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**Datasheet for the decision  
of 23 September 2019**

**Case Number:** T 1062/16 - 3.3.07

**Application Number:** 09709387.6

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**IPC:** A61K8/44, A61K8/20, A61Q11/00,  
A61K31/198, A61K33/16, A61P1/02

**Language of the proceedings:** EN

**Title of invention:**  
ORAL CARE PRODUCT AND METHODS OF USE THEREOF

**Applicant:**  
Colgate-Palmolive Company

**Headword:**  
Oral care product / COLGATE-PALMOLIVE

**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**  
Inventive step - (yes)



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Case Number: T 1062/16 - 3.3.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.07**  
**of 23 September 2019**

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

**Representative:** Wibbelmann, Jobst  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 14 December  
2015 refusing European patent application No.  
09709387.6 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** A. Uselli  
**Members:** S. Albrecht  
P. Schmitz

## Summary of Facts and Submissions

I. The appeal of the applicant (appellant) lies from the decision of the examining division to refuse European patent application No. 09709387.6. This application was filed as international application PCT/US2009/033290 (hereinafter the "application") and published as WO 2009/100264.

II. The decision of the examining division was based on a main request and three auxiliary requests, all filed during the oral proceedings held on 13 November 2015.

Claim 1 of the main request read as follows:

"An oral care composition comprising

a. an effective amount of arginine, in free or salt form; and

b. a fluoride ion source, wherein the amount of fluoride ion source is 0.01 wt% to 0.1 % by weight of the composition, and an anionic surfactant wherein the anionic surfactant is selected from sodium lauryl sulfate, sodium laureth sulfate and mixtures thereof."

III. The following documents were among those cited in the first instance examination proceedings:

D1: WO 00/78270

D2: WO 2004/039343

D4: WO 97/32565

D11: Cheng et al., Australian Dental Journal, 2015, 60: 104-111

IV. In its decision, the examining division decided that the claims of the main request fulfilled the requirements of Articles 123(2), 84 and 54 EPC.

With regard to inventive step, the examining division identified D4 as the closest prior art, from which the claimed subject-matter differed in terms of the presence and the choice of the anionic surfactant. The objective technical problem was seen as the provision of alternative/improved oral care compositions comprising fluoride ions in low amounts and arginine. The solution proposed by the claimed subject-matter was rendered obvious in the light of the teaching of D4 taken alone or in combination with either D1 or D2.

The claims of auxiliary requests 1 to 3 were held to lack an inventive step for the same reasons as the main request.

- V. With the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a main request or, as an auxiliary measure, on the basis of one of auxiliary requests 1 to 3, all filed with the same statement.
- VI. With letter of 15 February 2019, the appellant filed two further auxiliary requests, i.e. auxiliary requests 4 and 5.
- VII. In a communication pursuant to Article 15(1) RPBA issued on 23 July 2019, the Board expressed its preliminary opinion on all requests on file.
- VIII. With letter of 23 August 2019, the appellant filed a sixth auxiliary request.

The single claim of this request (hereinafter referred

to as "claim 1") read as follows:

"A toothpaste composition comprising

- a. an effective amount of arginine, in free or salt form;
- b. a fluoride ion source which provides from 300 to 600 ppm by weight of fluoride ions per weight of the composition;
- c. and an anionic surfactant wherein the anionic surfactant is selected from sodium lauryl sulfate; sodium laureth sulfate; and mixtures thereof, wherein arginine is present in an amount of 1 to 10 weight % of the total composition, the weight of the arginine being calculated as free base form."

IX. Oral proceedings were held on 23 September 2019 during which the appellant withdrew all requests on file except for the sixth auxiliary request which became the main request.

X. The appellant's arguments, as far as they are relevant to the present decision, can be summarised as follows:

The claimed compositions differed from those of the closest prior art document D4 *inter alia* in that they comprised fluoride levels of only 300 to 600 ppm. As demonstrated by example 1 of the application and the data of D11, the claimed fluoride amounts interact with arginine in such a manner as to provide effective anti-carries effects. As the skilled person would not have expected a toothpaste composition with fluoride levels of only 300 to 600 ppm to possess such properties, the claimed subject-matter involved an inventive step.

XI. Requests

The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request filed as sixth auxiliary request with letter of 23 August 2019.

**Reasons for the Decision**

1. Article 123(2) EPC

Basis for the claimed toothpaste composition may be found in item 1.0.74 of paragraph 0012 read in conjunction with item 1.0.38 and the first five lines of the same paragraph, paragraph 0025 and paragraph 0074 of the application.

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

2. Article 56 EPC

2.1 The closest prior art

2.1.1 In agreement with the examining division and the appellant, the Board considers document D4 as the closest prior art for assessing inventive step of the claimed subject-matter.

This document generally relates to oral compositions containing anti-carries agents distributed in an oral vehicle, wherein these agents are calcium, arginine and a cariostatic anion (see page 5, lines 15 to 18). In a particularly preferred embodiment, these formulations further include fluoride in an amount ranging from 200 to 1500 ppm (see page 6, lines 14 to 15).

2.1.2 As correctly pointed out by the appellant on page 2 of its letter of 15 February 2019, it is well known in the art that the appropriate level of actives (e.g. fluoride ions) is chosen depending on the type of oral compositions containing these. Accordingly, the skilled person would understand from the teaching of D4

(a) that the broad range of 200 ppm to 1500 ppm fluoride disclosed in this document only applies to oral compositions in general terms, but not to specific formulations;

(b) that the lower end of this range is contemplated for liquid compositions, whereas solid or pasty compositions such as toothpastes generally comprise fluoride ions in an amount corresponding to the upper part of the broad range disclosed in D4, i.e. an amount exceeding 600 ppm.

Hence, the claimed subject-matter differs from D4 *inter alia* in terms of the claimed range of fluoride ions.

2.2 Objective technical problem and solution

2.2.1 The definition of the technical problem is to be based on the technical effects provided by the distinguishing features over the closest prior art.

The Board notes that the appellant did not provide any comparative data vis-à-vis the toothpaste compositions disclosed in D4. Nevertheless, paragraph 0007 and example 1 of the application as well as the data disclosed in D11 credibly show that the claimed amounts of fluoride ions interact with arginine to provide anti-caries efficacy, whereas they would be subtherapeutic in the absence of arginine.

2.2.2 In view of the foregoing, the objective technical problem to be solved by the claimed invention vis-à-vis D4 can be formulated as the provision of a further toothpaste composition that can effectively reduce or inhibit formation of dental caries.

2.2.3 As a solution to this problem, a composition in accordance with claim 1 is provided.

2.2.4 Obviousness

At the date of filing of the application, toothpastes with fluoride levels of 300 to 600 ppm were generally considered to be therapeutically ineffective (see point 2.1.2 above). Against this background, the skilled person would not have had any motivation to reduce the fluoride amounts disclosed in D4 to the claimed levels, in order to solve the technical problem as posed.

For these reasons, the claimed subject-matter involves an inventive step.



## 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 the set of claims filed as auxiliary request 6 on 23 August 2019 which now became the main request and a description to be adapted.

The Registrar:

The Chairman:



G. Rauh

A. Usuelli

Decision electronically authenticated