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Datasheet for the decision of 31 July 2009

Case Number: T 1511/07 - 3.3.09

Application Number: 99917839.5

Publication Number: 1067846

IPC: A23L 1/304

Language of the proceedings: EN

Title of invention:
Calcium complex and food fortified therewith

Applicant:
Société des Produits Nestlé S.A.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56, 123(2)

Relevant legal provisions (EPC 1973):
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Keyword:
"Article 123(2): Main Request (no) - Arbitrary combination of ranges from two lists; Auxiliary Request (yes) - Combination of two especially preferred ranges"
"Novelty, Inventive step: Auxiliary Request (yes)"

Decisions cited:
T 0925/98

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1511/07 - 3.3.09

D E C I S I O N
of the Technical Board of Appeal 3.3.09
of 31 July 2009

Appellant: Société des Produits Nestlé S.A.
P.O. Box 353
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Representative: Thomas, Alain
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Decision under appeal: **Decision of the Examining Division of the European Patent Office orally announced 6 February 2007 and posted 23 March 2007 refusing European application No. 99917839.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: P. Kitzmantel
Members: W. Ehrenreich
W. Sekretaruk

Summary of Facts and Submissions

I. European patent application No. 99 917 839.5 filed on 23 March 1999 as International application No. PCT/EP99/01952 in the name of *Société des Produits Nestlé S.A* and published 14 October 1999 as WO-A 99/51114 with the title *"Calcium Complex and Food fortified therewith"* was refused by the Examining Division with its decision announced orally on 6 February 2007 and issued in writing on 23 March 2007.

II. The decision was based on sets of claims according to a main request and auxiliary requests 1 and 4, filed in the oral proceedings.
Auxiliary requests 2 and 3, filed with the letter dated 8 December 2006, had been withdrawn in the oral hearing.

Concerning the main and auxiliary request 1 the Examining Division held that the amendments to Claims 1 of these requests, which were directed to a metastable calcium complex having a specific potassium to calcium ratio, contravened Article 123(2) EPC.

The subject-matter of Claim 1 of auxiliary request 4, which had the following wording:

"1. A citrate-lactate complex selected from the group $[CaCitr_{0.5}Lact^{0.5}]^{0}$, $[CaCitr_{0.67}Lact]^{-}$ and $[CaCitr_{0.67}Lact_{0.5}]^{0.5-}$."

was considered to be insufficiently disclosed, contrary to the provisions of Article 83 EPC. It was argued that the Applicant has not provided any evidence that the claimed complexes were indeed formed when reacting the

alkaline calcium source, citric acid and lactic acid in the molar ratios given in the examples, which ratios did not correspond to those in the formulae characterising the claimed complexes.

The issues of novelty and inventive step were not dealt with in the reasons of the decision.

III. On 13 April 2007 the Applicant (hereinafter: the Appellant) lodged an appeal against the decision of the Examining Division. Enclosed with the Statement of the Grounds of Appeal, which was submitted on 23 July 2007, were two sets of claims as bases for a new main request (marked as "AR4") and an auxiliary request (marked as "AR5").

With its grounds of appeal the Appellant also submitted observations on novelty and inventive step with respect to the documents:

D1 WO-A 99/23896
D2 WO-A 92/07475
D3 Patent Abstracts of Japan vol. 099, no. 003, 1999
D4 EP-A 0 875 153
D5 EP-A 0 507 157.

With letter dated 29 July 2009 the Appellant informed the Board that it would not attend the oral proceedings scheduled for 31 July 2009 and filed a set of claims as basis for a new main request. The requests marked as "AR4" and "AR5" became the first and second auxiliary requests.

In response to a fax communication of the Board dated 30 July 2009 including a proposed set of claims which was considered allowable, the Appellant submitted, with a fax on the same day, two sets of claims as bases for a new main and auxiliary request and withdrew the requests "AR4" and "AR5". In addition, description pages adapted to each of the claim sets were filed.

The claims according to the auxiliary request correspond to the claims proposed by the Board in its communication.

Claim 1 according to the main request reads as follows:

"1. A metastable calcium complex formed by the interaction of calcium hydroxide with a mixture of lactic and citric acids, wherein:

- the weight ratio of the citric to lactic acid is from 1:2 to 2:1 and
- the weight ratio of the citric and lactic acids to calcium hydroxide is from 1:1 to 5:1."

