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**Datasheet for the decision of 17 September 2020**

**Case Number:** T 2039/16 - 3.3.09

**Application Number:** 08801858.5

**Publication Number:** 2187766

**IPC:** A23L5/20, A23L13/00, A23L15/00, A23L17/00, A23L19/00, A23L3/16

**Language of the proceedings:** EN

**Title of invention:**
RANGE OF ASEPTICALLY PRODUCED INFANT FOODS HAVING LOW CONCENTRATIONS OF UNDESIRED BY-PRODUCTS AND METHODS FOR MAKING THE SAME

**Patent Proprietor:**
Société des Produits Nestlé S.A.

**Opponents:**
N.V. Nutricia
HIPP & Co.

**Headword:**
Range of aseptically produced infant foods/Nestlé

**Relevant legal provisions:**
EPC Art. 83
RPBA Art. 13(2)



This datasheet is not part of the Decision
It can be changed at any time and without notice

**Keyword:**
Sufficiency of disclosure - (no)


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**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

**Case Number: T 2039/16 - 3.3.09**

# D E C I S I O N
# of Technical Board of Appeal 3.3.09
# of 17 September 2020

| | |
|---|---|
| **Appellant:** (Opponent 1) | N.V. Nutricia<br>Eerste Stationsstraat 186<br>2712 HM Zoetermeer (NL) |
| **Representative:** | Nederlandsch Octrooibureau<br>P.O. Box 29720<br>2502 LS The Hague (NL) |
| **Appellant:** (Opponent 2) | HIPP & Co.<br>Brünigstrasse 141<br>6072 Sachseln (CH) |
| **Representative:** | Schiweck Weinzierl Koch<br>Patentanwälte Partnerschaft mbB<br>Ganghoferstraße 68 B<br>80339 München (DE) |
| **Respondent:** (Patent Proprietor) | Société des Produits Nestlé S.A.<br>Entre-deux-Villes<br>1800 Vevey (CH) |
| **Representative:** | Rupp, Christian<br>Mitscherlich PartmbB<br>Patent- und Rechtsanwälte<br>Postfach 33 06 09<br>80066 München (DE) |
| **Decision under appeal:** | **Interlocutory decision of the Opposition Division of the European Patent Office posted on 8 July 2016 concerning maintenance of the European Patent No. 2187766 in amended form.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | A. Haderlein |
| **Members:** | F. Rinaldi |
| | E. Kossonakou |

## Summary of Facts and Submissions

I. This decision concerns the appeals filed by opponents 1 and 2 (appellants 1 and 2) against the interlocutory decision of the opposition division holding that European patent No. 2 187 766 as amended met the requirements of the EPC.

II. With their notices of opposition, the opponents had requested the revocation of the patent under Article 100(a) (lack of novelty and lack of inventive step), 100(b) and 100(c) EPC. Opponent 1 also raised objections under Article 100(a) EPC in conjunction with Articles 52(2)(c), 53(c) and 57 EPC.

III. Of the documents submitted during the opposition proceedings,

D10: EP A1 2 036 447

is of importance for the present decision.

IV. The opposition division decided that the fifth auxiliary request was allowable. Claims 1 and 7 of this request read:

"1 A range of infant food products comprising at least a vegetable based product and a fruit based product for each stage 1, 2, 3 and 4 (Junior) of infant development,
wherein the infant products for infants of stage 2 comprise one or more meats selected from of *[sic]* beef, veal, chicken, lamb, pork, turkey, and duck, and/or

fish, wherein each product in the range includes minimal levels of undesired by-products produced during processing as indicated by each product in the range comprising less than 2+/- 0.4 micrograms furan per kg food product."

"7 A method for the production of an infant food product which comprises precooking the ingredients separately, mixing the ingredients, subjecting them to UHT treatment and aseptically filling packaging containers wherein the food product is a food product for infants from 12 to 36 months of age comprising one or more meats selected from beef, veal, chicken, lamb, pork, turkey, duck, and/or fish, and/or eggs and/or crustaceans,
wherein each product comprises less than 2+/- 0.4 microgram furan per kilogram of food product."

The opposition division concluded that the invention was sufficiently disclosed, although it conceded that it might not be so across the entire scope of the claims.

V. In its reply to the appellants' respective statements setting out the grounds of appeal, the patent proprietor (respondent) requested that the appeals be rejected (main request) and filed six auxiliary requests.

VI. The board issued a communication setting out its preliminary opinion.

VII. In reply to the communication, by letter dated 18 June 2020, the respondent filed an amended main request and amended auxiliary requests 1 to 6, which replaced all requests on file. A corrected version of

the amended main request was filed by letter dated 25 August 2020.

