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# Datasheet for the decision of 20 September 2018

**Case Number:** T 2013/14 - 3.3.07

**Application Number:** 03029668.5

**Publication Number:** 1433464

**IPC:** A61K8/42, A61Q5/02

**Language of the proceedings:** EN

**Title of invention:**
Hair cleansing composition

**Patent Proprietor:**
KAO CORPORATION

**Opponents:**
Henkel AG & Co. KGaA
L'OREAL

**Headword:**
Cleansing composition / KAO

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

**Keyword:**
Inventive step - main request (no)

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**Case Number: T 2013/14 - 3.3.07**

# D E C I S I O N
# of Technical Board of Appeal 3.3.07
# of 20 September 2018

| | |
|---|---|
| **Appellant:** (Opponent 2) | L'OREAL<br>DPI<br>14, rue Royale<br>F-75008 Paris (FR) |
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| **Respondent:** (Patent Proprietor) | KAO CORPORATION<br>14-10, Nihonbashi Kayaba-cho 1-chome,<br>Chuo-ku<br>Tokyo 103-8210 (JP) |
| **Representative:** | Hoffmann Eitle<br>Patent- und Rechtsanwälte PartmbB<br>Arabellastraße 30<br>81925 München (DE) |
| **Party as of right:** (Opponent 1) | Henkel AG & Co. KGaA<br>Henkelstrasse 67<br>40589 Düsseldorf (DE) |
| **Representative:** | Henkel AG & Co. KGaA<br>CLI Patents<br>Z01<br>40191 Düsseldorf (DE) |
| **Decision under appeal:** | **Interlocutory decision of the Opposition Division of the European Patent Office posted on 25 July 2014 concerning maintenance of the European Patent No. 1433464 in amended form.** |

**Composition of the Board:**

| | |
|---|---|
| **Chairman** | D. Boulois |
| **Members:** | S. Albrecht |
| | P. Schmitz |

## Summary of Facts and Submissions

I. European patent No. 1 433 464 was granted on the basis of a set of 6 claims.

Independent claim 1 as granted read as follows:

"A hair cleansing composition comprising the following components (A) to (C):

(A): 0.001 to 20 wt% of an amphipathic amide lipid,
(B): 1 to 50 wt% of an anionic surfactant, and
(C): 0.005 to 5 wt.% of a silicone,

wherein the composition has a pH of not less than 5 and less than 6 when diluted 20 times by weight with water at 25°C;
wherein the weight ratio of component (A) to (C) is from 1:1 to 1:50."

II. Two oppositions were filed against the patent on the grounds that its subject-matter lacked novelty and inventive step (Article 100(a) EPC).

The evidence submitted during the examination and opposition proceedings included the following:

D1.1: EP1430871

D1.2: WO97/12587

D2.1: EP862405

D2.2: EP739625

D2.3: EP906082

D2.4: EP918506

D2.5: EP914079

Experimental data contained in the annex of the letter of the then applicant filed on 29 October 2008 (hereinafter referred to as "annex 1")

Experimental data contained in the annex of the letter of the then applicant filed on 7 February 2011 (hereinafter referred to as "annex 2")

III. The appeal by opponent 02 (hereinafter: the appellant) lies against the interlocutory decision of the opposition division to maintain the patent as amended. The decision was based on the main request filed with letter of 7 January 2013.

Compared with claim 1 as granted, independent claim 1 of this request contained the additional feature that the silicone is selected from the group consisting of dimethylpolysiloxane, polyether-modified silicones, amino-modified silicones, and mixtures thereof.

IV. According to the decision under appeal:

(a) The main request complied with the requirements of Articles 123(2) and 123(3) EPC.

(b) Document D2.1 did not anticipate the subject-matter of the claims of the main request.

(c) The claimed subject-matter was inventive based on D1.1 as the closest prior art. The other documents cited by the opponents as the closest prior art, namely D1.2, D2.1 and D2.2, were less appropriate

starting points for the assessment of inventive step.

V. With the statement setting out the grounds of appeal the appellant requested that the decision under appeal be set aside and that the patent be revoked.

VI. With letter of 14 April 2015, opponent 01, party as of right to the appeal proceedings, equally requested that the decision under appeal be set aside and that the patent be revoked.

VII. With its reply to the statement setting out the grounds of appeal dated 30 April 2015, the patent proprietor (hereinafter the respondent) requested that the appeal be dismissed, i.e. that the patent be maintained on the basis of the request filed with letter of 7 January 2013 before the opposition division. The respondent also submitted the following evidence:

D3.1: Additional experimental data in the form of a table with the title "Formulation and Evaluation Results"

VIII. In a communication pursuant to Article 15(1) RPBA issued on 31 July 2018, the Board expressed its preliminary opinion on inventive step of the main request. In its view, the claimed subject-matter appeared to lack inventive step based *inter alia* on D2.2 as the closest prior art.