Claim 1 of the auxiliary request differs from that of the main request only by the limited ratio of the citric and lactic acids to calcium hydroxide and reads as follows:

"1. A metastable calcium complex formed by the interaction of calcium hydroxide with a mixture of lactic and citric acids, wherein:

- the weight ratio of the citric to lactic acid is from 1:2 to 2:1 and
- the weight ratio of the citric and lactic acids to calcium hydroxide is from 2.5:1 to 5:1."

IV. The Appellant argued that the weight ratio of 1:1 to 5:1 of the citric and lactic acids to calcium hydroxide according to Claim 1 of the main request was a combination of the lower value of the broadest range with the upper value of the narrowest range as disclosed in the application as filed. Such a combination would be in line with the decision T 925/98 (Case Law of the Boards of Appeal, 2006, p. 300), and thus did not violate Article 123(2) EPC.

As regards the Examining Division's objections under Article 83 EPC with respect to the formulae of the complexes specified in Claim 1 of auxiliary request 4 (point II above) the Appellant held that Claim 1 no longer relied on a specific complex formula, but on the weight ratios of citric acid, lactic acid and alkaline calcium source used to prepare the complex. This enabled a skilled person to perform the invention without undue burden and without needing inventive skill.

The Appellant also considered the claimed subject-matter novel and inventive over the cited prior art and referred in this context to its submissions provided with the grounds of appeal.

V. The Appellant requested, as appears from the written proceedings, that the decision under appeal be set aside and that a patent be granted on the basis of Claims 1 to 9 of the main request or of Claims 1 to 9 of the auxiliary request, both presented with the submission dated 30 July 2009.

VI. On 31 July 2009 oral proceedings were held, as scheduled, in the absence of the Appellant. For the reasons set out below, the Board considered the claims according to the auxiliary request allowable.

Reasons for the Decision

1. The appeal is admissible.

2. *Article 123(2) EPC*

2.1 Main Request

According to Claim 1 the weight ratio of the citric and lactic acids to calcium hydroxide is from 1:1 to 5:1. This ratio defines a new sub-range which emerges from a combination of the lower value of the broadest range of from 1:1 to 10:1 with the upper value of the especially preferred range of from 2.5:1 to 5:1 as disclosed in the last two lines at page 3 of the application as filed (represented by the WO-publication). This range was combined with the especially preferred range of 1:2 to 2:1 for the weight ratio of citric to lactic acid disclosed at page 3, lines 30/31 of the WO-publication.

Although the selection of explicitly disclosed borderline values defining several (sub)ranges, in order to form a new (narrower) sub range, is not contestable under Article 123(2) EPC when the ranges belong to the same list, the combination of an individual range from this list with another individual range emerging from a second list of ranges and relating to a different feature is not considered to be

disclosed in the application as filed, unless there is a clear pointer to such a combination.

There is, however, no indication in the WO-publication which unambiguously points to the combination of the weight ratio of 1:1 to 5:1 for the citric and lactic acids to the alkaline calcium source with the weight ratio of 1:2 to 2:1 for the citric to lactic acid. The amendment to Claim 1 is therefore an inadmissible combination from two lists and contravenes Article 123(2) EPC.

As a consequence, the main request is not allowable.

2.2 Auxiliary Request

Claim 1 of the auxiliary request combines the weight range of from 1:2 to 2:1 for the citric to lactic acid with the weight range of from 2.5:1 to 5:1 for the citric and lactic acids to calcium hydroxide. Both ranges are characterised as especially preferred (emphasis by the Board) at page 3, lines 30 to 35 of the WO-publication. In the absence of any information in the application which the skilled person would consider - in view of its impact on the claimed invention - to cast doubt on their combination, identifying the ranges in the two lists as "especially preferred" is, in the Board's judgment, a clear indication for the intended parallel convergence of the ranges of the two lists; the combination of these two especially preferred ranges therefore satisfies the requirements of Article 123(2) EPC.

In addition, the claimed calcium complex is now characterised as metastable as disclosed in Claim 1 of the application as filed.

Consequently, the amendments meet the requirement of Article 123(2) EPC.