Claim 1 of the amended main request (25 August 2020) is based on claim 1 of the request held allowable in which after the term "infant development," the following term is added:

"wherein the range of products further comprises a complete meal for stage 2 of infant development"

Claim 6 of the amended main request is based on claim 7 of the request which the opposition division held allowable. The only amendment is that the term "wherein each product" in claim 7 is replaced by "wherein the product".

The complete wording of amended auxiliary requests 1 to 6 is not relevant for the present decision. These requests comprise product claims based on claim 1 of the amended main request (amended auxiliary requests 1 to 4) and method claims based on claim 6 of the amended main request (amended auxiliary requests 1, 2, 5 and 6). In amended auxiliary requests 1 to 5, a concentration of less than 2+/- 0.4 micrograms furan per kg food product is referred to, and in amended auxiliary request 6, the value is less than 2+/- 0.2 microgram furan per kg food product.

VIII. The appellants' arguments relevant to the present decision may be summarised as follows.

- The amended requests were filed late in the proceedings. They should not be admitted because they could have been filed earlier, did not address

the issues raised and gave rise to further objections.

- The skilled person would not have been enabled to obtain the invention as claimed. The patent and its examples, in particular the experiments to which figure 4 relates, did not show that the furan concentration recited in the claims could be achieved. D10 did not show that the invention was enabled.

IX. The respondent's arguments relevant to the present decision may be summarised as follows.

- The amended main request and auxiliary requests constitute an appropriate reaction to the board's communication and should be admitted into the proceedings.
- The invention was enabled. The results in figure 4 showed that a food product according to the claims could be obtained. The skilled reader would have recognised that the tests in figure 4 with added ascorbic acid and fish oil were designed to fail. Moreover, these experiments showed what should be avoided to arrive at the claimed subject-matter. D10 showed that by using the patent's process conditions, the products mentioned in the claims could be obtained.

X. The final request of the appellants was that the decision under appeal be set aside and that the patent be revoked.

XI. The respondent's final request was maintenance of the patent on the basis of either the main request (filed by letter dated 25 August 2020) or one of auxiliary requests 1 to 6 (filed by letter dated 18 June 2020).

## Reasons for the Decision

1. *Admission of the amended requests*

1.1 The (corrected) amended main request was filed less than one month before the oral proceedings, and the amended auxiliary requests 1 to 6 were filed about three months before the oral proceedings. The appellants objected to their admission and argued that the requests could and should have been filed earlier. In their view, the amendments did not address the issues raised but, *prima facie*, gave rise to further issues (amended main request, claim 1: added subject-matter and lack of clarity; amended main request, claim 6: added subject-matter, extension of subject-matter, objection under Rule 80 EPC and infringement of the prohibition of *reformatio in peius*).

1.2 The board disagrees. The amended requests constitute a direct reaction to objections formulated in the board's communication. The objection with regard to claim 7 held allowable was raised by the board of its own motion. Similarly, the added-matter objection to claim 1 held allowable was based on the board's interpretation of that claim and the disclosure of the application as filed, as set out for the first time in points 3 and 4 of the board's communication. Under these specific circumstances, the board accepts that the respondent, faced with a new objection and a new line of argument, had reason to file amendments.

1.3 As to whether the amended requests *prima facie* address the issues raised or even give rise to further issues,

the board decided that the requests were admissible. In view of the fact that none of the requests is allowable, as will be shown below, it is not necessary to set out in detail the reasons for admitting these requests (Article 13(2) RPBA 2020).

2. *The patent in suit*

The patent relates to infant food products with a low content of furan, a possibly carcinogenic substance undesired in food. Furan can be generated from precursors, such as polyunsaturated fatty acids (PUFAs), ascorbic acid (vitamin C) and sugars during heat processing of foods (paragraphs [0002] to [0006]). In the independent claims of the granted patent, the concentrations specified are: less than 2+/- 0.4 micrograms furan per kg food (product claim 1) and less than 5+/- 1 microgram furan per kg food product (method for the production claim 11).

