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# Datasheet for the decision of 1 August 2024

**Case Number:** T 1550/22 - 3.3.10

**Application Number:** 13712791.6

**Publication Number:** 2830573

**IPC:** A61K8/22, A61K8/31, A61Q5/08, A61K8/38

**Language of the proceedings:** EN

**Title of invention:**
Multi-compartment device for bleaching keratin fibres

**Patent Proprietor:**
L'OREAL

**Opponent:**
Henkel AG & Co. KGaA

**Headword:**

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

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

**Decisions cited:**
T 0245/10

**Catchword:**

Europäisches Patentamt
European Patent Office
Office européen des brevets

**Beschwerdekammern**

**Boards of Appeal**

**Chambres de recours**

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0

**Case Number: T 1550/22 - 3.3.10**

# D E C I S I O N
# of Technical Board of Appeal 3.3.10
# of 1 August 2024

| | |
|---|---|
| **Appellant:** (Opponent) | Henkel AG & Co. KGaA<br>Henkelstrasse 67<br>40589 Düsseldorf (DE) |
| **Representative:** | LKGLOBAL<br>Lorenz & Kopf Patentanwalt<br>Attorney at Law PartG mbB<br>Brienner Straße 11<br>80333 München (DE) |
| **Respondent:** (Patent Proprietor) | L'OREAL<br>14 rue Royale<br>75008 Paris (FR) |
| **Representative:** | L'Oreal<br>Service D.I.P.I.<br>9, rue Pierre Dreyfus<br>92110 Clichy (FR) |
| **Decision under appeal:** | **Decision of the Opposition Division of the European Patent Office posted on 8 June 2022 rejecting the opposition filed against European patent No. 2830573 pursuant to Article 101(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chair** | P. Gryczka |
| **Members:** | R. Pérez Carlón |
| | F. Blumer |

## Summary of Facts and Submissions

I. The opponent appealed the opposition division's decision rejecting the opposition against European patent No. 2 830 573.

II. Notice of opposition had been filed on the ground of lack of inventive step (Article 100(a) EPC).

III. The following documents are relevant to the present decision:

D1 US 4,507,278
D3 EP 2 198 841 A1
D4 EP 2 345 400 A2
D6 experimental evidence filed as Annex A before the opposition division.

IV. Claim 1 of the patent as granted reads as follows:

*"Multi-compartment device comprising:*
- *at least one anhydrous composition A comprising at least one peroxygenated salt,*
- *at least one aqueous composition B comprising at least one basifying agent, and at least one oxyalkylenated non-ionic surfactant chosen from saturated or unsaturated, linear or branched, oxyalkylenated $C_8$-$C_{30}$ fatty alcohols chosen from the products of addition of ethylene oxide with lauryl alcohol comprising from 10 to 50 oxyethylene groups; the products of addition of ethylene oxide with behenyl alcohol comprising from 10 to 50 oxyethylene groups; the products of addition of ethylene oxide with cetearyl alcohol (mixture of*

*cetyl alcohol and stearyl alcohol) comprising from 10 to 30 oxyethylene groups; the products of addition of ethylene oxide with cetyl alcohol comprising from 10 to 30 oxyethylene groups; the products of addition of ethylene oxide with stearyl alcohol comprising from 10 to 30 oxyethylene groups; the products of addition of ethylene oxide with isostearyl alcohol comprising from 10 to 50 oxyethylene groups; the products of addition of ethylene oxide with oleocetyl alcohol comprising from 10 to 50 oxyethylene groups, and mixtures thereof; and*

- *at least one composition C comprising at least one oxidizing agent and at least 3% by weight of fatty substance relative to the total weight of said composition,*
- *said compositions being packaged separately and having a fatty substance content such that the total fatty substance content in the mixture of the compositions A, B and C is greater than or equal to 10% by weight of said mixture."*

V. The opposition division concluded that document D4 came closest to the claimed invention. Like the claimed invention, D4 related to a multi-compartment device comprising three components, one of them having anhydrous peroxygenated salts, and had more features in common with claim 1 of the patent than D3 did. The problem underlying the claimed invention was to provide another multi-compartment device, the compositions of which were easily mixed and applied. The claimed solution, characterised by composition B comprising the non-ionic surfactants in claim 1, was not obvious in view of D1. D1 disclosed those non-ionic surfactants as thickening agents only, and although they could be part of the lotion, which corresponded to composition B in

claim 1, all the examples included them as part of the developer, which was composition C in claim 1. An inventive step was thus acknowledged.

The opposition division also concluded that the claimed device was inventive if a skilled person had started from document D3.

VI. The appellant's arguments were as follows.

Both D3 and D4 were suitable springboards for examining inventive step, and the claimed subject-matter was not inventive in view of either of them.

