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Datasheet for the decision of 10 November 2016

Case Number: T 1243/13 - 3.3.07

Application Number: 05824776.8

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Title of invention:
ORAL CARE MALODOR COMPOSITION

Applicant:
Colgate-Palmolive Company

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - all requests (no)

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Case Number: T 1243/13 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 10 November 2016

Appellant: (Applicant)	Colgate-Palmolive Company 300 Park Avenue New York, NY 10022 (US)
Representative:	Jenkins, Peter David Page White & Farrer Bedford House John Street London WC1N 2BF (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 22 October 2012 refusing European patent application No. 05824776.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

I. The appeal lies from the decision of the examining division announced at oral proceedings on 3 July 2012 refusing European patent application No. 05 824 776.8.

II. The decision was based on three sets of claims filed as main request with letter of 1 June 2012 and as first and second auxiliary requests during said oral proceedings.

Claim 1 of the main request read as follows:

"1. An oral odor control agent admixture composition, comprising:
(a) from 10 weight percent to 30 weight percent thyme essential oil;
(b) from 10 weight percent to 30 weight percent anise essential oil;
(c) from 10 weight percent to 30 weight percent fennel essential oil;
(d) from 10 weight percent to 30 weight percent basil essential oil; and
(e) from 10 weight percent to 30 weight percent juniperberry essential oil."

Claim 1 of the first auxiliary request (which corresponded to claim 4 of the main request) read as follows:

"1. An oral care composition comprising:
(a) an oral care vehicle, and
(b) from 0.3 weight percent to 2 weight percent oral odor control agent dispersed in said oral care vehicle, said odor control agent comprising essential oils in respective proportions to said odor control agent of

(1) from 10 weight percent to 30 weight percent thyme essential oil;
(2) from 10 weight percent to 30 weight percent anise essential oil;
(3) from 10 weight percent to 30 weight percent fennel essential oil;
(4) from 10 weight percent to 30 weight percent basil essential oil; and
(5) a remainder of juniperberry essential oil
wherein sail juniperberry essential oil is from 10 weight percent to 30 weight percent of said odor control agent."

Claim 1 of the second auxiliary request (which corresponded to claim 17 of the main request with minor amendments) read as follows:

"1. A method of suppressing oral garlic malodor, comprising: applying to the oral cavity an oral care vehicle having an orally effective amount of a dispersed odor control agent, said odor control agent comprising essential oils in respective proportions to said odor control agent of
(1) from 10 weight percent to 30 weight percent thyme essential oil;
(2) from 10 weight percent to 30 weight percent anise essential oil;
(3) from 10 weight percent to 30 weight percent fennel essential oil;
(4) from 10 weight percent to 30 weight percent basil essential oil; and
(5) a remainder of juniperberry essential oil
wherein sail juniperberry essential oil is from 10 weight percent to 30 weight percent of said odor control agent."

III. In the decision under appeal, the following documents were cited:

D1: CH-A-688 985
D2: GB-A-1910/29565
D3: A.Y. Leung et al., Encyclopedia of common natural ingredients, John Wiley & Sons, Inc, 1988, pages 36-38, 68-69, 240-243, 325-327, 492-494
D4: JP-A-59175410, WPI Abstract
D5: W.J. Loesche, Quintessence International, volume 30(5), 1999, pages 311-318

IV. According to the decision under appeal:

(a) Taking document D2 as the closest prior art, the difference with the subject-matter of claim 1 of the main request was that basil, fennel and juniperberry were added to the composition in specific proportions. The alleged effect, namely the elimination of garlic malodor was not credible, as it was shown that all five essential oils of the combination of claim 1 had individually efficacy in reducing garlic malodor, which was also the case for all essential oils tested not included in the composition (table 1 in the application), but an effect for the specific combination of claim 1 had not been proven, since example 2 indicated a reduction in garlic malodor which was inferior to the efficacy of the individual oils and the control composition had unknown content. The problem was therefore the provision of a further oral odor control composition. The addition of several compounds known for their aromatic properties was one of the several possibilities among which the skilled person would select without the exercise of any inventive skills. Documents D1, D2 itself, D3,

D4 and D5 were analysed in order to confirm that the five essential oils present in claim 1 had been used alone or in different combinations for the same purpose as claimed, i.e. for controlling oral odor. For these reasons, the composition of claim 1 of the main request did not involve an inventive step. Also the subject-matter of independent claims 4 and 17 was not inventive starting from D2 as the closest prior art.

