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**Datasheet for the decision  
of 24 January 2023**

**Case Number:** T 2333/19 - 3.3.09

**Application Number:** 10770041.1

**Publication Number:** 2429319

**IPC:** A23J3/22, A23L17/00

**Language of the proceedings:** EN

**Title of invention:**

FLAKED FISH ANALOGS AND METHODS FOR MAKING SUCH ANALOGS

**Patent Proprietor:**

Société des Produits Nestlé S.A.

**Opponent:**

Mars, Incorporated

**Headword:**

Flaked fish analogs/NESTLÉ

**Relevant legal provisions:**

EPC Art. 56

RPBA 2020 Art. 13(2)

**Keyword:**

Inventive step - main request (no) - auxiliary requests (no)  
Amendment after summons - exceptional circumstances (no)



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Case Number: T 2333/19 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 24 January 2023**

**Appellant:** Mars, Incorporated  
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**Respondent:** Société des Produits Nestlé S.A.  
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**Representative:** Rupp, Christian  
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**Decision under appeal:** **Decision of the Opposition Division of the  
European Patent Office posted on 18 June 2019  
rejecting the opposition filed against European  
patent No. 2429319 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman** A. Haderlein  
**Members:** F. Rinaldi  
W. Sekretaruk

## Summary of Facts and Submissions

I. This decision concerns the appeal filed by the opponent (appellant) against the opposition division's decision to reject the opposition.

II. In the notice of opposition, the opponent had requested that the patent be revoked under Article 100(a) EPC for lack of inventive step, among other things.

III. The following documents were cited during the opposition proceedings:

D2: US 2009/0068336 A1

D3a: English translation of RU 2 260 357 C2

D5: WO 01/35766 A1

IV. In the decision under appeal, the opposition division concluded that the claims of the patent as granted (main request) involved an inventive step, among other things.

V. The patent proprietor (respondent) filed the following document with its reply to the statement setting out the grounds of appeal:

D8: Figures 3 and 4 of the patent in suit, in colour

Moreover, by letter dated 27 April 2022, it filed auxiliary requests 1 to 9.

VI. The wording of the claims relevant to this decision are as follows:

Main request (patent as granted)

Claim 1 reads as follows:

*"A flaked fish analog comprising from 18 to 25% protein, from 3 to 9% fat, and from 60 to 85% moisture; further comprising from 2 to 20% fish skin; wherein the fish skin is coated on the analog."*

Claim 12 reads as follows:

*"A method for making a flaked fish analog comprising: creating a homogeneous dough mixture of (1) one or more proteins in amounts sufficient to produce a final fish analog containing from 18 to 25% protein; (2) one or more fats in amounts sufficient to produce a final fish analog containing from 3 to 9% fat; and (3) water in amounts sufficient to produce a final fish analog containing from 60 to 85% moisture; emulsifying the dough mixture while increasing the temperature to from 135 to 160°C and the pressure to from 413.7 to 689.5 KPa (60 to 100 psi); and cooling the emulsion to a temperature to from 15 to 40°C and reducing the pressure to about atmospheric pressure to produce the flaked fish analog."*

Auxiliary requests 1 and 2

The exact wording of these requests is not relevant. These requests are based on the claims as granted, with features from the description added to claim 12 (auxiliary request 1) and to claim 1 (auxiliary request 2).

Auxiliary request 3

This request includes a claim having the same wording as claim 1 of the main request.

Auxiliary requests 4 to 9

These requests include a claim having the same wording as claim 12 of the main request.

- VII. The appellant argued that claim 1 as granted lacked inventive step starting from D2 as the closest prior art and that claim 12 as granted lacked inventive step starting from D5 as the closest prior art.
- VIII. The respondent agreed with the appellant on the choice of the closest prior art but not on the distinguishing features identified. In its view, claims 1 and 12 involved an inventive step.
- IX. Final requests

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

The respondent requested that the appeal be dismissed or that the patent be maintained on the basis of any one of auxiliary requests 1 to 9, filed by letter dated 27 April 2022.