D4 disclosed multi-component composition devices which lacked the required surfactant as part of component B but included it in component C. D6 did not provide a comparison with respect to the closest prior art. Thus the objective technical problem underlying the claimed invention was only that of providing an alternative. The claimed solution would have been obvious in view of D1 and was thus not inventive.

D3 related to multi-component compositions. The sole example of D3 disclosed a two-part composition, but paragraph [0130] taught that it could include peroxygenated salts too. In view of the known instability of these salts, they could only have been added in solid form as a separate component. The claimed invention was thus not inventive starting from D3 either.

VII. The respondent's (patent proprietor) arguments were as follows.

D3 was not a suitable starting point for examining

inventive step as it neither addressed the problem of mixing nor required solid components. Paragraph [0130] of D3 taught that peroxygenated salts could be used as part of the oxidising agent, which corresponded to composition C of claim 1. The claimed invention was thus inventive in view of D3 even as a mere alternative.

The experimental evidence filed as D6 showed an effect due to the feature distinguishing the invention from D4, which represented the closest prior art. The problem underlying the claimed invention was to provide devices having multi-component compositions which could be easily mixed, and to result in a mixture which could be homogeneously applied onto hair and thus improved its bleaching. The claimed solution, characterised by formulating the required surfactant as part of composition B, would not have been obvious to a skilled person seeking an improved device, and was thus inventive.

VIII. Oral proceedings before the board of appeal took place on 1 August 2024.

IX. The parties' final requests were as follows:

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

The respondent requested that the appeal be dismissed.

X. At the end of the oral proceedings, the decision was announced.

## Reasons for the Decision

1. The appeal is admissible.

2. The claimed invention relates to a device comprising at least the following three, separately packed, compositions:

composition A, anhydrous, comprising at least one peroxygenated salt,

composition B, aqueous, comprising one basifying agent and an oxyalkylenated non-ionic surfactant,

composition C, comprising an oxidising agent and at least 3% fatty substance,

with the additional requirement that the amount of fatty substance in the mixture of the three compositions be greater than or equal to 10% by weight.

The claimed device is suitable for bleaching keratin fibres, in particular hair. It seeks to minimise the ammonia given off during application, improve the ease of mixing, and efficiently and evenly bleach (see paragraphs [0001] to [0005] of the patent).

3. Document D4 as closest prior art

3.1 It was undisputed that document D4 was a suitable springboard for examining inventive step, and that the multi-component device in D4 (see paragraph [0077], embodiment 4.2) differed from the device in claim 1 only in lacking the required non-ionic surfactant in the basifying agent B (see table in paragraph [0075]).

In D4, said non-ionic surfactant (Ceteareth-20) is included in the composition containing the oxidising agent corresponding to component C defined in claim 1 (see paragraph [0073] of D4, eleventh entry of the table).

3.2 Technical problem underlying the invention

The respondent defined the technical problem underlying the claimed invention as providing a multi-component device which allowed good mixing, no odour, ease of application and improved bleaching.

3.3 Solution

The solution to this technical problem is the claimed device, characterised in that basifying composition B contains a non-ionic surfactant of defined structure.

3.4 Success

3.4.1 The respondent relied on the results filed as D6 and on the data in the application to show that the problem as formulated above has been solved.

In the example of D6 according to the claimed invention, Laureth-12, which is a non-ionic surfactant required by claim 1, is part of the basifying composition B. In the comparative example, Laureth-12, as in D4, is formulated as part of component C.

Both bleaching agents, once the components have been mixed, contain the same ingredients and proportions. Both were used to bleach hair strands and the colour achieved was measured with a spectrocolorimeter.

Bleaching was stronger with the composition arising from the multi-component system defined in claim 1. The board thus considers that at least the part of providing enhanced bleaching has been credibly solved by the claimed device.

3.4.2 The appellant criticised the results in D6 for a number of reasons, which are not convincing.

3.4.3 The appellant considers the difference of 2.19 units between the bleaching of the comparative system and that in accordance with claim 1, measured as delta E, unnoticeable to the untrained eye. For this reason alone, the effect should not be taken into consideration.

However, the appellant has not provided any evidence showing this to be correct.

In these circumstances, since it was undisputed that the difference had been objectively measured by a well-known physical method, the board sees no reason to disregard it (see also in this respect T 245/10, Reasons 6.4.1).

3.4.4 The appellant also argued that different types of hair would have led to different results.

The comparison was however carried out according to D6 with the same type of hair for the experiment illustrating the prior art and the experiment illustrating the invention. This argument is thus not convincing.

3.4.5 The appellant argued that the use of a single strand in the tests inevitably made the measurement error so high

as to overshadow the difference ascertained in D6.

The appellant has however not provided any evidence with regard to the expected error of magnitude if only one strand is used, nor to what error in general is linked to colorimetric measurements.