IX. With letter dated 27 August 2018, the party as of right informed the Board that it would not attend the oral proceedings.

X. Oral proceedings took place on 20 September 2018 in the presence of the appellant and the respondent.

XI. The appellant's arguments, as far as they are relevant for the present decision, may be summarised as follows:

(a) The composition of claim 1 of the main request differed from example 12 of the closest prior art D2.2, in that it further contained a silicone, wherein this silicone was selected from the group consisting of dimethylpolysiloxane, polyether-modified silicones, amino-modified silicones, and mixtures thereof.

(b) The experimental data on file did not support any particular technical effect originating in the distinguishing feature. The composition of example 1 of the patent as well as the formulations of the additional examples E2 and E3 of D3.1 were not suitable to show any such effect, because they did not exhibit the claimed weight ratio of component (A) to (C), and lay thus outside the scope of claim 1. The "A/C" ratios disclosed in the second row of the table of D3.1 should be disregarded in this context, because in the light of the data of annex 2 it was immediately evident to the skilled person that the value of "C" of these ratios corresponded to the amount of the silicone-containing emulsion as a whole contained in the composition, whereas component (C) forming part of the claimed weight ratio of claim 1 was the silicone as such.
As for the remaining examples on file, merely additional examples E0 and E1 of D3.1 fell within the scope of claim 1 of the main request.
Nevertheless, D3.1 lacked any comparative data with regard to additional example E0, whereas the

comparative data provided in respect of additional example E1 were not relevant, because they were not based on the distinguishing feature.
Also, other examples which did not fall within the scope of claim 1, nevertheless provided for the technical effects relied on by the respondent for arguing inventive step.

(c) Hence, the objective technical problem to be solved was the provision of alternative hair cleansing compositions. The solution proposed, i.e. the compositions of claim 1 of the main request, was obvious in the light of the closest prior art taken in combination with either D2.3, D2.4 or D2.5.

XII. The party as of right argued that the claimed subject-matter was not inventive based on D1.1 as the closest prior art.

XIII. The respondent's arguments, as far as they are relevant for the present decision, can be summarised as follows:

(a) The composition of claim 1 of the main request differed from the composition of example 12 of the closest prior art D2.2 by the following two features:

(i) it comprised a further component (C) as defined in claim 1; and

(ii) it had a weight ratio of component (A) to (C) from 1 : 1 to 1: 50.

(b) As evidenced by the comparative data provided in respect of example 1 of the patent and in respect of additional examples E1 to E3 of D3.1, the

technical effects attributable to the two distinguishing features were (i) an improved smoothness of the hair, (ii) a moister feeling of the hair, and (iii) the prevention of split ends and breakage of the hair during brushing. Contrary to the appellant's assertions, all of these examples did indeed exhibit the claimed weight ratio of component (A) to (C).

(c) Accordingly, the objective technical problem to be solved was the provision of hair cleansing compositions exhibiting the aforementioned three technical effects. The solution proposed, i.e. the compositions of claim 1 of the main request, was not rendered obvious by the prior art. The claimed silicones might have been known as such from the prior art documents D2.2 to D2.5, but these documents did not contain any suggestion to adjust the weight ratio of the amphipathic amide lipid to the silicone to the range of claim 1 in order to solve the technical problem as posed.

XIV. Requests

The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The party as of right requested in writing that the decision under appeal be set aside and that the patent be revoked.

The respondent requested that the appeal be dismissed, i.e. that the patent be maintained on the basis of the request filed with letter of 7 January 2013 before the opposition division.

## Reasons for the Decision

Main request - Claim 1

1. Article 100 (a) EPC in conjunction with Article 56 EPC

1.1 *The closest prior art*

1.1.1 The respondent identified D2.2 as the closest prior art, in particular example 12 thereof. The appellant equally considered this document to represent a suitable starting point for the assessment of inventive step. The party as of right, on the other hand, identified D1.1 as the closest prior art.

The Board agrees with the appellant and the respondent that D2.2 constitutes an appropriate starting point. D1.1, on the other hand, is not relevant for the discussion of inventive step, given the fact that it was published after the date of filing of the patent in suit.

1.1.2 Example 12 of D2.2 pertains in particular to a cleansing composition comprising *inter alia:*

(i) an amphipathic amide lipid in the form of a ceramide (i.e. ceramide A) and

(ii) an anionic surfactant (i.e. the first two components of this example),

wherein the respective amounts of components (i) and (ii) fall within the claimed weight percent ranges.

The pH of the composition is adjusted to 5, and the composition is suitable for hair cleansing (see page 2, lines 31 to 35; claim 22 of D2.2). It does not, however, contain any silicone.

