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**Datasheet for the decision
of 12 June 2018**

Case Number: T 1291/15 - 3.3.07

Application Number: 03027318.9

Publication Number: 1428518

IPC: A61K7/16, A61K7/18

Language of the proceedings: EN

Title of invention:

Method for optimizing fluoride uptake of teeth by applying a liquid dentifrice composition

Applicant:

Colgate-Palmolive Company

Headword:

Method for optimizing fluoride uptake of teeth by applying a liquid dentifrice composition/Colgate-Palmolive Company

Relevant legal provisions:

EPC Art. 84
RPBA Art. 13

Keyword:

Auxiliary request 6 - Admission into the proceedings (yes)
Clarity - All requests (no)

Decisions cited:

Catchword:



Beschwerdekammern
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 1291/15 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 12 June 2018

Appellant: Colgate-Palmolive Company
(Applicant) 300 Park Avenue
New York, NY 10022 (US)

Representative: Wichmann, Hendrik
Wuesthoff & Wuesthoff
Patentanwälte PartG mbB
Schweigerstraße 2
81541 München (DE)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 22 January 2015
refusing European patent application No.
03027318.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman J. Riolo
Members: D. Boulois
Y. Podbielski

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse European patent application n° 03 027 318.9. The decision was based on 3 sets of claims filed with letter of 21 October 2014 as main request and auxiliary requests 1 and 2.

Claim 1 of the main request and auxiliary requests 1-2 read as follows:

Main request

"1.A liquid dentifrice composition comprised of an orally acceptable vehicle containing an abrasive and a fluoride ion releasable fluoride salt, the viscosity of the composition being in a range of 10,000 to 50,000 mPa.s at 23°C and 6 revolutions per minute using a Brookfield Viscometer Model LVT and spindle E, wherein

- a) the vehicle comprises 75-90% by weight of a mixture of water and humectants,
- b) the vehicle comprises water in an amount ranging from 40-60% by weight,
- c) the vehicle comprises humectant in an amount ranging from 25-45% by weight, and
- d) the fluoride salt is incorporated at a concentration of 0.75-2.0% by weight."

Auxiliary request 1

Claim 1 of auxiliary request 1 differed from claim 1 of the main request in that "c) the vehicle comprises humectant in an amount ranging from **30-40%** by weight".

Auxiliary request 2

Claim 1 of auxiliary request 2 differed from claim 1 of the main request in that "d) the fluoride salt is incorporated in the composition at a concentration of **0.90-1.3%** by weight."

- II. According to the decision under appeal, claim 1 of the main request contravened Article 123(2) EPC, because it omitted a feature set out as essential to the invention in the application as filed, namely the additional requirement that the fluoride salt is present in the vehicle at a concentration sufficient to release 1.000 to 6.000 ppm fluoride ion.

Claim 1 of the main request did also not meet the requirements of Article 84 EPC, since it did not define what belonged to the claimed vehicle. Apart from the requirement that the vehicle has to contain at least 75% by weight of a mixture of water and humectants, claim 1 was silent what constituted the remaining 25 wt % of the vehicle. The fact that the composition exhibited a viscosity of 10.000 to 50.000 mPa.s begged the question as to whether thickeners necessary to achieve viscosities within this range also belonged to the vehicle. A further question arose as to whether the vehicle, apart from water and humectants, only contained other solvents or whether other substances, including solids, belonged to the vehicle. It was not possible to assess whether dentifrice compositions from the state of the art satisfied claim 1 or not.

The first and second auxiliary request did not meet the requirements of Article 123(2) and 84 EPC for the same reasons as the main request.

- III. The applicant (hereinafter the appellant) filed an appeal against that decision. With the statement setting out the grounds of appeal, the appellant filed a new main request and four auxiliary requests.
- IV. With a letter dated 26 October 2017, the appellant filed a main request and auxiliary requests 1-5.

Claim 1 of the requests read as follows, the difference with respect to the main request being indicated by **bold** (addition) or ~~strike through~~ (deletion):

Main request

Claim 1 of the main request was identical to claim 1 of the main request which was the subject of the decision of the examining division.