3.4.6 The appellant argued that since the composition tested differed from that in embodiment 4.2 of D4, which was the closest prior art, the comparison could not prove any effect over the latter. In addition, composition B lacked surfactants, despite the fact that the composition of D4 contained a number of them (see paragraph [0075]).

Comparative tests should show that the alleged advantage or effect has its origin in the feature distinguishing the claimed invention from the prior art. For that purpose, it is well-established case law that the prior-art examples can be modified (see Case Law of the Boards of Appeal, 10th edition, 2022, I.D. 4.3.2). In the present case, the key point is that the compositions compared in D6 differed only by virtue of the distinguishing feature between the claimed subject-matter and that in D4, i.e. the presence of specific non-ionic surfactants in the basifying composition B instead of in the oxidising composition C.

3.4.7 The appellant also argued that the respondent's definition of the problem underlying the claimed invention was vague and that some parts of the problem such as the ease of mixing must inevitably have been solved by the device in D4 too.

As the board will rely in the following only on the part of the technical problem requiring improved

bleaching, these arguments do not need to be addressed.

3.5 It remains to be decided whether the proposed solution to the objective problem defined above would have been obvious to a skilled person in view of the prior art.

3.5.1 In none of the documents relied on by the appellant would a skilled person have found any indication that bleaching could be enhanced when adding a non-ionic surfactant containing ethylene oxide residues to the basifying composition of a multi-component bleaching composition.

The claimed solution is thus inventive.

3.5.2 D1 discloses bleaching compositions, some comprising three components (see table, column 8). The compositions of D1 contain an activator having persulfates, a developer containing hydrogen peroxide and a lotion containing ammonium hydroxide and surfactants.

None of the surfactants in the examples of D1 are of the type required by claim 1. The table, column 9, lines 34 to 48 discloses a surfactant required by claim 1 (Brij 35, which is Laureth-23) as a suitable thickener which can be part of the lotion. Column 7, lines 6 to 15 discloses that the compositions of D1 include a lotion having gelling components, a developer with hydrogen peroxide, and an activator containing persalts.

The appellant argued that D1 taught the claimed solution, as it disclosed non-ionic surfactants in general and Laureth-23 in particular as part of the

"lotion" in D1 (see definition of the thickeners in column 5, lines 19 to 21).

However, D1 does not teach any effect on bleaching due to this type of surfactants. D1 discloses them as thickeners, to reduce the use of ammonia (column 2, lines 19-21) and to facilitate application (column 1, line 50). This argument is thus not convincing.

4. D3 as closest prior art

4.1 Like the opposition division and the respondent, the board considers that document D3, which discloses a two-component bleaching system lacking a solid component, represents a more remote starting point for examining the claimed invention. The positive conclusion on inventive step when starting from the closest prior art thus cannot differ from that achieved starting from the closer disclosure of D4. The arguments that follow are thus provided only for completeness.

The example of D3 contains an aqueous composition having an emulsion A1 corresponding to composition B in claim 1. Emulsion A1 contains monoethanolamine as basifying agent (phase C of emulsion A1 in paragraph [0146]) and Beheneth-10 (phase A, first entry), which is a non-ionic surfactant required by claim 1. The example of D3 further contains a composition comprising hydrogen peroxide (paragraph [0147]), which corresponds to composition C in claim 1. It lacks the anhydrous composition A required by claim 1. This was undisputed.

4.2 Problem underlying the claimed invention

It was undisputed that the problem underlying the

claimed invention in view of D3 is to provide an alternative multi-component device for bleaching hair.

4.3 Solution

The solution proposed by claim 1 is characterised by including a separate, anhydrous phase containing peroxygenated salts.

4.4 Success

It was undisputed that the claimed device credibly solves the problem of providing an alternative.

4.5 Obviousness of the claimed solution

Paragraph [0130] of D3 teaches that peroxygenated salts enhance bleaching. The appellant argued that, knowing that peroxygenated salts cannot be formulated in aqueous compositions due to their instability, a skilled person would have added them as a separate phase and thus arrived at the claimed subject-matter.

However, the cited paragraph discloses peroxygenated salts as a part of the oxidising agent, which is composition C in the wording of claim 1. D3 does not teach the claimed solution.

In addition, if the instability of peroxygenated salts were to be considered proven, and even if a skilled person would not have considered formulating them in aqueous media, as argued by the appellant, knowing that the oxidising composition of D3 can be an emulsion (see [0135]), a skilled person following the teaching of D3 would have formulated them as part of the fatty component and thus not have arrived at the claimed

invention.

5. The claimed device is thus inventive (Article 56 EPC).

**Order**

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

The appeal is dismissed.

The Registrar: The Chair:

A. Vottner P. Gryczka

Decision electronically authenticated