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**Datasheet for the decision
of 5 November 2015**

Case Number: T 0081/13 - 3.3.07
Application Number: 05077497.5
Publication Number: 1666097
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Title of invention:

Post-foaming dental mousse and methods utilizing the same

Applicant:

Colgate-Palmolive Company

Headword:

Post-foaming dental mousse and methods utilizing the same/
Colgate-Palmolive Company

Relevant legal provisions:

EPC Art. 84, 123(2)

Keyword:

Main request and Auxiliary requests 1-7 - Clarity (no)
Auxiliary requests 8-15 - Amendments (no)
Alternative main request, alternative auxiliary requests 1-3,
8-11 - Amendments (no)

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Catchword:



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Case Number: T 0081/13 - 3.3.07

**D E C I S I O N
of Technical Board of Appeal 3.3.07
of 5 November 2015**

Appellant: Colgate-Palmolive Company
(Applicant) 300 Park Avenue
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 26 July 2012 refusing European patent application No. 05077497.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman J. Riolo
Members: D. Boulois
P. Schmitz

Summary of Facts and Submissions

I. The appeal lies from the decision of the examining division to refuse European patent application n° 05 077 497.5. The decision was based on 5 sets of claims filed as main request and auxiliary requests 1-3 with letter of 13 April 2012 and as auxiliary request 4 during oral proceedings.

II. Claims 1 and 13 of the main request read as follows:

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterised in that the propellant is present in the mousse in an amount of 2 to 3 wt%."

13. A system for dispensing an oral care mouse, comprising a dentifrice and dispenser,

wherein the dentifrice comprises (a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterised in that the propellant is present in the mousse in an amount of 2 to 3 wt%."

The subject-matter of the independent claims 1 of the auxiliary requests read as follows, the difference(s) compared with the main requests shown in bold:

(a) Auxiliary request 1

1. An oral care mousse comprising:

- (a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate**; and
- (b) a compressed liquid propellant comprising a mixture of propane and isobutane; characterised in that the propellant is present in the mousse in an amount of 2 to 3 wt%; **and in that the surfactant comprises cocamidopropyl betaine**".

The subject-matter of independent claim 11 related to a "system for dispensing an oral care mouse, comprising a dentifrice and dispenser, wherein the dentifrice comprises" the same features as independent claim 1.

(b) Auxiliary request 2

The subject-matter of claim 1 of auxiliary request 2 differed from the subject-matter of claim 1 of auxiliary request 1 by the further specification of the amounts, namely **"in that the sodium lauryl sulfate is present in the dentifrice composition in an amount of 1 to 1.65 wt%"** and **"wherein the cocamidopropyl betaine is present in the dentifrice composition in an amount of 1.25 to 2.5 wt%."**

The subject-matter of independent claim 11 related to a "system for dispensing an oral care mouse, comprising a dentifrice and dispenser, wherein the dentifrice comprises" the same features as independent claim 1.

(c) Auxiliary request 3

The subject-matter of claim 1 of auxiliary request 2 differed from the subject-matter of claim 1 of auxiliary request 1 by the additional feature **"in that**

the composition of (a) further comprises a binder agent, which binder agent is carrageenan."

The subject-matter of independent claim 8 related to a "system for dispensing an oral care mouse, comprising a dentifrice and dispenser, wherein the dentifrice comprises" the same features as independent claim 1.

(d) Auxiliary request 4

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant **that has a boiling point of less than -10°C at atmospheric pressure, wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) at 20°C as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed to atmospheric pressure as a gel that expands at least 100 vol% in less than 5 seconds at 20°C"**.

The subject-matter of independent claim 16 related to a "system for dispensing an oral care mouse, comprising a dentifrice and dispenser, wherein the dentifrice comprises" the same features as independent claim 1.

