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**Datasheet for the decision  
of 19 May 2015**

**Case Number:** T 2041/10 - 3.3.02

**Application Number:** 01906773.5

**Publication Number:** 1251793

**IPC:** A61C15/00, A61K7/16, A61K7/18,  
A61K7/20, A61K7/22, A61K33/40

**Language of the proceedings:** EN

**Title of invention:**  
COMPOSITIONS AND METHODS FOR WHITENING AND DESENSITIZING TEETH

**Applicant:**  
Ultradent Products, Inc.

**Headword:**  
Dental bleaching and desensitizing composition/ULTRADENT

**Relevant legal provisions:**  
EPC Art. 54  
RPBA Art. 15(3)

**Keyword:**  
Oral proceedings - held in absence of appellant  
Novelty - (no)

**Decisions cited:**  
G 0004/92

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 2041/10 - 3.3.02

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.02**  
**of 19 May 2015**

**Appellant:** Ultradent Products, Inc.  
(Applicant) 505 West 10200 South  
South Jordan,  
Utah 84095 (US)

**Representative:** Grünecker Patent- und Rechtsanwälte  
PartG mbB  
Leopoldstraße 4  
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**Decision under appeal:** **Decision of the Examining Division of the European Patent Office posted on 3 March 2010 refusing European patent application No. 01906773.5 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** U. Oswald  
**Members:** H. Kellner  
R. Cramer

## Summary of Facts and Submissions

I. European patent application No. 01 906 773.5, based on international application PCT/US01/02945 filed on 30 January 2001 and published as WO 01/54610, was filed with forty-three claims.

II. The following documents were cited inter alia during the examination and appeal proceedings:

D5 US 5 851 512

D6 US 5 985 249

D7 WO 98/55001

Enclosure A: Internet excerpt "Oral hygiene: The Toothpaste - History - Ingredients - Types", pages 1 to 3, created by Abyss Design ©1998-2009, Last Update: 21/03/2009

III. The present appeal lies from a decision of the examining division refusing the patent application under Article 97(2) EPC.

IV. Claim 1 of the main request before the examining division reads as follows:

"1. A dental bleaching composition for whitening and desensitizing a person's teeth comprising:  
at least one dental bleaching agent in an amount of 0.5% to 50% by weight of the dental bleaching composition;  
potassium nitrate in an amount of 0.05% to 1% by weight of the dental bleaching composition; and  
a carrier into which the dental bleaching agent and potassium nitrate are dispersed, wherein the dental bleaching composition is free of abrasives."

The examining division considered that example 4 of document D7, disclosing a composition having 10% of hydrogen peroxide and 1% potassium nitrate, was novelty-destroying for the subject-matter of claim 1 of the main request. The argument of the applicant, that titanium dioxide was an abrasive, was found not convincing by the examining division, since titanium dioxide was not among the abrasives explicitly mentioned in the description of document D7 and, moreover, it belonged to the general knowledge in the art that titanium dioxide was used in small amounts as a pigment in order to achieve a white colour of dental compositions without having any abrasive effects.

Claim 1 of the first auxiliary request before the examining division as amended during the oral proceedings (see minutes of 3 March 2010, Annex 2) read as follows:

"1. A dental bleaching composition for whitening and desensitizing a person's teeth, **packaged within a syringe, squeezable tube or other similar positive pressure dispensing device**, comprising:  
at least one dental bleaching agent in an amount of 0.5% to 50% by weight of the dental bleaching composition;  
potassium nitrate in an amount of 0.05% to **0,75%** by weight of the dental bleaching composition; and  
a carrier into which the dental bleaching agent and potassium nitrate are dispersed,  
wherein the dental bleaching composition is free of abrasives." (amendments with respect to the main request put in bold by the board)

The examining division considered the subject-matter of claim 1 of the first auxiliary request to be obvious over the combination of documents D5 or D6 with document D7.

- V. The applicant (appellant) lodged an appeal against the decision of the examining division. With its statement of grounds of appeal it filed a main request, which is identical to the main request before the examining division, and a first auxiliary request.

Claim 1 of the first auxiliary request differs from claim 1 of the first auxiliary request before the examining division in that the amount of potassium nitrate is 0.05% to 1% by weight instead of 0.05% to 0.75%.

- VI. Oral proceedings took place on 8 December 2014 in the absence of the duly summoned representative of the appellant.

- VII. The written arguments of the appellant as far as relevant for this decision may be summarised as follows:

Example 4 of document D7 contained 1 wt% of titanium dioxide and a high amount of a paste carrier. It was hence not "free of abrasive" as required by claims 1 of the current requests. Document D7 explicitly listed possible abrasives, but did not exclude titanium dioxide. Moreover, the person skilled in the art considered titanium dioxide as a suitable abrasive, as evidenced by Enclosure A.

Furthermore, the person skilled in the art would reasonably assume that the term "paste carrier" described a composition comprising further amounts of

abrasive materials. Document D7 disclosed that, when an abrasive material was included, the vehicle may contain water, humectants, surfactants and a thickener. This passage apparently provided a definition for the term "paste carrier". Hence, if the vehicle included water, humectants, surfactants and a thickener, i.e. the essential components of a paste carrier, it also included an abrasive.

VIII. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or alternatively on the basis of the first auxiliary request, both filed with the statement of grounds of appeal.

#### **Reasons for the Decision**

1. The appeal is admissible.
2. The oral proceedings before the board took place in the absence of the appellant, who had been duly summoned but had decided not to attend.

The present decision is based on facts and evidence presented in the written proceedings and on which the appellant had had an opportunity to comment. The conditions set forth in Enlarged Board of Appeal decision G 4/92 (OJ EPO 1994, 149) are therefore met.