Auxiliary request 1

Claim 1 of auxiliary request 1 differed from claim 1 of the main request in that "d) the fluoride salt is incorporated in the composition at a concentration of 0.75-2.0% by weight, **and the amount of fluoride ion releasable from the fluoride salt is in the range of 3000 to 6000 ppm.**"

Auxiliary request 2

Claim 1 of auxiliary request 2 differed from claim 1 of the main request in that "d) the fluoride salt **is sodium fluoride** and is incorporated in the composition at a concentration of 0.75-2.0% by weight, **wherein the amount of fluoride ion releasable from the fluoride salt is in the range of 4000 to 5500 ppm.**"

Auxiliary request 3

Claim 1 of auxiliary request 3 differed from claim 1 of the main request in that "d) the fluoride salt **is sodium fluoride** and is incorporated in the composition at a concentration of **0.90-1.3%** by weight, **wherein the amount of fluoride ion releasable from the fluoride salt is in the range of 4000 to 5500 ppm.**"

Auxiliary request 4

"1.A liquid dentifrice composition comprised of an orally acceptable vehicle containing an abrasive and a fluoride ion releasable salt, the viscosity of the composition being in a range of 10,000 to 50,000 mPa.s at 23°C and 6 revolutions per minute using a Brookfield Viscometer Model LVT and spindle E, wherein
~~a) the vehicle comprises 75-90% by weight of a mixture of water and humectants,~~
~~b) the vehicle comprises water in an amount ranging from 40-60% by weight,~~
~~c) the vehicle comprises humectant in an amount ranging from 25-45% by weight, and~~
d) the fluoride salt **is sodium fluoride** and is incorporated in the composition at a concentration of 0.75-2.0% by weight, **wherein the amount of fluoride ion releasable from the fluoride salt is in the range of 4000 to 5500 ppm.**".

Auxiliary request 5

"1.A liquid dentifrice composition comprised of an orally acceptable vehicle containing an abrasive and a fluoride ion releasable salt, the viscosity of the composition being in a range of 10,000 to 50,000 mPa.s

at 23°C and 6 revolutions per minute using a Brookfield Viscometer Model LVT and spindle E, wherein

- ~~a) the vehicle comprises 75-90% by weight of a mixture of water and humectants,~~
- ~~b) the vehicle comprises water in an amount ranging from 40-60% by weight,~~
- ~~c) the vehicle comprises humectant in an amount ranging from 25-45% by weight, and~~
- d) the fluoride salt **is sodium fluoride** and is incorporated in the composition at a concentration of **0.90-1.3%** by weight, **wherein the amount of fluoride ion releasable from the fluoride salt is in the range of 4000 to 5500 ppm.**"

- V. A communication expressing the Board's preliminary opinion was sent to the appellant. The Board stated in particular that none of the requests met the requirements of Article 84 EPC and of Article 83 EPC.
- VI. With a letter dated 22 January 2018 the appellant submitted an auxiliary request 6.

Claim 1 of auxiliary request 6 read as follows:

"1.A liquid dentifrice composition comprising an orally acceptable vehicle comprised of 75-90 wt% of a mixture of water and humectants, wherein the liquid vehicle for the dentifrice comprises

- water in an amount ranging from 40-60% wt%,
 - a humectant in an amount ranging from 25-45% wt%, and
 - fluoride salt at a concentration of 0.75 to 2.0 wt% such that 3,000 to 6,000 ppm fluoride ion are made available to teeth when the liquid dentifrice composition is brushed on the teeth,
- wherein the liquid composition is adjusted with abrasive thickening agents blended therein to a

viscosity of 10,000 to 50,000 mPa.s at 23°C and 6 revolutions per minute using a Brookfield Viscometer Model LVT and spindle E."