(b) As the subject-matter of claim 1 of the first auxiliary request corresponded to the subject-matter of claim 4 of the main request and the subject-matter of claim 1 of the second auxiliary request corresponded to the subject-matter of claim 17 of the main request, they did not involve an inventive step for the same reasons as outlined for the main request.

V. The applicant (appellant) lodged an appeal against that decision. With the statement setting out the grounds of appeal, the appellant submitted three sets of claims as main request and first and second auxiliary requests, which corresponded to the requests on which the decision was based. In addition, the appellant filed a declaration of one of the inventors (D6: "Declaration of Joe Vazquez dated 4 March 2013").

VI. In a communication sent in preparation of oral proceedings, the Board expressed *inter alia* its doubts that the data available (including those of D6) showed the effects claimed by the appellant (point 1.5 in the communication).

VII. Oral proceedings took place on 10 November 2016 in the absence of the appellant as announced with a letter dated 28 September 2016.

VIII. The appellant's arguments, insofar as relevant to the present decision, can be summarised as follows:

None of documents D1 to D5 disclosed that a combination of thyme, anise, fennel, basil and juniperberry essential oils in the specific proportions as claimed had an efficacy against malodor in an oral care composition. In particular, nothing was available concerning the use of juniperberry essential oil against malodor and regarding the efficacy of any of the essential oils against garlic malodor. The selection of the five oils was not an arbitrary one, as already proven by the data in the application and as confirmed and emphasised by the data in D6. The better results in table 1, where individual oils were tested, related to the use of the essential oils in higher concentration than in example 2, which was the appropriate comparison, as it used as a control the traditional garlic odor care active blend. This blend was indeed to be considered as the closest prior art. The data in D6 showed that the garlic odor reduction activity was different at lower concentrations and that some specific combinations of essential oils provided enhanced efficacy which could not be predicted from the performance of the individual oils. They represented therefore the proof that the claimed combination was not arbitrary, but provided an unexpected effect. The objective technical problem was thus the provision of enhanced garlic odor reduction activity. The solution in claim 1 of the main request was not obvious, as none of the documents hinted at the specific combination and

no information, in particular, was available for juniperberry essential oil.

The same reasoning applied to claim 1 according to the first and second auxiliary requests in view of the data available referring to the elimination of garlic malodor.

IX. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the set of claims of the main request or first or second auxiliary requests filed with the statement setting out the grounds of appeal dated 1 March 2013.

Reasons for the Decision

Main request - inventive step

1. Claim 1 and claim 4 of the main request concern respectively an oral odor control agent admixture composition comprising a combination of 5 essential oils in defined composition ranges and an oral care composition comprising an oral care vehicle and a given quantity of an oral odor control agent corresponding to the composition of claim 1.

1.1 The appellant, taking into consideration the relevance given to garlic malodor in the application and example 2 therein where a traditional garlic odor care active blend is used as a control, submitted that such a traditional garlic odor care active blend should be taken as the closest prior art. However, such a blend does not correspond to any piece of prior art; moreover, the composition of the blend has not been defined in the application, nor in any of the

submissions of the appellant. The Board considers that a completely unknown composition cannot be taken as the closest prior art.

1.2 Document D2, disclosing a mouth wash including thyme oil and anise oil (see title and table), has been considered as the closest prior art in the decision under appeal. However, as there is no clear mention of odor control in D2, the Board considers that document D5 disclosing mouthrinses to control oral malodor containing essential oils (see abstract) is a more appropriate starting point both for the oral odor control agent admixture composition of claim 1 and for the oral care composition comprising an oral odor control agent of claim 4, since that document concerns compositions with the same purpose of those of claims 1 and 4.

1.3 Mouthrinses are per definition oral care compositions including an orally acceptable carrier or vehicle (see e.g. paragraph [0018] of the application as filed). While document D5 discloses essential oils as one of their ingredients, it does not provide any detail of which essential oils are used and in which quantities.

1.4 In order to formulate the technical problem, it must be analysed whether the choice of the specific combination of the 5 essential oils in specific quantities provides advantages or improvements with respect to an arbitrary choice of essential oils, alone or in combination.