## **Reasons for the Decision**

### 1. *Patent in suit*

1.1 The patent relates to fish analogues and methods for making them.

1.2 According to the patent, the analogues have a realistic flaked fish-like appearance. The texture is stated to be less fibrous and stringy than in prior-art analogue products (paragraphs [0001] and [0039]).

### 2. *Admittance of D8*

2.1 The respondent filed D8 with its reply to the statement setting out the grounds of appeal. It is not apparent from the file that this document could have been filed earlier.

2.2 Therefore, there is no reason for excluding D8 from the proceedings under Article 12(4) RPBA 2007. The document is admitted into the appeal proceedings.

### 3. *Main request, claim 1 - inventive step*

#### 3.1 Decision under appeal

3.1.1 In the decision under appeal, the opposition division decided that claim 1 involved an inventive step over D2 as the closest prior art.

3.1.2 According to the decision, the distinguishing feature of claim 1 was 2 to 20% of a fish skin coated on the fish analogue. Contrary to the patent proprietor's

allegation, this feature did not provide an improved appearance of the fish analogue. The only effect achieved was a different appearance. However, the solution set out in claim 1 was not suggested in the prior art. D3a, for instance, referred to a collagen solution obtained from fish skin. Instead, in light of the patent's description, claim 1 called for "real" fish skin.

- 3.1.3 The appellant contested this decision and disagreed with the opposition division's reading of D3a, which also disclosed fish skin.
- 3.2 Closest prior art and distinguishing feature(s)
  - 3.2.1 The parties agreed to use D2 as the closest prior art.
  - 3.2.2 D2 relates to meat analogues such as fish analogues (paragraph [0060] and Example 3). The analogue is prepared from an emulsion and is formed in multiple individual segments. The resulting meat analogue has a textured surface (claim 7). The product is in the form of chunks, as shown in Figures 4A, 4B and 5.
  - 3.2.3 The emulsion of D2 includes protein, fat and moisture. These components may be used in various concentrations, as disclosed in paragraph [0066]. The more preferred concentration of these substances is as follows: protein, 14-20%; fat, 6-16%; and moisture, 60-75%. The most preferred concentration is: protein, 16-18%; fat, 12-16%; and moisture: 60-70%.
  - 3.2.4 The product of D2 is in a form described as chunks. No clear-cut distinction can be made between the chunks of D2 and the flakes referred to in claim 12. The claim does not call for specified dimensions of the flakes.

Therefore, the flakes of claim 12 do not constitute a distinguishing feature over D2.

3.2.5 It is uncontested that D2 does not disclose the feature 2 to 20% fish skin and that the fish skin is coated on the fish analogue.

3.3 The respondent argued that claim 1 encompassed a further distinguishing feature. In view of the most preferred ranges in D2, the concentration of fat had to be regarded as a distinguishing feature of claim 1.

3.4 It is observed that the more preferred concentrations of protein, fat and moisture overlap to a large extent with those set out in claim 1. In light of this, the concentration of fat does not seem to provide a distinction over claim 1.

3.5 However, in the current case, deciding on whether this concentration is indeed a distinguishing feature of claim 1 is not required. Even if it were, the assessment of inventive step would not differ. This is discussed in the following (and in particular in point 3.8.8).

3.6 Technical effect

3.6.1 The respondent argued that claim 1 provided a fish analogue with improved appearance and texture. It did not argue that the concentration of fat made any contribution in achieving the alleged improvement.

3.6.2 To demonstrate the improvement, the respondent referred to Figure 4 of the patent. It also mentioned D8, which shows the same figure, in colour and in a better resolution.