VII. Oral proceedings before the Board took place on 12 June 2018.

VIII. The appellant's arguments can be summarised as follows:

The main request complied with the requirements of Article 84 EPC. It was clear to the person skilled in the art, upon reading the present application as a whole, that the "vehicle" is made up of all the liquid components of the composition, i.e. the humectants and water, as well as any other additional liquid ingredients, such as the dyes. The vehicle in claim 1 was defined to comprise: an abrasive, fluoride ion releasable fluoride salt, water and humectants. While the water and humectants only made up at least 75 wt% of the vehicle, it was clear to the skilled person that the other ingredients, namely the abrasive and the fluoride ion releasable fluoride salt would make up the remaining up to 25 wt% of the vehicle. The thickeners are not defined as part of the vehicle in claim 1. Claim 1 thus clearly defines which ingredients belong to the vehicle and fulfils the requirements of Article 84 EPC.

The same arguments applied for auxiliary requests 1-5.

The wording of auxiliary request 6 made clear what was comprised in the claimed composition. Claim 1 clearly defines that the vehicle comprises water, humectant and fluoride salt (i.e. the soluble components of the composition), while the remaining composition includes the abrasive thickening agents blended therein. The

term abrasive thickening agent was a clarification of the term abrasive, and was clear.

IX. Requests

The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request or one of auxiliary requests 1-5, all filed with letter dated 26 October 2017, or on the basis of auxiliary request 6 filed with letter dated 22 January 2018.

Reasons for the Decision

1. Main request - Article 84 EPC

- 1.1 Claim 1 refers to a liquid dentifrice composition comprised of a vehicle, said vehicle itself containing an abrasive, a fluoride ion releasable fluoride salt, water and a humectant. Hence, the wording of the claim makes a clear distinction between said liquid dentifrice composition and said vehicle.
- 1.2 The wording of claim 1 and of its dependent claims does however not allow to identify in a clear way the respective components of the vehicle and of the liquid composition and their respective amounts in said vehicle and/or said composition, which renders said subject-matter unclear.
 - 1.2.1 Claim 1 makes, for instance, from the fluoride salt a component of the vehicle, but mentions that "the fluoride salt is incorporated in the composition at a concentration of 0.75-2.0% by weight" and therefore gives its concentration only in relation to the composition and not to the vehicle. The same applies to

the abrasive which is a component of the vehicle, but its concentration is only given in relation to the liquid dentifrice composition in dependent claim 3, namely "a concentration of 3-25% by weight" of the composition of claim 1.

- 1.2.2 Additionally, claim 1 does not give the amount of vehicle which is comprised in the final liquid dentifrice composition. Claim 1, as well as the other dependent claims and also the description of the application, is also silent on whether possible further components would belong to the vehicle or to the liquid dentifrice composition; it is indeed not known whether the components of the vehicle are limited to the humectant, water, the fluoride salt and the abrasive. Neither the claims, nor the description indicate indeed whether remaining components such as the thickening agent of dependent claim 2, as well as other components mentioned in the description, are part of the vehicle or are part only of the final liquid dentifrice composition (see description, pages 4,5).

The absence of this information in correlation with the absence of any indication of the amount of vehicle comprised in the liquid dentifrice composition has an obvious impact on the calculation of the amounts of the components present in the vehicle or in the liquid dentifrice composition. It becomes impossible to put in practice the claimed weight amounts of water and humectant in the vehicle, since the skilled person does not know which components he should take in account for determining the respective amounts of water and humectant. The skilled person is therefore not in a position to determine whether a certain liquid dentifrice composition, such as the composition of

example A of the application, is encompassed by the claims or not.

Hence, the subject-matter of claim 1 is unclear.

- 1.2.3 According to the appellant, it was obvious that the vehicle was made up from all the liquid components of the composition, namely water, the humectant, the fluoride salt, the abrasive and any other additionally liquid ingredient such as the dye. Other components, such as the thickener are not defined as being part of the vehicle, but are disclosed only as part of the final composition.

The Board could however not find any support for this argument in the claims or in the description of the application as filed. This argument remains therefore an unsubstantiated assumption.

- 1.3 Claim 1 thus lacks clarity (Article 84 EPC). The main request is thus not allowable.

2. Auxiliary request 1 - Article 84 EPC

Claim 1 of auxiliary request 1 has been modified by the amount of fluoride ion releasable from the fluoride salt. This amendment has no effect on the lack of clarity of claim 1 as stated above for the main request.

Consequently, auxiliary request 1 does not meet the requirements of Article 84 EPC for the same reasons as the main request.