1.5 All the tests provided by the appellant have addressed the specific issue of garlic odor control.

1.5.1 The data in table 1 (page 20 in the application) show that, by using various natural extracts in treating a

garlic-saliva mixture for at least 8 hours at 37 degrees Celsius (paragraph [0043]), a reduction in garlic odor around 95.0% is obtained both for the 5 essential oils used in claims 1 and 4 and for the great majority of all other essential oils tested, when used individually. These data therefore do not show any particular effect for the oils as individually used, nor address what happens when they are used in combination.

1.5.2 Example 2 (page 21) compares a combination of the 5 essential oils listed in claim 1 in equal proportions with a control, which is defined as a traditional garlic odor oral care active blend. As mentioned above, no information is given about that blend, so that the comparison in itself does not give any relevant information. Moreover, the garlic odor reduction is at 78% not any better than the reduction for the individual oils. While it may well be the case that a difference in concentration is the reason for the lower odor reduction for the blend of example 2 with respect to the individual essential oils in table 1, as alleged by the appellant, no information is available as to which concentrations were used in the two cases and with regard to what happens if the same essential oil concentration is used for the individual oils and for the claimed combination. Under such circumstances, also the results in example 2 cannot provide any indication of an effect associated with the specific combination of essential oils as claimed.

1.5.3 Table 1 of declaration D6 relates to various combinations of natural extracts and indicates for each combination of two extracts either an empty slot or a "+" sign. Above the table it is indicated that the combinations were tested using a GC which measured in

the ppm range and were expected to parallel a clinical testing type environment. However no satisfactory information can be derived from the table, as the test is not described, it is not explained what is the meaning of a "+" sign as opposed to an empty slot and pairs of oils are analysed, but not the claimed combination. Also the final sentence of D6 stating that the claimed blend represents the best odor reduction does not appear to be supported by clear data or facts.

1.6 Under such circumstances, the Board is not in the position of acknowledging the presence of an effect for the claimed composition over a composition containing individual oils or arbitrary combinations thereof. In the absence of an acknowledged effect, the problem is to be formulated as the provision of a further composition.

1.7 As to obviousness with respect to the available prior art, the skilled person, looking for a further composition, would consider any arbitrary combination of essential oils in arbitrary quantities, including the combination of the five oils in claims 1 and 4 in the quantities specified therein, as an obvious solution.

This is all the more the case, since oral compositions containing at least two of the essential oils in combination are available (e.g. D1 with mouth care products containing fennel oil and thyme oil, see the table, D2 with a mouth wash containing thyme oil and anise oil, see the table, and D4 with an anti caries composition containing anise oil and fennel oil, see abstract) and it is also known that all five oils have odor masking or fragrance properties (e.g. D3, page 37, third full paragraph for anise; page 68, last paragraph

for basil; page 241, last full paragraph for fennel; page 326, last paragraph of left column for juniperberry; page 493, last line of left column and second full paragraph of right column for thyme). In addition, also the amount of oral odor control agent indicated in claim 4 is an arbitrary one, which the skilled person would select without any inventive activity.

1.8 For these reasons the oral odor control agent admixture composition of claim 1 and the oral care composition of claim 4 of the main request do not involve an inventive step, contrary to the requirements of Article 56 EPC.

First auxiliary request - inventive step

2. Claim 1 of the first auxiliary request is identical to claim 4 of the main request. Therefore, it does not involve an inventive step for the same reasons as detailed for the main request (see point 1, above).

Second auxiliary request - inventive step

3. Claim 1 of the second auxiliary request concerns a method of suppressing oral garlic malodor by applying to the oral cavity an oral care vehicle containing an effective amount of an agent corresponding to the composition of claim 1 of the main request. With respect to claim 1 of the main request the category of the claim is changed and the specific indication of the type of malodor ("garlic" malodor) is added.

3.1 However, as already analysed for the main request (see point 1.5, above), the data available on file do not support the presence of an effect of the specific combination for garlic malodor suppression with respect

to an arbitrary choice of essential oils, alone or in combination.

3.2 Under such circumstances, the analysis of inventive step remains similar to the one developed above for the main request (point 1) with still document D2 as the closest prior art and the technical problem as the provision of a further method for suppressing oral malodor.

3.3 The skilled person, looking for a further method, would consider both the choice of an arbitrary combination of essential oils in arbitrary quantities, including the combination of the five oils in claims 1 in the quantities specified therein, and the choice of an arbitrary malodor, such as garlic malodor, as an obvious solution to the posed problem.

3.4 In view of this, the method of claim 1 of the second auxiliary request does not involve an inventive step.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

S. Fabiani J. Riolo

Decision electronically authenticated