- 3.6.3 As described in the patent, paragraph [0015], Figure 4 shows a "photograph of a flaked fish analog of the present invention with skin". The product photographed is obtained following the manufacturing method in Example 2 of the patent. According to this example, a specified amount of flaked fish analogue is produced and coated with an equal amount of a fish skin slurry which is made of water, minced fish skin and xanthan gum.
- 3.6.4 The quality of Figure 4 of the patent does not allow understanding what is depicted. Therefore, Figure 4 of D8 is considered.
- 3.6.5 On the face of it, Figure 4 of D8 shows comminuted particles included in a transparent phase. In view of the description of Example 2 of the patent, the photograph is seen to show flaked fish analogues included and surrounded by the gelled slurry. Particles of fish skin cannot be identified in the photograph. Moreover, contrary to the respondent's contention, the product in Figure 4 cannot be seen to resemble real fish with skin.
- 3.6.6 Therefore, the only effect that can be acknowledged is that a product with a different appearance is obtained, as correctly assessed by the opposition division.
- 3.6.7 Furthermore, in view of what Figure 4 and Example 2 disclose, the feature of claim 1 that "the fish skin is coated on the analog" must be given a broad interpretation. It manifestly encompasses applying on the analogue a gelled, water-based coating that includes fish skin.

3.7 In view of this, the only technical problem that can be identified is to provide a different presentation of a fish analogue. In this respect, the opposition division's assessment is correct. The problem is solved by applying a coating (i.e. a slurry) which includes 2 to 20% fish skin.

3.8 Obviousness

3.8.1 The skilled person would turn to D3a to solve the technical problem.

3.8.2 D3a relates to a method for coating a moulded minced fish product. The coating is intended to preserve the product and impart organoleptic properties (page 1, last full paragraph and page 5, third paragraph). This is done by forming a coating of collagen proteins isolated from pink salmon skin. The coating is applied in the form of a dispersion (page 5, second paragraph).

3.8.3 The method for producing the collagen dispersion is set out in D3a on page 6, starting from line 4. The fish skin is ground; salt and water-soluble fractions are removed by extraction; a lipid hydrolysis is conducted; lipid and "ballast" protein are removed; then the fish skin is dispersed in a diluted solution of acetic acid to provide a dispersion with a collagen mass fraction of 3 to 5%.

3.8.4 In sum, D3a explicitly states that the residue after removal of salt, water-soluble fractions, hydrolysed lipids and "ballast" protein is still a fish skin. This is the product used to coat the moulded minced fish product of D3a.

- 3.8.5 The skilled person wishing to modify the appearance of the product of D2 would consider applying a coating to it. Needless to say, a coating is suitable for modifying the presentation, i.e. the appearance of an uncoated product.
- 3.8.6 To do this, the skilled person would consider applying the collagen dispersion which includes the fish skin described in D3a. The coating with fish skin of D3a, designed for moulded minced fish, is suitable for coating the analogue of D2. There is nothing that would prevent the skilled person from using the coating of D3a for the product of D2.
- 3.8.7 As regards the amount of fish skin of 2 to 20% in claim 1, choosing this amount does not require any inventive contribution. The dispersion of D3a includes collagen, in an amount of 3 to 5%, and also some part of the fish skin. In view of this, the skilled person would have arrived at the claimed subject-matter simply by applying the teaching of D3a.
- 3.8.8 Finally, as to the concentration of fat of the fish analogue in claim 1, the skilled person would consider working in the range specified. First, the amount called for in claim 1 is explicitly taught in D2, the value being 6%. Second, the skilled person would have understood that they can work within the entire range disclosed in D2. In other words, there is nothing that from a technical point of view would have prevented the skilled person from working in the range called for in claim 1. Therefore, the concentration of fat cannot make the subject-matter of claim 1 inventive.
- 3.9 To conclude, claim 1 lacks an inventive step. In view of this finding alone, the ground for opposition under

Articles 100(a) and 56 EPC prejudices the maintenance of the patent.

4. *Main request, claim 12 - inventive step*

4.1 Decision under appeal

4.1.1 In the decision under appeal, the opposition division decided that claim 12 involved an inventive step over D5 as the closest prior art.

4.1.2 According to the decision, claim 12 differed from D5 in the amount of protein. In view of the evidence provided (Figures 2 and 3 of the patent), no effect was shown regarding the texture or flaky appearance. The problem to be solved was to provide an alternative method for producing fish analogues. However, there was no suggestion, either in D5 alone or in D2, to reduce the amount of protein.