This finding was not contested by the respondent.

1.1.3 Hence, the composition of claim 1 of the main request differs from the formulation described in example 12 of D2.2 in that:

(a) it further contains component (C), i.e. 0.005 to 5 wt.% of a silicone, wherein the silicone is selected from the group consisting of dimethylpolysiloxane, polyether-modified silicones, amino-modified silicones, and mixtures thereof, and

(b) in that the weight ratio of component (A) to component (C) is from 1:1 to 1:50.

1.2 *Technical problem and solution*

1.2.1 In order to formulate the objective technical problem, it is necessary to establish the technical effect/s achieved by the aforementioned distinguishing features (a) and (b).

1.2.2 The respondent attributed the following three technical effects to feature (a):

(i) an improved smoothness of the hair (hereinafter referred to as "effect (i)");

(ii) a moister feeling of the hair (hereinafter referred to as "effect (ii)"); and

(iii) prevention of split ends and breakage of the hair during brushing (hereinafter referred to as "effect (iii)").

1.2.3 As evidence of the achievement of these three effects by means of feature (a), the respondent relied on the following experimental evidence:

(i) the data of example 1 and comparative example 1 disclosed in table 1 of the patent in support of effects (i) and (ii); and

(ii) the results of additional example E3 and additional comparative example E3 disclosed in D3.1 in support of effects (i) and (iii).

1.2.4 The respondent further remarked that effects (i) and (ii) were additionally attained by the second distinguishing feature, i.e. feature (b) mentioned above, as demonstrated by the following experimental data:

(i) with regard to effect (i): additional example E1 versus additional comparative example E1;

(ii) with regard to effects (i) and (ii): additional example E2 versus additional comparative example E2.

1.2.5 Accordingly, it needs to be determined first of all, whether the compositions of example 1 of the patent and those of additional examples E1 to E3 of D3.1 relied on by the respondent to support the technical effects (i)

to (iii) fall within the scope of claim 1 of the main request.

In this regard, the Board observes the following:

(a) Composition of example 1 of the patent in suit:

This composition is described in table 1 of the patent in suit. It comprises *inter alia* 2 weight percent (hereinafter referred to as "wt.%") of amphipathic amide lipid A (i.e. component (A)), and 2 wt.% of an emulsion comprising 75 weight percent of dimethylpolysiloxane (i.e component (C)); see in particular the rows named "(A)" and "(C)" of column 3 of table 1 and footnote *1.

Accordingly, the amount of dimethylpolysiloxane per se is 75% of 2 wt.%, i.e. 1,5 wt.% of the total composition. This, in turn, means that the composition of example 1 exhibits a weight ratio of the amphipathic amide lipid to the silicone of 2 : 1,5 (i.e. 1 : 0,75), whereas claim 1 of the main request requires that the weight ratio of the amphipathic amide lipid to the silicone falls within a range of from 1 : 1 to 1 : 50.

Hence, the composition of example 1 of the patent in suit does not fall within the scope of claim 1 of the main request, and can therefore not support a causal link between the observed effects and the distinguishing features.

(b) Additional examples E2 and E3 of D3.1:

The same considerations apply with respect to these two examples, the respective weight ratios of the

amphipathic amide lipid to the silicone being as follows:

(i) 0,2 wt.% : 0,15 wt.%, i.e. 1 : 0,75 for additional example E2 (see rows "A" and "C" of columns 2, 3 and 7 of D3.1; the value of 0,15 wt% corresponds to 75% of 0,2 wt.%),

(ii) 0,4 wt.% : 0,375 wt.%, i.e. 1 : 0,9375 for additional example E3 (see rows "A" and "C" of columns 2, 3 and 9 of D3.1; the value of 0,375 wt.% corresponds to 75% of 0,5 wt.%).

Accordingly, the compositions of additional examples E2 and E3 of D3.1 equally do not fall within the scope of claim 1 of the main request, and are therefore not suitable to demonstrate any causal link between the observed technical effects and the distinguishing features either.

(c) Additional example E1 of D3.1:

The composition of this example, on the other hand, exhibits the claimed weight ratio of the amphipathic amide lipid to the silicone (i.e. 0,05 wt.% : 1,875 wt.% which corresponds to 1 : 37,5; see rows "A" and "C" of columns 2, 3 and 5 of D3.1; the value of 1,875 wt.% corresponds to 75% of 2,5 wt.%), as well as all of the other technical features of claim 1.

Accordingly, this composition falls within the scope of claim 1 of the main request.