III. According to the decision under appeal, the cancellation of the limitation on viscosity in claim 1 and in claim 13 of the main request could not be inferred from the description or the drawings as originally filed, since said limitation on the viscosity was an essential parameter of the claimed composition. Hence, it was concluded that the deletion of the upper viscosity limit in claim 1 was not

foreseen in the application as originally filed. The corresponding suppression in claim 1 of the main request was not directly and unambiguously derivable from the application as originally filed. Claim 1 and claim 13 of the main request further differed from claim 6 as originally filed that the condition on expansion behaviour of the mousse is absent. As for the viscosity, the deletion of the condition on expansion behaviour could not be inferred from the description or drawings as originally filed. The requirements of Article 123(2) EPC were not fulfilled for claims 1 and 13 of the main request.

The arguments set out for the main request applied also to claims 1 and 11 of auxiliary requests 1-3.

As to the amendments made to auxiliary request 4, the description did not disclose the pressure at which the boiling point of the compressed liquid propellant should be less than -10°C , nor the temperature at which either of the viscosity or expansion were to be determined. The introduction of these terms contravened thus the requirements of Article 123(2) EPC.

The following features of claim 1 of auxiliary request 4 were found to be unclear under Article 84 EPC, namely the boiling point without pressure indication, the viscosity without shear rate and temperature of measurement, as well as the expansion rate without conditions under which expansion took place.

Moreover, the present application did not disclose how to carry out the invention as claimed in auxiliary request 4 except to repeat example 1, since the unclear features of boiling point, viscosity and expansion rate claim 1 were not restricted in any scope. Hence, the requirements of Article 83 EPC were also not met.

IV. The applicant (appellant) filed an appeal against the examining division's decision. With the statement of grounds of appeal dated 3 December 2012, the appellant submitted a main request and first to fifteenth auxiliary request, and alternative main and first to third auxiliary requests and alternative eighth to eleventh auxiliary requests.

The subject-matter of the independent claims 1 of the requests read as follows, the difference(s) compared with the main request shown in bold:

(a) Main request

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt% wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed to atmospheric pressure as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(b) Auxiliary request 1

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate**; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%; and

in that the surfactant comprises cocamidopropyl betaine,

wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(c) Auxiliary request 2

The subject-matter of claim 1 of auxiliary request 2 was identical to the subject-matter of claim 1 of auxiliary request 1 with the further additional features:

"in that the sodium lauryl is present in the dentifrice composition in an amount of 1 to 1.65 wt%" and "wherein the cocamidopropyl betaine is present in the dentifrice composition in an amount of 1.25 to 2.5 wt%".

(d) Auxiliary request 3

The subject-matter of claim 1 of auxiliary request was identical to the subject-matter of claim 1 of auxiliary request 1 with the further additional feature:

"in that the composition of (a) further comprises a binder agent, which binder agent is carrageenan".

(e) Auxiliary request 4

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

~~characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt% wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(f) Auxiliary request 5

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and
characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the surfactant comprises cocamidopropyl betaine wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant ~~and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(g) Auxiliary request 6

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the sodium lauryl sulfate is present in the dentifrice composition in an amount of 1 to 1.65 wt%; and

in that the surfactant comprises cocamidopropyl betaine, wherein the cocamidopropyl betaine is present in the dentifrice composition in an amount of 1.25 to 2.5 wt%,

wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant ~~and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C~~.

(h) Auxiliary request 7

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the surfactant comprises cocamidopropyl betaine,

in that the composition of (a) further comprises a binder agent, which binder agent is carrageenan

wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant ~~and the mousse~~

~~is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(i) Auxiliary request 8

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt% wherein **the**

~~composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield~~

~~viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and~~ the mousse is dispensed

as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(j) Auxiliary request 9

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%; and

in that the surfactant comprises cocamidopropyl betaine,

wherein ~~the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a~~

~~Brookfield viscometer model RVTDV-II, spindle E at 5~~

~~rpm prior to addition of the propellant and~~ the mousse

is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(k) Auxiliary request 10

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the sodium lauryl sulfate is present in the dentifrice composition in an amount of 1 to 1.65 wt%;

and

in that the surfactant comprises cocamidopropyl betaine, wherein the cocamidopropyl betaine is present in the dentifrice composition in an amount of 1.25 to 2.5 wt%,

~~wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and~~

the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(l) Auxiliary request 11

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the surfactant comprises cocamidopropyl betaine,

in that the composition of (a) further comprises a binder agent, which binder agent is carrageenan

~~wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a~~

~~Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and~~

the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".