3. *The claims of the amended main request*

3.1 Claim 1 of the amended main request (wording, points III and VI above) is directed to a range of infant food products. One of its mandatory features is that the range comprises an infant food product which:

- is suitable for stage 2 infants (i.e. for infants of about 6 to about 8 months of age, patent in suit, paragraph [0021])
- comprises one or more meats selected from beef, veal, chicken, lamb, pork, turkey, and duck, and/or fish
- comprises less than 2+/- 0.4 microgram furan per kg food product

3.2 Claim 6 of the main request (wording, points III and VI above) is directed to a method for the production of an infant food product. The method comprises pre-cooking the ingredients separately, mixing the ingredients, subjecting them to UHT treatment and aseptically filling packaging containers. The food product:

- is for infants from 12 to 36 months of age
- comprises one or more meats selected from beef, veal, chicken, lamb, pork, turkey, duck, and/or fish, and/or eggs and/or crustaceans
- comprises less than 2+/- 0.4 microgram furan per kilogram of food product

3.3 The relevant aspect of these two claims for the decision is that they both refer to an infant food product which comprises one or more meats and less than 2 microgram furan per kilogram of food product.

4. *Sufficiency of disclosure - amended main request*

4.1 The appellants argued that the skilled person would not have known how to prepare the infant food products referred to in claims 1 and 6, whereas the respondent contended that by following the instructions in the patent in suit, the skilled person would have obtained the products referred to in the claims.

4.2 In arguing that the skilled person would have known how to prepare the compositions referred to in claims 1 and 6, the respondent did not rely on the skilled person's common general knowledge, apart from stating that conventional, normal UHT conditions were known in the art. Rather, the respondent's view was that to prepare the infant food products referred in the

claims, the skilled person would only have had to apply the process conditions described in the patent.

4.3 The patent refers in paragraph [0058] to a method which comprises pre-cooking the ingredients separately, mixing the ingredients, subjecting them to UHT treatment and aseptically filling packaging containers. In the same paragraph, it also describes that food products "produced in this way have reduced levels of by-products including furan compared to similar products processed using conventional retorting".

However, the patent specification includes no further details regarding the process or the conditions to be applied.

4.4 The examples of the patent (paragraphs [0063] to [0083]) describe several infant food formulations (vegetable dishes; fruit dishes; complete meals) for stages 1, 2, 3 and 4 of infant development and the list of ingredients used. Although some of the formulations include furan precursors (PUFAs in rapeseed oil, ascorbic acid), no method for producing these formulations is described, and for none of these formulations is the furan concentration disclosed.

4.5 In support of the argument that the products referred to in claims 1 and 6 were obtainable, the respondent referred to the example to which figure 4 relates. In its view, the data in this figure demonstrated that it was possible to prepare an infant food product which contained about 2 microgram furan per kilogram of food product.

4.5.1 However, according to paragraph [0086] of the patent in suit, figure 4 relates to a study carried out to

investigate the amount of furan formation relative to the addition of ascorbic acid and PUFAs derived from fish oil. There is no further information in the patent specification on the set-up of the experiments or the type of product used in the study.

4.5.2 Figure 4 itself shows a bar chart. The nine bars of the chart correspond to three sets of experiments ("retort", "UHT normal process", "UHT overprocessed"), and in each one of the three experiments, three different samples were studied, namely:

(1) "no BAB added"
(2) "0.024% Fishoil + 0.06 Vit. C"
(3) "0.12% Fishoil + 0.12 Vit. C"

No explanation is given in the patent as to what the term "no BAB added" means.

Furthermore, the bars show that in the "retort" experiments, the furan concentration in the (unspecified) product is about 20 microgram/kg for sample (1) and above 40 microgram/kg for samples (2) and (3). In the "UHT normal process" experiments, the furan concentration is about 2 microgram/kg for sample (1) and about 15 microgram/kg for samples (2) and (3). In the "UHT overprocessed" experiments, the results for samples (1) and (2) are as in the "UHT normal process", and the result for sample (3) is slightly higher.

4.5.3 Figure 4 may be seen to show that after a UHT process a food product can be obtained which has a furan concentration of about 2 microgram/kg. However, the patent does not provide any further information on how the experiments are to be carried out by the skilled

person. The patent does not disclose the composition of the product used in the experiments, whether it contained one or more meats according to the definitions of claims 1 or 6, and what process steps or conditions were used for preparing the product. But even if the food product analysed had been prepared in accordance with the teaching of the patent in suit, in particular following the process steps set out in paragraph [0058], it is manifest that adding furan precursors to the food product leads to a furan concentration well above that of claims 1 and 6.

4.6 The respondent argued that the skilled reader would have learnt from this disclosure how to avoid the generation of furan, namely by not adding furan precursors. Moreover, the skilled person would have recognised that the tests in figure 4 with added ascorbic acid and fish oil were designed to fail.

