- XI. The appellant requested that the decision under appeal be set aside and that the European patent No 0 595 194 be revoked.

The respondent requested that the appeal be dismissed and that the patent be maintained either as amended by the decision of the opposition division or, as auxiliary request, on the basis of the set of claims filed with its letter dated 26 September 2003.

Reasons for the Decision

1. *Admissibility*

1.1 The appeal is admissible.

1.2 However, with respect to the lateness of the filing of document (7), the Board considers that the jurisprudence of the Boards of Appeal has consistently shown that, the later a document is filed, the more

relevant it has to be in order to be admitted into the proceedings.

Therefore the Board decides in favour of the respondent that the late filing of document (7) is not admissible, since it is a less relevant document than those already on file. The Board also notes that document (7) was specifically referred to in document (6), which clearly suggests it could have been filed during the opposition period.

2. *Main request*

2.1 Whereas it is a fact that the grounds for opposition did not contain any arguments against the novelty of the product claim, it is also true that the opposition division explicitly came, in its decision to maintain the patent in amended form, to a positive conclusion with respect to both the novelty and inventive step of the products claimed in claim 9.

Therefore it has to be investigated whether the subject-matter of claim 9 meets the requirements of novelty and inventive step.

2.2 Claim 9 relates to a product produced by the process of claim 1. Claim 1 does not specify any product features other than that the product prepared is a seasoning sauce. Therefore it is necessary to assess whether the process features defined in claim 1 are suitable to characterise the claimed product over known seasoning sauces.

2.3 Claim 1 relates to a process for the production of a seasoning sauce by means of fermentation. As acknowledged by the respondent, the only specified features in the process claim 1 concern the presence in the substrate of bread made of from 20-80% wheat gluten, the low salt content in the mash and the fermentation time defined in c).

However, it was undisputed by the parties that the substrate may comprise other components apart from bread and that the bread may comprise up to 80% of other ingredients apart from wheat gluten.

Furthermore, no proportion or amount of the bread component in the substrate is specified in the claim. Therefore, the range 20-80% wheat gluten does not correspond to the absolute content of wheat gluten in the substrate, but is relative to the proportion of bread used.

Consequently, claim 1 also encompasses substrates comprising proportions of wheat gluten smaller than 20%, or substrates containing soy bean or soy bean flour, i.e. claim 1 encompasses substrates with the same ingredients as those disclosed in document (1) (page 5, lines 34 to 39, page 6, lines 1 to 6).

Moreover, the process disclosed in document (1) is carried out at a low salt content (8-12% or 7-13% by weight, depending on the temperature) (page 12, lines 3 to 4).

The fermentation and maturing is carried out, according to document (1), for a suitable period of time such as about 7 to 90 days and the natural salt concentration in the final product is of at least 5% (page 14, lines 26 to 29, page 15, lines 1 to 3).

Therefore the values disclosed in document (1) for the salt content and the fermentation step fully overlap with the ranges of values given in claim 1.

Furthermore, the undisputed difference, that bread is not disclosed for the production process of document (1), only shows that the solid substrate comprises a component with a porous structure but cannot serve, in the absence of other specified ingredients, to distinguish the **final** seasoning sauce from the known seasoning sauces produced by the process of document (1).

2.4 Therefore the Board considers that the product claimed in claim 9 lacks novelty over the seasoning sauces disclosed in document (1).

2.5 Finally, regarding the respondent's argument that the product of claim 9 relates to a seasoning sauce having specific taste and flavour, it has to be said that in the absence of evidence (such as organoleptic tests) any reference made in the patent in suit to sensory properties such as "harmonious taste" has a subjective character which cannot serve to characterise the invention over the prior art (column 2, line 37).

2.6 In conclusion, the main request fails to meet the requirements of Article 54(1)(2) EPC.

3. *Auxiliary request*

- 3.1 Claim 1 of the auxiliary request is identical to claim 1 of the main request.

The process for the production of a seasoning sauce claimed in claim 1 is novel over the process disclosed in document (1) in view of the use of bread as a component for the substrate.

- 3.2 The closest prior art is document (1) which discloses a process for the production of a seasoning sauce by digesting a koji at a digestion temperature of 30 to 55°C and at a salt concentration depending on the chosen temperature of e.g. 8-12% or 7-13% by weight (page 5, lines 27 to 31, page 12, lines 3 to 4).