(m) Auxiliary request 12

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt% ~~wherein the~~

~~composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield~~

~~viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed~~

~~as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(n) Auxiliary request 13

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising**

sodium lauryl sulfate; and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane;
characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt% and
in that the surfactant comprises cocamidopropyl betaine
~~wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(o) Auxiliary request 14

1. An oral care mousse comprising:
(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and
(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and
characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%
in that the sodium lauryl sulfate is present in the dentifrice composition in an amount of 1 to 1.65 wt%;
and
in that the surfactant comprises cocamidopropyl betaine, wherein the cocamidopropyl betaine is present in the dentifrice composition in an amount of 1.25 to 2.5 wt%,
~~wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".~~

(p) Auxiliary request 15

1. An oral care mousse comprising:

(a) a dentifrice composition that comprises a surfactant and a humectant, **the surfactant comprising sodium lauryl sulfate;** and

(b) a compressed liquid propellant comprising a mixture of propane and isobutane; and

characterized in that the propellant is present in the mousse in an amount of 2 to 3 wt%

in that the surfactant comprises cocamidopropyl betaine,

in that the composition of (a) further comprises a binder agent, which binder agent is carrageenan

~~**wherein the composition of (a) has a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant and the mousse is dispensed as a gel that expands at least 100 vol% in less than 5 seconds at 20°C".**~~

(q) Alternative requests

The subject-matter of claim 1 of the alternative main request and alternative auxiliary requests 1-3 and 8-11 was modified as compared to the corresponding requests above by the addition of the following wording: **"when dispensed and exposed to atmospheric pressure at 20°C".**

V. With a letter dated 29 September 2015, the appellant withdrew its request for oral proceedings, and maintained its request for a decision based on the current state of the written file.

VI. A communication dated 9 October 2015 expressing the board's preliminary opinion of the board was sent to

the appellant. The Board's opinion was that the main request and auxiliary requests 1-11 did not meet the requirements of Article 84 EPC. Additionally, auxiliary requests 1 and 5-11, as well as auxiliary requests 12-15 and all alternative requests did not meet the requirements of Article 123(2) EPC.

VII. Oral proceedings before the board of appeal took place on 5 November 2015 in the absence of the appellant.

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

The Examining Division had applied an Article 84 EPC/ Article 123(2) EPC "squeeze", which led to an "inescapable trap", by objecting to the claimed parameters under Article 84 EPC, and simultaneously refusing the omission of the same parameters in the claims. This interpretation reduced the technical disclosure of the invention to zero. The application had to be read through the eyes of a skilled person desirous of trying to make constructive technical sense of the patent application, not through the eyes of a semantic pedant trying to destroy any technical sense in the document (*sic*).

Main request

With respect to the measurement of viscosity, it was implicit to the skilled person that in the context of dentifrice compositions which were foamable when used and there being no express disclosure that viscosity was measured at another temperature, the viscosity property of the composition was at room temperature, since the dentifrice was indeed used at room temperature. Also, the skilled person knew that the

viscosity of dentifrice changed negligibly over typical user temperatures, and was certainly below the high threshold of 30,000 centipoises. In other word, the high viscosity threshold comprised viscosity values for the dentifrice measured at 20°C, 25°C, 30°C etc.

With respect to the gel expansion, it was also implicit that the gel expansion property of the dentifrice was at room temperature and atmospheric pressure. In addition, paragraph [0009] of the published application clearly disclosed that the foaming dental mousse of the invention had this particular foaming property at atmospheric pressure.

The main request thus met the requirements of Article 84 EPC.

As regards sufficiency of disclosure, example 1 of the application was one way of carrying out the invention as defined in the claims and for these reasons the provisions of Article 83 EPC were met.

Auxiliary request 1-3

For the reasons submitted for the main request, these requests also met the requirements of Articles 84 and 83 EPC.