4.1.3 The appellant contested this decision. It argued that the skilled person would have reduced the amount of protein.

4.2 The parties agreed that D5 was the closest prior art for assessing inventive step of claim 12.

4.3 D5 relates to meat emulsions with a fibre-like structure, cut in the form of chunks. In a preferred embodiment, the meat emulsion comprises about 29 to 31% by weight protein and about 4 to 6% by weight fat. The meat emulsion contains between about 45 to 80% by weight moisture. The protein may be fish protein.

4.4 As in the decision under appeal, it is uncontested that claim 12 differs from D5 in the amount of protein (18

to 25%). In D5, the concentration of protein disclosed is higher, 29%.

4.5 The respondent argued that claim 12 had further distinguishing features in that the process:

- used a different range of pressure
- involved a different cooling temperature
- provided a flaked product

4.6 Range of pressure

4.6.1 The respondent argued that D5 disclosed emulsifying the meat emulsion at a temperature from 120 to 163 °C at a pressure of approximately 100 to 500 psi (page 9, line 10 to 16). The skilled person would not have seriously contemplated working at the lower pressure range.

4.6.2 This is not convincing. The pressure range on page 9 is not the only disclosure in D5 addressing the pressure usable in the emulsifying step. D5 also suggests carrying out such a step at the pressure of claim 12. In what is described as a preferred or at least alternative embodiment of D5 (page 10, lines 1 to 12), the processing in the emulsifier housing involves a reduced pressure of 60 to 100 psi. The term "reduced" in this context designates a reduction of the pressure compared to the pressure described on page 9. This process step is followed by displacing the product with a high pressure pump close coupled directly after the emulsifier. The open wording of claim 12, which uses the "comprising" language, encompasses such a sequence of steps.

4.6.3 In view of this, D5 discloses the same emulsifying step as claim 12. Therefore, the pressure in the emulsifying step is not a distinguishing feature.

#### 4.7 Cooling temperature

4.7.1 The respondent argued that D5 only disclosed cooling at a range of 60 to 93 °C. In contrast, claim 12 required the step of cooling to a temperature of 15 to 40 °C to produce the flaked fish analogue. In its understanding, the cooling step was decisive for producing the flaked fish analogue.

4.7.2 However, it is manifest from the patent's disclosure that the flakes are obtained by cutting or dicing the set emulsion (paragraphs [0042] and [0059]). Such a step is disclosed in D5 too, after the emulsion is cooled and discharged from the processing zone.

4.7.3 Moreover, it is intrinsic to the process of D5 that the product inevitably cools down to ambient conditions. There is nothing in D5 to suggest that the product must be cooled below ambient conditions or that it has to be permanently kept above such conditions.

4.7.4 Therefore, the cooling step is not considered a distinguishing feature of claim 12.

#### 4.8 Product obtained

4.8.1 The respondent argued that the products obtained in D5 were fibrous, whereas the product of claim 12 was flaked. This appearance, together with the low protein content, ensured that the product was more fish-like than the prior-art product of D5.

- 4.8.2 However, claim 12 does not specify the dimensions of the flakes. Therefore, it is not possible to identify a difference between the "flakes" referred to in claim 12 and the "chunks" in D5.
- 4.8.3 This is all the more so considering that the process described in D5 comprises cutting the product (be it poultry, pork, beef or fish) to the desired size (page 11, lines 19 to 22) and resizing or dicing (page 11, line 29). Cutting the product of D5 will necessarily break down the fibre structure of the meat emulsion.
- 4.8.4 In view of this, the flaked product obtained in the process of claim 12 is also not considered a distinguishing feature.
- 4.9 Therefore, the opposition division was correct to conclude that the amount of protein is the only distinguishing feature of claim 12.
- 4.10 Technical effect
- 4.10.1 The respondent referred to paragraphs [0025] and [0038] to [0040] of the patent and argued that the amount of protein and the emulsifying pressure of claim 12 avoided a fibrous, stringy appearance. The claimed process provided a composition that looked like real fish.
- 4.10.2 In the cited passages of the patent specification, it is explicitly disclosed that the improvements are achieved over the teaching in specified prior-art documents. The documents listed include D5 and its patent family. However, this statement as such does not make the alleged effects credible. Moreover, since the

emulsifying pressure is not a distinguishing feature over D5, the respondent's argument that this feature provided a particular effect is not credible.