3. *Sufficiency of disclosure - Article 83 EPC 1973*

According to Claim 1 of the auxiliary request the claimed complex is the result of the interaction of calcium hydroxide with a mixture of lactic and citric acid in defined weight ratios. There is no doubt that a skilled person can react the educts in the claimed weight ratios and under the conditions given in the examples of the application.
Because citric acid, lactic acid and calcium hydroxide have a definite molecular weight, the weight ranges given in the claim implicitly also define molar ranges in which the educts are reacted to lead to the complex solutions which are characterized in the examples as stable without causing sedimentation or coagulation of milk proteins when used for fortifying milk beverages. These properties establish that indeed a complex compound has been formed because uncomplexed calcium ions would necessarily lead to such undesired effects.

The claimed invention is therefore sufficiently disclosed for a skilled person, irrespective of the fact that the exact structure of the claimed complexes is not known.

4. *Novelty (auxiliary request)*

None of the cited documents disclose a complex which is the reaction product of calcium hydroxide, citric acid and lactic acid.

- According to D1, the calcium source can *inter alia* be calcium hydroxide and the acid can *inter alia* be citric or lactic acid (Claims 2 and 5). A combination of the three educts is not disclosed.

- D2 describes a metastable calcium citrate malate complex (Claim 1) and not a calcium citrate lactate complex.

- The patent abstract D3 was published after the priority date of the application and is not relevant.

- The calcium citrate lactate complex disclosed in D4 contains alkali metal (potassium) ions (Claim 1, examples). The same applies to the fruit juice described in D5 which contains tripotassium citrate and calcium lactate (example).

5. *Inventive Step (auxiliary request)*

Documents D1 and D4 are state of the art according to Article 54(3) EPC and are not relevant for the assessment of inventive step.

5.1 The subject-matter of the application; problem and solution

The application concerns metastable calcium complexes which serve as a calcium source to fortify milk or dairy-based products without protein coagulation and salt sedimentation. The complexes should also have improved palatability and reduced bitterness due to a low content of potassium ions (WO-publication, page 2, lines 11 to 24).

According to Claim 1 of the auxiliary request the obtained complex is the reaction product of calcium hydroxide with a mixture of lactic acid and citric acid in a defined weight range and is therefore free of potassium. As evidenced by examples 1 and 2, it does not lead to protein coagulation and salt sedimentation in milk products fortified therewith. The desired objectives are therefore credibly attained.

5.2 The prior art

Document D2 discloses in examples I and II a calcium citrate malate complex obtained by reacting calcium carbonate as alkaline calcium source with citric acid and malic acid.

D5 describes a fruit juice beverage containing, *inter alia* tripotassium citrate and calcium lactate (Claim 1, example).

5.3 Obviousness of the claimed subject-matter

The calcium citrate malate complexes of D2 are used for fortifying spreadable emulsified oil dressing products like salad dressings, which in addition contain vegetable oils/fats and thickeners (Claims 1, 2 and 5). The document, however, does not deal with the problem of coagulation of proteins when fortifying milk/dairy beverages. Therefore, a skilled person would not be induced by D2 to replace malic acid by lactic acid in order to solve the problem underlying the application.

Tripotassium citrate and calcium lactate are only mentioned amongst a number of other ingredients of the fruit juice drinks described in D5. No disclosure is found that it is intended to form a complex from these two salts, let alone that bitterness should be avoided. It was therefore not rendered obvious from D5 to provide a potassium-free complex by reacting calcium hydroxide with citric and lactic acid.

The claimed subject-matter is therefore not obvious from the prior art.

6. From the reasons set out in points 2.2 and 3 to 5 it follows that the subject-matter of the claims of the auxiliary request meets the requirements of the EPC.

7. The Board wishes to point out that the grant of a patent on the basis of the claims of the auxiliary request requires a description which is completely adapted to the claims.

Although the Appellant has submitted, with its fax dated 30 July 2009, adapted description pages 3, 4, 6, 7, 8, 9, this requirement is not yet met because:

- page 2 of the description still indicates an "alkaline calcium source" in general instead of only calcium hydroxide to which Claim 1 is now limited;
- examples 9 and 10 describe a potassium-containing calcium complex which is no longer embraced by Claim 1.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the Examining Division with the order to grant a patent on the basis of Claims 1 to 9 of the auxiliary request filed with the submission of 30 July 2009 and a description yet to be adapted.

The Registrar The Chairman

G. Röhn P. Kitzmantel