Alternative main request and alterative auxiliary requests 1-3

Paragraph [0009] clearly disclosed that the foaming dental mousse had its property at atmospheric pressure. Furthermore, paragraphs [0020] and [0021] also clearly disclosed that the foaming dental mousse had its particular properties at 20°C because the vapour

pressure of the propellant at that specific temperature was material. The skilled person was directly and unambiguously taught that the gel expansion rate recited in the independent claims was at atmospheric pressure at 20°C.

Auxiliary request 4

The claims were defining the dentifrice composition in itself. The expansion rate of the mousse was not a feature of said composition and certainly not an essential feature. The claims of auxiliary request 4 recite what the mousse comprises in composition terms rather than how it expanded. The skilled person would have understood that the said unclear expansion rate was not essential.

Auxiliary request 5-7

The same arguments as for the fourth auxiliary request applied.

Auxiliary request 8

The independent claims had been amended as to delete the viscosity deemed unclear by the Examining Division. With respect to the viscosity, the claim recited that a mousse was provided, which was formed by expansion of the gel by the propellant. Such a mousse was provided on dispensing and implicitly the dentifrice composition had to have a viscosity which could form such a mousse. To that extent, the measured Brookfield viscosity was not essential to define the mousse composition. Then amended claims complied with Article 84 EPC and Article 123(2) EPC.

Auxiliary requests 9-11

The amended claims of these requests met the requirements of *inter alia* Article 84 EPC for the reasons submitted for the eighth auxiliary request.

Alternative requests 8-11

As submitted for the previous alternative requests, the description of the application clearly disclosed that the foaming dental mousse had its foaming properties at atmospheric pressure and at 20°C (see par. [0009], [0020] and [0021]).

Auxiliary request 12

Neither independent claim of this request recited the viscosity or the gel expansion rate. These parameters were not essential to the mousse, and so the independent claims did not add subject-matter by not including those features, alleged to be unclear by the Examining Division.

Auxiliary requests 13-15

These requests met the requirements of Article 123(2) EPC and 84 EPC for the same reasons as the twelfth auxiliary request.

IX. Requests

The appellant requested in writing that the decision under appeal be set aside and that the case to be remitted to the Examining Division for the assessment of novelty and inventive step on the basis of the sets of claims filed as main request or first to fifteenth

auxiliary requests, and alternative main and first to third auxiliary requests and alternative eighth to eleventh auxiliary requests, all filed with letter of 3 December 2012.

Reasons for the Decision

1. Main request - Clarity

- 1.1 The subject-matter of claim 1 of the main request relates to an oral care mousse specified by its viscosity, to be specific "a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant".

This parameter is a feature contributing to the definition of the claimed dentifrice composition, to which it confers particular properties, and as such can only be seen as an essential feature. The viscosity allows in particular the formation of a mousse with the evaporating propellant.

In addition, the broadness of the definition of the claimed dentifrice composition, limited to the presence of an unquantified and unidentified surfactant and humectant renders the viscosity feature even more essential.

- 1.2 There is however no further indication in claim 1 on the conditions at which the measurement of this parameter takes place. The parameter of viscosity is indeed given without the indication of the shear rate or temperature of measurement. Yet these informations are essential for the measurement of the viscosity, which is dependent thereon; it is common general

knowledge that the temperature and the shear rate used to measure the viscosity influence the measured results.

- 1.2.1 First, viscosity is affected by the temperature, in that when the temperature increases, the viscosity decreases, and some chemical products are very sensitive to a temperature variation, which will result in a significant change in the viscosity measured. It is common general knowledge that there are normal variations in viscosity of about 15-20% over the normal temperature span of 20-30°C, even for products such as water. It is thus crucial to control the temperature during any viscosity measurement. The absence of any indication on the temperature at which the measurement is made results in an uncertainty as to the claimed viscosity value.