4.7 This is not convincing.

4.7.1 Firstly, there is no indication in the patent in suit that precursors should not be used. Instead, both ascorbic acid (e.g. tables 2 and 17) and oils containing PUFAs such as rapeseed oil (e.g. tables 1 and 15) are used in the formulations exemplified in the patent in suit. As discussed during the oral proceedings, the formulation of table 16 includes both PUFAs and ascorbic acid in the tomato purée. Furthermore, the amounts of the precursors (ascorbic acid or oil containing PUFAs) used in the formulation examples correspond to the amounts added in the experiments of figure 4. This was convincingly shown by appellant 2. Nevertheless, the patent in suit does not disclose how to add one or more precursors while

avoiding the formation of furan and achieving the furan concentration described in claims 1 and 6.

4.7.2 Secondly, the data presented in figure 4 is the result of experiments carried out to show that "sterilization of the food product by retorting lead to remarkably larger levels of furan production in the food product compared to sterilization by UHT treatment ... Indeed, it can clearly be seen that UHT sterilization minimizes the formation of furan by a factor of 2.5 to 5 compared to traditional retorting under normal sterilization conditions" (patent in suit, paragraph [0087]). The experiments also show that furan formation remained almost constant as a result of UHT treatment under amplified (i.e. overprocessed) conditions.

In light of this, the experiments with added ascorbic acid and oil containing PUFAs were carried out to show that even in the presence of added furan precursors, UHT treatment minimised the formation of furan compared to retorting. Rather than being designed to fail, the experiments in figure 4 underline the difference between a conventional retorting process and a UHT process even in the presence of furan precursors.

4.7.3 At this juncture, it is observed that the disclosure of the application as filed was directed to a range of infant food products in which each product in the range had less than about 15 microgram furan per kilogram of food product (paragraph [0027]). The same value is also recited in claim 1 of the application as filed.

4.8 This leads to the conclusion that the data in figure 4 is intended to demonstrate that by using a UHT treatment, the furan concentration described in the application as filed is obtainable even when furan

precursors are used in the preparation of a food product.

4.9 In summary, the disclosure of the patent in suit may be considered to enable the skilled person to reach a furan concentration as disclosed in the application as filed (less than about 15 microgram furan per kilogram of food product). However, the patent's disclosure would not have provided the skilled person with sufficient instructions to carry out the invention as disclosed in claims 1 and 6, i.e to provide an infant food product which comprises one or more meats and less than 2 microgram furan per kilogram of food product. This concentration is significantly lower than the maximum concentration originally covered.

4.10 The parties also discussed the disclosure of D10.

4.10.1 D10 and the patent in suit have the same effective date and are filed by the same applicant/patent proprietor. In D10, experiments are described in which a product (vegetable and veal savoury meal) is treated using either conventional retorting or a process involving pre-cooking and UHT conditions, with or without further adding ascorbic acid and fish oil. There is, however, no additional information on the set-up of the experiments. The furan concentration obtained in these experiments is shown in figure 5 of D10, which is identical with figure 4 of the patent in suit.

4.10.2 D10 was published after the date of filing of the patent in suit and is a European patent application. Therefore, it cannot represent common general knowledge available before the effective date of the patent in suit, and it cannot be used to complement the disclosure of the patent in suit.

4.10.3 At most, D10 could be used as evidence showing that the skilled person could have carried out the invention, based on the disclosure of the patent in suit and the common general knowledge. However, D10, like the patent in suit, merely shows that adding furan precursors to a food product (vegetable and veal savoury meal) leads to a furan concentration well above that of claims 1 and 6.

4.11 Thus, the amended main request does not comply with the requirement set out in Article 83 EPC.

5. *Sufficiency of disclosure - amended auxiliary requests*

5.1 Amended auxiliary requests 1 to 6 comprise product claims based on claim 1 of the amended main request (amended auxiliary requests 1 to 4) and method claims based on claim 6 of the amended main request (amended auxiliary requests 1, 2, 5), in which an infant food product which comprises less than 2+/- 0.4 microgram furan per kilogram of food product is referred to. In method claim 1 of amended auxiliary request 6, the infant food product comprises less than 2+/- 0.2 microgram furan per kilogram of food product.

5.2 In all amended auxiliary requests, the same issues as in the amended main request arise, namely that the skilled person could not have obtained an infant food product which comprises one or more meats and less than 2 microgram furan per kilogram of food product. This conclusion applies irrespective of the deviation from this value recited in the claim (amended auxiliary requests 1 to 5: +/- 0.4; amended auxiliary request 6: +/- 0.2).

5.3 Thus, none of amended auxiliary requests 1 to 6 complies with the requirement of Article 83 EPC.

6. *Conclusion*

None of the respondent's claim requests is allowable.

**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. Nielsen-Hannerup A. Haderlein

Decision electronically authenticated