The koji is preferably a solid koji, obtained by subjecting a substrate which comprises a protein-containing starting material -such as non fat soybeans, wheat, wheat gluten, etc. used alone or in combination- to a common starting material treatment, using a common method of treatment with a culture such as a soy sauce koji mould employed in normal soy sauce production to produce koji (page 5, lines 34 to 39, page 6, lines 1 to 6).

In particular, the koji is produced by the conventional method of cultivating koji cultures (after inoculation) on the starting materials. The species are preferably those of koji mould such as *Aspergillus oryzae* or *Aspergillus soyae* (page 6, lines 24 to 28).

The fermentation and maturing is carried out, as already mentioned, for a suitable period of time such as about 7 to 90 days (page 14, lines 26 to 29).

- 3.3 The respondent defined the problem as to provide a process for the production of an **improved product** (*emphasis added by the Board*) over the prior art products in terms of flavour, colour and a low salt content.

However, as becomes evident from the novelty assessment of the seasoning sauce made above (paragraph 2.1), the alleged improvement is not reflected by the features of the process claim. Additionally, there is no technical evidence on file.

Accordingly, the problem can only be seen in the provision of an alternative process for the provision of a seasoning sauce with low salt content.

- 3.4 The problem is solved by the use of bread made of from 20-80% wheat gluten as a component of the substrate.

In the light of the examples and the description of the patent in suit, the Board is satisfied that the problem has been plausibly solved.

- 3.5 It remains to be considered whether the proposed solution is obvious in the light of the prior art to the skilled person in the field, i.e. the food technologist, in particular with knowledge in fermentation processes.

3.6 The skilled person looking for alternatives would be aware of document (6), since it relates to the production of seasoning sauces, made from modified koji substrates, with low salt content.

The koji is made in document (6) by inoculation with a koji starter which is then processed conventionally with addition of aqueous salt solution and water **to a corrected salt concentration of 12%** (*emphasis added by the Board*) (page 3, second and third paragraphs).

With respect to the starting material employed in the production process according to document (6), it is made by mixing defatted soybean flour and wheat flour (with the addition of water) and then submitting them to simultaneous pressure and heat treatment in an expanding extruder (page 1, second paragraph, page 2, second paragraph).

The "bread" used as component for the process of the patent in suit may be made by expanded extrusion, since the term "extrusion by boiling" (appearing in column 3, line 55 of the patent in suit) obviously arises from a mistake in translation of the original expression in German.

Furthermore, document (6) teaches that the use of the processed starting material was advantageous for the production process:

"Because it had a **porous structure**, growth of the A. oryzae hyphae could be seen inside the starting material, and this is thought to have contributed to

the increase in the enzyme production." (*emphasis added by the Board*) (page 7, first paragraph).

The beneficial effects of using a processed starting material for the production of the seasoning sauce are further confirmed by the following passage in document (6): "One reason for such high rates of utilization and degradation, other than high enzyme activities, is that the processed starting material is readily degradable. It appears that the expansion treatment brings about a suitable structural breakdown and modification of protein and starch." ("Summary", bridging passage between pages 16 and 17).

Accordingly, the skilled person starting from document (1), aware of the teaching of document (6), and putting into practice the method therein disclosed would have considered the use of processed starting material obtained by expanded extrusion.

3.7 Therefore, the Board concludes that the process claimed in claim 1 is an obvious combination of the teaching of documents (1) and (6).

3.8 With respect to the respondent's argument that the skilled person would have not used bread made of from 20-80% wheat gluten as a component of the substrate the following has to be considered:

The use of a wheat gluten as ingredient of the starting material is already foreseen in document (1) (page 6, lines 9 to 10). Furthermore, the absolute amount of wheat gluten employed in the substrate is not defined in claim 1 (see point 2.3 above). Therefore, the fact

that the bread is made of from 20-80% wheat gluten only provides for a porous structure to allow a ready degradation of the starting material (as foreseen in document (6)) containing wheat gluten.

3.9 Consequently, the auxiliary request is rejected for lack of inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

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

The Registrar:

The Chairman:

A. Townend

U. Oswald