The argument of the appellant that the skilled person would understand that the viscosity can only be measured at room temperature fails for following reasons:

- (a) The term "room temperature", usually a temperature comprised between 20°C and 25°C, remains so vague and indeterminate that it cannot serve as a reliable means of indicating with sufficient precision and clarity the limiting values for the viscosities of the components as now specified in claim 1, in view of the dependency between the viscosity and the temperature at which it is measured and that even within a range of five degrees Centigrade the viscosity value may vary in a relevant way.
- (b) The present invention relates to an oral care mousse with a dentifrice composition to be administered into the oral cavity. It is not

convincing that, in the absence of any mention of temperature in the application in suit, the measurement necessarily takes place at room temperature since the skilled person may for convenience choose to make the measurement of the viscosity of the composition to be administered to the oral cavity at a higher temperature, namely at a temperature closer to the temperature of the oral cavity, for instance 30°C.

1.2.2 Secondly, viscosity is also affected by the shear rate at which the measurement is made. When a material is to be subjected to a variety of shear rates in processing or use, as it appears to be the case with the composition of the present application, which has to be expelled from a dispenser, it is essential to know its viscosity at the projected shear rate. The measurement under different shear rates will also give a variable result in the viscosity measurement. The absence of the shear rate results thus also in uncertainty as to the exact limits of the scope of claim 1.

1.2.3 Therefore, claim 1 relates to an attempt to delimit the subject-matter for which protection is sought by means of a parameter, namely a maximum viscosity value, which has been defined incompletely and for which the lack of definition cannot be completed in a standard manner by the skilled person's general knowledge. It follows that the lack of information regarding the exact conditions under which the viscosity limit of claim 1 is to be determined, results in uncertainty as to the exact limits of the scope of claim 1. Therefore, the viscosity cannot be considered to be clearly indicated and the matter for which protection is sought is not sufficiently defined, so that the subject-matter of claim 1 is unclear.

The main request does not meet the requirements of Article 84 EPC.

2. Auxiliary requests 1-7

As for the main request, the subject-matter of claim 1 of auxiliary requests 1 to 7 is specified by the same viscosity parameter, namely "a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant". The conclusion reached for the main request therefore applies *mutatis mutandis* and auxiliary requests 1 to 7 do not meet the requirements of Article 84 EPC.

3. Auxiliary request 8

3.1 The subject-matter of claim 1 of auxiliary request 8 has been reformulated with the omission of the viscosity feature, namely "a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant".

3.2 This viscosity feature was present in all independent claims of the application as filed in relationship with the dentifrice composition.

As to the description, the only passage mentioning the dentifrice composition in general terms is in paragraph [0003]. Said passage mentions that "the mousse includes (a) a dentifrice composition that contains at least a surfactant and a humectant; and (b) a compressed liquid propellant that has a boiling point of less than about -10 deg. C". This passage is immediately followed, in

the next sentence, by the specification that "the dentifrice composition has a viscosity of less than about 30,000 centipoises". It therefore cannot constitute a basis for the omission of the viscosity requirements.

Consequently, the dentifrice composition is not disclosed in the description or in the claims as originally filed in isolation from its viscosity requirements. The limitation on viscosity appears thus as an essential parameter defining the claimed dentifrice composition, and not as an option or a preferred embodiment. The omission of such essential feature results in an undisclosed generalisation.

3.3 The appellant argued that an unclear and unmeasurable viscosity value was not essential and could be omitted for this reason from the claim. This omission should also be possible to escape the Article 84 EPC/Article 123(2) EPC "squeeze" which leads to an "inescapable trap".

3.3.1 The Board does not agree. It was the choice of the appellant to define an essential characteristic of the invention by a parameter. This parameter revealed to be unclear but remains however an essential feature since, even unclear, it confers to the mousse composition a particular aspect and reflects a composition having specific and essential properties. This "not so high" viscosity allows in particular, as mentioned by the appellant, the formation of a mousse with the evaporating propellant. The essentiality of this property renders therefore necessary the presence in claim 1 of a feature allowing its performance, in the form of the viscosity parameter or of an alternative.

In reality, if the omission of such feature reflecting essential properties of a claimed product is not possible, its replacement by an equivalent feature providing inevitably the same essential property can be considered as normally feasible. This is usually possible through the incorporation of adequate technical features able to provide inevitably said property. As a last resort, the claimed subject-matter could even have taken the form of an exemplified subject-matter. It therefore cannot be concluded that the presence of an unclear essential feature in a claim inevitably leads to an "inescapable trap".