3. Auxiliary request 2 - Article 84 EPC

Claim 1 of auxiliary request 2 has been modified by the amount of fluoride ion releasable from the fluoride salt and by the restriction to "sodium fluoride" as fluoride salt. As for auxiliary request 1, these amendments have no effect on the lack of clarity of claim 1 as stated above for the main request and the same conclusions apply mutatis mutandis. Auxiliary request 2 does not meet the requirements of Article 84 EPC.

4. Auxiliary request 3 - Article 84 EPC

Claim 1 of auxiliary request 3 has been modified by the amount of fluoride ion releasable from the fluoride salt, by the restriction to "sodium fluoride" as fluoride salt, and by a restriction to an amount of "0.90-1.3% by weight" of said sodium fluoride. These amendments have no effect on the lack of clarity of claim 1 as stated above for the main request and auxiliary request 3 does not meet the requirements of Article 84 EPC.

5. Auxiliary request 4 - Article 84 EPC

Claim 1 of auxiliary request 4 has been modified by the deletion of all features relating to the concentration of water and humectant in the vehicle and by the specification of the fluoride salt and its releasable amount. Claim 1 however still recites that the liquid dentifrice composition is comprised of a vehicle containing an abrasive and a fluoride ion releasable salt.

The subject-matter of claim 1 or of its dependent claims does still not allow the skilled person to determine the content of the distinct vehicle and of

the final dentifrice liquid composition and the respective amounts of the components thereof.

Sodium fluoride is claimed as a component of the vehicle while its concentration is given in relationship with the dentifrice composition, as for the main request. The same is valid for the abrasive, which is given in claim 1 as a part of the vehicle, but which concentration is given in relation to the liquid dentifrice composition in dependent claim 3.

Consequently, the use of a terminology distinguishing between an undefined vehicle and a liquid dentifrice composition comprising said vehicle renders the claimed subject-matter unclear and auxiliary request 4 does not meet the requirements of Article 84 EPC.

6. Auxiliary request 5 - Article 84 EPC

Claim 1 of auxiliary request 5 differs from the subject-matter of claim 1 of auxiliary request 4 in the specification of the weight amount of the sodium fluoride. This amendment has no effect on the conclusion raised above as regards auxiliary request 4, and the same conclusion applies mutatis mutandis to this request.

Hence, auxiliary request 5 does not meet the requirements of Article 84 EPC.

7. Auxiliary request 6

7.1 Admission into the proceedings

This request is a direct response to the Board's communication which confirmed the decision of the

examining division as regards Article 84 EPC, but also raised new objections under Article 83 EPC.

Consequently, auxiliary request 6 is admitted into the proceedings (Article 13 RPBA).

7.2 Article 84 EPC

7.2.1 Claim 1 of auxiliary request 6 has been inter alia amended by the feature "wherein the liquid composition is adjusted with abrasive thickening agents blended therein to a viscosity of 10,000 to 50,000 mPa.s".

This feature finds a basis on page 3, first paragraph of the application. This is however the only passage of the application relating to "abrasive thickening agents" and the term is not defined therein. The description and the claims as originally filed always relate either to an "abrasive" or to "thickening agents", and thus to two distinct classes of components (cf. page 4 of the description). It is therefore not possible to understand what is encompassed by this term and to identify which components are "abrasive thickening agents".

Moreover, dependent claims 2 and 3 of auxiliary request 6 refer also respectively to a "thickening agent" and an "abrasive", and not to an "abrasive thickening agent(s)". The use of the term "abrasive thickening agents" in claim 1 creates thus an inconsistency with the subject-matter of dependent claims 2 and 3.

Therefore, the skilled person is not in a position to understand the meaning of the term "abrasive thickening agents" and what is encompassed by this term and

auxiliary request 6 does not meet the requirements of Article 84 EPC.

7.2.2 Additionally, this request does not overcome the objection under Article 84 EPC raised against the main request. The skilled person is still not in a position to determine the proportion of vehicle comprised in the liquid dentifrice composition and which components, other than water, humectant and the fluoride salt belong to the vehicle.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Fabiani

J. Riolo

Decision electronically authenticated