- 4.10.3 To demonstrate the alleged effect, the respondent also referred to the patent's Figures 2 and 3. The former shows the product of D5 and the latter the product of Example 1 of the patent. The respondent's view was that visually comparing these two figures revealed that the method of claim 12 provided improved appearance and texture.
- 4.10.4 However, the board does not share respondent's understanding.
- 4.10.5 It is accepted that Figure 2 of the patent is identical to Figure 2 of D5. Nevertheless, in D5 there is no information on how the product photographed in Figure 2 was prepared. D5 does not disclose the protein concentration of the product shown in Figure 2 or how the product was processed.
- 4.10.6 Be that as it may, on the face of it, Figure 2 is not considered to show a product that is fibrous but not flaked. Furthermore, the product of Figure 3 does not have a more realistic fish-like appearance compared to the product shown in Figure 2. If anything, the difference between the product shown in Figure 2 (D5) and Figure 3 (the patent) is that the latter has been cut and diced to a higher degree. But, as explained above, claim 12 is not restricted to any dimension of the flakes.
- 4.10.7 In sum, contrary to the respondent's view, comparing Figures 2 and 3 does not allow drawing any conclusion

as to the fibrous or stringy texture of the products depicted.

- 4.10.8 To conclude, Figures 2 and 3 may be seen to show different products. But they are not suitable for demonstrating that an improvement in appearance or texture is achieved.
  
- 4.11 Therefore, the board agrees with the problem identified in the decision under appeal. Claim 12 solves the problem of providing an alternative method for producing fish analogues.
  
- 4.12 Obviousness
  - 4.12.1 In D5, the amount of protein is not restricted to a specified range (page 3, line 31 and following; claim 13). It may be varied. In addition, there is no teaching that the process of D5 can only be carried out with an amount of protein between 29 and 31%. The restricted amount of protein is a mandatory feature of the product of D5, not of the process of D5.
  
  - 4.12.2 Rather, the skilled person would have known from the disclosure of the closest prior art that variations of the protein concentration can be made. D5 itself discloses that the amount and type of protein will have an impact on the firmness (i.e. the texture) of the product (page 5, lines 1 to 4 and page 10, lines 19 and following).
  
  - 4.12.3 Furthermore, lower amounts of protein are regularly used in the art of meat emulsion analogues. D2 outlines in claim 7 a generic process, similar to the one of claim 12 of the patent in suit and D5. Therefore, the process of D2 is compatible with that of the closest

prior art D5. The skilled person would consider using the amounts of protein disclosed in D2. As discussed above in point 3.2.3, D2 discloses in paragraph [0066] amounts of protein (and fat and moisture) which overlap with the amounts in the patent in suit and claim 12.

4.12.4 Therefore, the skilled person entrusted with modifying the process of D5 would arrive at the subject-matter of claim 12 without applying any inventive skill.

4.13 To conclude, the subject-matter of claim 12 does not involve an inventive step. For this reason as well, the ground for opposition under Articles 100(a) and 56 EPC prejudices the maintenance of the patent.

5. *Auxiliary requests*

5.1 After notification of the summons to oral proceedings before the board, the respondent filed auxiliary requests 1 and 2. The board is not aware of any exceptional circumstances justifying the filing of these requests, nor did the respondent refer to any such circumstances. Therefore, there is no reason to admit these requests on appeal (Article 13(2) RPBA 2020).

5.2 Auxiliary request 3 includes a claim having the same wording as claim 1 of the main request. In view of what is stated above in point 3, this request does not involve an inventive step.

5.3 Auxiliary requests 4 to 9 include a claim having the same wording as claim 12 of the main request. In view of what is stated above in point 4, none of these requests involve an inventive step.

5.4 In sum, auxiliary requests 1 and 2 are not admitted into the proceedings, and auxiliary requests 3 to 9 are not 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:



M. Schalow

A. Haderlein

Decision electronically authenticated