1.2.6 The respondent contested that the amounts indicated in row "(C)" of table 1 of the patent and in row "C" of

D3.1 were the amounts of the silicone-containing emulsions as a whole. In its opinion, it was clear that these amounts referred to the active agent, i.e. the silicone per se.
That this interpretation of the values of rows "(C)" and "C" was indeed the correct one was further supported by the fact that D3.1 explicitly disclosed an "A/C" ratio of several additional examples illustrating the claimed invention (see second row of D3.1), wherein the values of each of these ratios were calculated on the basis of the respective amounts found in the rows designated as "A" and "C" of D3.1. As the A/C ratios of these examples all fell within the range of the weight ratio of component (A) to (C) specified in claim 1, whereas those of the corresponding comparative examples did not, it was immediately evident that the amounts disclosed in row "C" of D3.1 could only refer to the silicone as such.

Nevertheless, the Board cannot concur with the respondent's interpretation of the amounts disclosed in row "C" of D3.1 and in row "(C)" of table 1 of the patent. As pointed out by the appellant, table 1 of the patent as well as D3.1 and the additional tabular data of page 1 of annexes 1 and 2 all disclose the amounts in row "(C)" and in row "C" in direct correlation with the entire silicone-containing emulsion used in each of these examples. That these amounts do refer to the emulsions as a whole and not merely to the silicones contained in these is further confirmed by the fact that another, different table disclosed on page 2 of annex 2 explicitly lists the amounts (expressed as wt. %) in which the silicones as such are present in each of the exemplified compositions (see in particular the second and third row of this table), as well as the corresponding weight ratios of component (A) to (C)

(see ultimate row of this table). These silicone amounts have been calculated on the basis of the weight percentage of silicone contained in the emulsions disclosed in row "(C)" of the first table of this annex. For instance, the amount of silicone present in example 4 is 0,375 wt.% which corresponds to 75% of 0,5 wt.%, i.e. the amount of the silicone-containing emulsion contained in example 4.

1.2.7 Accordingly, the Board concludes that the compositions of example 1 of the patent and of additional examples E2 and E3 of D3.1 do not exhibit the claimed weight ratio of component (A) to (C). Hence, they do not form part of the scope of claim 1 of the main request, and can thus not validly support the alleged causal link between the observed observed effects and the distinguishing features.
The same holds true for the remaining examples on file with the exception of additional example E0 and E1 of D3.1. These do fall within the scope of claim 1, however no comparative data has been submitted with regard to additional example E0. Accordingly, solely the comparative data provided in respect of additional example E1 of D3.1 could possibly provide a valid support for the aforementioned causal link.

1.2.8 Hence, it needs to be assessed which technical effect is shown by means of this comparative data, and which is the technical feature responsible for this effect.

1.2.9 In the respondent's view, the composition of additional example E1 provides for effect (i), i.e. an improved smoothness of the hair in comparison with the comparative composition of additional comparative example E1, by virtue of the claimed weight ratio of component (A) to (C).

1.2.10 The Board concurs with the respondent, in so far as the attainment of effect (i) by means of the claimed compositions is concerned. However, as already remarked in point 3.4.3 of the Board's communication issued on 31 July 2018, this effect is linked to the presence of the claimed silicones, i.e. distinguishing feature (a), whereas the claimed weight ratio of component (A) to (C) is not essential in this regard (see the experimental data on file, in particular examples 4 and 7 of the patent as well as additional examples E0 and E1 of D3.1 in comparison with the compositions of examples 2 and 3 of the patent which still bring good smoothness of the hair, although their weight ratio of Component (A) to (C) falls outside the claimed range).

1.2.11 Accordingly, the objective technical problem to be solved starting from D2.2 is the provision of a hair cleansing composition which imparts hair with improved smoothness.

1.2.12 The solution proposed to this problem is a hair cleansing composition in accordance with claim 1 of the main request which comprises *inter alia* 0,005 to 5 wt.% of a silicone, wherein the silicone is selected from the group consisting of dimethylpolysiloxane, polyether-modified silicones, amino-modified silicones, and mixtures thereof.

1.3 *Obviousness*

1.3.1 The claimed silicones are known components of slightly acidic, anionic surfactant-based hair-cleansing compositions (see for instance D2.3: paragraphs [0008], [0009], [0017], [0051], example; D2.4: paragraphs [0002], [0031], [0042], [0043], [0056], examples; D2.5: paragraphs [0022]-[0025], [0056], examples).

They are in particular used in these compositions in order to improve the smoothness of the hair (see paragraph [0009] and example of D2.3; paragraph [0008] and examples of D2.4; example 1 of D2.5). In the light of these teachings, the skilled person would consider obvious to include the claimed silicones in the composition of example 12 of D2.2 in order to solve the technical problem as posed.

1.3.2 Hence, the subject-matter of claim 1 of the main request does not comply with the requirements of Article 56 EPC.

**Order**

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

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

S. Fabiani D. Boulois

Decision electronically authenticated