In the present case, and according to the appellant, the viscosity of a dentifrice composition changes negligibly over typical user temperatures, and is certainly always below the claimed high threshold of 30,000 centipoises. This argument appears to be confirmed by the alternative maximal viscosities disclosed in the description, which are below 23,000 or 15,000 centipoise (see par. [0018]). In view of this argument, a theoretically feasible alternative way to define the dentifrice composition achieving the specific aspect and property of the dentifrice composition could thus have been reflected in the claim through the the presence of specific compounds in specific amounts or ranges, which could have replaced the viscosity parameter. This replacement could have been done under the condition that the dentifrice composition defined by such specific compounds in specific amounts should have had inevitably a viscosity lower than 30,000 centipoises measured under any temperature condition, i.e. 18°C, 20°C, 25 or 30°C.

If this solution to the said "Article 84 EPC/Article 123(2) EPC squeeze" does not appear to be realisable in

the present case, it is because the description of the present application does not provide sufficient teaching for defining the dentifrice composition by means of specific compounds or class of compounds in specific amounts, in a broader way than the examples. Apart from the surfactant and humectant, the description is totally silent on the amounts of the remaining components of the dentifrice composition, in particular those which may also have an influence on the viscosity of the dentifrice composition, such as for instance the binder or the abrasive (par. [0010]-[0017]). Yet these components are essential components of a dentifrice composition. The application as originally filed presents thus a disclosure deficiency and if there is an inescapable trap, it is rather linked to this deficiency.

- 3.4 The oral care mousse composition is thus not disclosed independently from its viscosity in any part of the application as originally filed. The omission of this parameter constitutes therefore an unallowable generalisation not derivable directly and unambiguously from the application as originally filed. Auxiliary request 8 does not meet the requirements of Article 123(2) EPC.

4. Auxiliary requests 9-15

The essential viscosity parameter, namely "a viscosity of less than 30,000 mPa.s (centipoise) as determined by a Brookfield viscometer model RVTDV-II, spindle E at 5 rpm prior to addition of the propellant" has been suppressed in all independent claim 1 of these requests. In all these requests, this suppression constitutes an unallowable generalisation not derivable directly and unambiguously from the application as

originally filed. The conclusions drawn for auxiliary request 8 apply thus *mutatis mutandis* to all auxiliary requests 9-15 which do not meet the requirements of Article 123(2) EPC.

5. Alternative main request and alternative auxiliary requests 1-3 and 8-11
 - 5.1 The subject-matter of claim 1 of alternative auxiliary requests 8-11 suffer from the same deficiency regarding Article 123(2) EPC as the corresponding auxiliary requests.
 - 5.2 Additionally, all alternative requests, that is the alternative main request and all alternative auxiliary requests 1-3 and 8-11 comprise the supplementary feature "when dispensed and exposed to atmospheric pressure at 20°C", which relates to the viscosity parameter as well as to the gel expansion parameter.
 - 5.2.1 According to the appellant, a basis for the temperature value of 20°C was to be found in paragraphs [0021] and [0022] of the description and a basis for the atmospheric pressure was to be found in paragraph [0009].
 - 5.2.2 As regards the temperature, said paragraphs [0021] and [0022] relate to the vapor pressure of the compressed liquid propellant made from isobutane and propane, which is given at 20°C, and neither to the viscosity of the dentifrice composition nor its gel expansion.

It is furthermore not deductible from the description that the measurement of the viscosity and the gel expansion of the dentifrice composition has to be performed at ambient temperature or room temperature,

even more precisely at 20°C. This indication is absent from the description and is also not obvious as the invention relates to a product to be administered to the oral cavity, which represents a different range of temperature.

Moreover as discussed above, the concept of room temperature covers usually a temperature comprised between 20°C and 25°C and as such remains indeed indeterminate and cannot be translated to the value of 20°C.

5.2.3 The subject-matter of claim 1 of the alternative main request, auxiliary requests 1-3 and 8-11 does not meet the requirements of Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Fabiani

J. Riolo

Decision electronically authenticated