Moreover, as stipulated by Article 15(3) Rules of Procedure of the Boards of Appeal (RPBA), the board shall not be obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of any party duly summoned who may then be treated as relying only on its written case.

3. Claim 1 of the main request; Article 54 EPC

3.1 Claim 1 of the main request relates to

(i) a dental bleaching composition for whitening and desensitizing a person's teeth comprising

(ii) at least one dental bleaching agent in an amount of 0.5% to 50% by weight of the dental bleaching composition;

(iii) potassium nitrate in an amount of 0.05% to 1% by weight of the dental bleaching composition; and

(iv) a carrier into which the dental bleaching agent and potassium nitrate are dispersed,

(v) wherein the dental bleaching composition is free of abrasives.

3.2 Document D7 relates to the field of dentistry, and specifically to the whitening of teeth (page 1, lines 6 to 8). Example 4 of document D7 (see page 13) discloses a composition comprising inter alia hydrogen peroxide in an amount of 10 wt%, potassium nitrate in an amount of 1 wt% and a paste carrier. Hydrogen peroxide is defined as a suitable bleaching compound (see page 3, lines 28 to 32) and potassium nitrate is defined as a suitable ingredient to decrease tooth sensitivity (see page 7, lines 13 to 15). Consequently, example 4 of document D7 discloses features (i) to (iv).

3.3 Hence it remains to be answered whether example 4 of document D7 is "free of abrasives" (feature (v)).

3.3.1 Document D7 discloses on page 6, lines 5 to 6 that "In one embodiment, an abrasive material can be used with the composition of the invention". This passage clarifies that only particular embodiments in this document contain an abrasive. Consequently, without further notice, any composition mentioned in this document is to be read a priori as being a composition free of an abrasive.

Moreover, in lines 6 to 17 of page 6, suitable abrasive materials are indicated, for instance dicalcium phosphates or siliceous materials, but not titanium dioxide. Accordingly, as a consistent language and terminology has to be presupposed in a document, titanium dioxide - having not been assigned the characteristic of an abrasive - cannot be present as an abrasive in example 4.

3.3.2 It follows that example 4 of document D7 is free of abrasive and thus includes all the features (i) to (v).

4. The further arguments of the appellant cannot succeed.

4.1 The appellant argued that it was reasonable to assume that the paste carrier of example 4 of document D7 comprised amounts of abrasive material.

It referred to page 6, lines 18 to 20 of the application, which reads:

*"When an abrasive material is included the vehicle may contain water, humectant, surfactant, and a thickener."*

The board notes that the composition of the paste carrier of example 4 is defined neither in the example itself nor anywhere else in the application documents,



including the passage cited above. This passage solely defines a vehicle, which may contain water, humectant, surfactant and a thickener, but does not refer to a paste carrier as mentioned in example 4. Thus, the use of "paste carrier" in the composition of the formulation of a bleaching compound according to example 4 is not an indication for the presence of an abrasive ingredient.

Consequently, there is no disclosure in document D7 that the paste carrier of example 4 comprises an abrasive material.

- 4.2 The appellant submitted Enclosure A in order to show that titanium dioxide is used as an abrasive in dental compositions.

Enclosure A is an excerpt from the Internet. The last page of this document states that the document was created by Abyss Design ©1998-2009, Last Update: 21/03/2009.

The document was submitted to the Office on 13 July 2010. Consequently, the content of this document has to be assigned a date of 21 March 2009. It does not therefore constitute the state of the art within the meaning of Article 54(2) EPC.

Nevertheless, the issue of whether Enclosure A discloses the common general knowledge of a person skilled in the art at the relevant date of filing of the application under consideration must be discussed.

The relevant passage of Enclosure A on page 1 thereof reads:

**"Abrasives:** Calcium phosphate (chalk) and alumina were used as the abrasive base of tooth pastes but they had the disadvantage of reacting with other chemical ingredients. Today the common abrasives are Silicon Dioxide (silica) and Titanium Dioxide. Hydrated silica is a transparent abrasive used not only in white opaque tooth pastes, but in gel toothpastes as well."

According to this passage, silicon dioxide (silica) and titanium dioxide are the abrasives of "today", and other abrasives such as calcium phosphate and alumina were used in the past. In other words, the publication date of Enclosure A confirms that titanium dioxide was not commonly used as an abrasive at the relevant date of filing of the application under consideration. Rather, it was calcium phosphates (which is in concordance with the teaching of document D7) or alumina that were used.

- 4.3 Taking into account all these considerations, the subject-matter of claim 1 of the main request is not new with respect to the teaching of document D7.
- 5. Claim 1 of auxiliary request 1; Article 54 EPC
- 5.1 The subject-matter of claim 1 of the first auxiliary request differs from the subject-matter of the main request in the additional feature
  - (vi) packaged within a syringe, squeezable tube or other similar positive pressure dispensing device.
- 5.2 Document D7 discloses on page 8, lines 11 to 15 that the whitening agent and catalytic agents can each be contained in a gel or paste form, which upon extrusion from the container are admixed and placed on a

toothbrush. Example 4 of document D7 contains a "paste carrier".

The above passage provides a clear link for a composition in paste form and the extrusion thereof from a container. The wording "extrusion from a container" is considered equal to the wording "pressure dispensing device" and thus document D7 also discloses additional feature (vi).

5.3 The subject-matter of claim 1 of the first auxiliary request is therefore also not new with respect to the teaching of document D7.

## Order

### **For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



N. Maslin

U. Oswald

Decision electronically authenticated