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**Datasheet for the decision
of 10 July 2025**

Case Number: T 0003/23 - 3.3.10

Application Number: 16709950.6

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A61K8/41, A61K8/44, A61Q5/10,
A61K8/19, A61K8/22

Language of the proceedings: EN

Title of invention:
PROCESS FOR OXIDATIVE DYEING HAIR

Patent Proprietor:
Kao Germany GmbH

Opponent:
L'OREAL

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes) - non-obvious alternative

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
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Case Number: T 0003/23 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 10 July 2025

Appellant: L'OREAL
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Respondent: Kao Germany GmbH
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 28 October 2022 rejecting the opposition filed against European patent No. 3346973 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman P. Gryczka
Members: M. Kollmannsberger
F. Blumer

Summary of Facts and Submissions

- I. The opponent's appeal is directed against the decision of the Opposition Division to reject the opposition against the patent pursuant to Article 101(2) EPC.
- II. The patent deals with a method for hair dyeing and compositions useful in such a method. The method defined in claim 1 comprises mixing three compositions A, B and C in a defined ratio in order to get an alkaline ready-to-use composition, applying this ready-to-use composition to hair and rinsing it off after a certain time. Claim 14 is directed to a kit containing compositions A, B and C.
- III. The independent claims of the granted patent read as follows:

Claim 1:

"A process for dyeing hair, especially human hair, wherein the compositions A, B, and C, being kept separately before application onto hair, and are mixed immediately before application onto hair at a weight ratio of A:B:C in the range from 1:2:0.1 to 1:1 1, to obtain a ready-to-use composition, wherein the composition A is an aqueous composition comprising one or more hair dyes and one or more alkalizing agents and has an alkaline pH, in the range of 7.5 to 12, wherein the composition B is an aqueous composition comprising one or more oxidizing agents, preferably

hydrogen peroxide, and has a pH in the range of 1.5 to 5,

wherein the composition C comprises

- i) one or more carboxylic acids and/or their salts having three or more carboxyl groups selected from citric acid, ethylenediamine tetraacetic acid (EDTA), pyromellitic acid and glutamate diacetate, and
- ii) one or more additional organic acid and/or their salts having one or two carboxyl groups selected from acetic acid, malic acid, lactic acid, glycolic acid, tartaric acid, formic acid, oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, maleic acid, and fumaric acid,

wherein the composition C comprises the acids of i) and ii) and/or their salts at a total concentration of 10% to 100% by weight calculated to the total of the composition C,

wherein the ready-to-use composition has an alkaline pH in the range of 8 to 11 and comprises the acids and/or their salts at a total concentration in the range from 1% to 10% by weight calculated to the total of the ready-to-use composition,

wherein the ready-to-use composition is applied onto hair and left on the hair for 1 to 45 min, then rinsed off from hair and optionally the hair is shampooed and dried."

Claim 14:

"Kit for hair comprising the compositions A, B and C as defined in claims 1 to 13."

IV. The following document is referred to in the present decision:

D1: US 5,053,051

V. The opposition was based on Article 100(a) EPC, namely lack of novelty and inventive step (Articles 54 and 56 EPC). In the decision under appeal the Opposition Division came to the conclusion that the granted claims were novel over D1 and likewise involved an inventive step over D1 as closest prior art document.

VI. In appeal proceedings the appellant submitted that the Opposition Division's conclusion on inventive step was erroneous. The hair dyeing process defined in claim 1 and the hair kit defined in claim 14 lacked an inventive step over D1, in particular over example 3 of D1, when read in combination with example 5 of the same document. Novelty of the claims was not disputed anymore.

VII. The respondent (patent proprietor) submitted that the Opposition Division's decision was correct.

VIII. Oral proceedings were held on 10 July 2025.

IX. The parties final requests were the following:

The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 3 346 973 be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed. As an auxiliary request it requested that the patent be maintained in amended form based on one of auxiliary claim requests 1 to 3, filed together with the reply to the grounds of appeal.

- X. The decision was announced at the end of the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.
2. The issue to be decided is whether the patent as granted fulfils the requirement of inventive step, Articles 100(a) and 56 EPC.
3. The patent focusses on the problem of homogeneous hair dyeing when using oxidative hair dyeing processes, in particular on the dyeing of virgin and pre-damaged hair in a homogeneous way. It has been found that the admixture of a composition containing certain carboxylic acids to conventional oxidative hair dyeing compositions immediately before use, in a certain ratio, has a beneficial effect on hair dyeing homogeneity, see paragraphs [0003], [0005] and claim 1.
4. Closest state of the art

- 4.1 The parties agree with the Opposition Division's choice of D1 as document representing the closest state of the art.

D1 explains that alkaline oxidative ready-to-use hair dyeing compositions damage the hair, in particular in case of repeated dyeing processes necessary for re-dyeing, see column 1 lines 22-49. D1 addresses this problem by adding solid, microencapsulated carboxylic acids to conventional alkaline oxidative hair dyeing compositions. The composition is applied in this form to the roots of the hair. After a certain amount of time, the composition is combed into the hair lengths and ends. At this point, the microencapsulated acid is released due to the weakening of the capsule wells over time, promoted by the mechanical action of combing. The release of the acid leads to a lowering of the pH of the composition, thus leading to less hair damage at the lengths and ends of the hair to be re-dyed, see column 1, line 50 to column 2, line 42.

The appellant cited example 3 of D1 as embodiment closest to the present claims. In example 3 a dye composition is mixed with an oxidizing composition containing citric acid microencapsulated in fumaric acid. This composition is applied to the hair regrowth, and combed into the rest of the hair after 15 minutes. At this point the pH of the composition had fallen from 9.5 to 7 due to the release of the encapsulated citric acid.

- 4.2 The parties disagreed on the features distinguishing granted claim 1 from the disclosure of example 3 of D1.
- 4.2.1 It was undisputed that the claimed ratio of compositions A (aqueous alkaline dye), B (aqueous

acidic oxidizing agent) and C (carboxylic acids) of 1:2:0.1 to 1:1:1 is not fulfilled in example 3 of D1. The ratio there is 1:0,925:0,075.

4.2.2 Claim 1 requires furthermore that the compositions A, B and C be "*kept separately before application onto hair, and are mixed immediately before application*". This is not the case in example 3 since there component A is mixed with a pre-formed mixture of components B and C.

4.2.3 In the view of the respondent, and also of the Opposition Division (see point 4.5 of the decision), a further difference of the claims over D1 is the pH of and/or the presence of two acids in the *ready-to-use-composition*. It is argued that the citric acid is encapsulated in fumaric acid and thus, at the beginning, not a part of the composition. Once the citric acid is dissolved after 15 minutes, the pH is out of the range defined in the claim.

The Board acknowledges that the compositions of D1 are somewhat peculiar in that one acid is encapsulated within the other. However, there is no feature in claims 1 or 14 that would exclude such a composition from these claims, so that this cannot be considered to provide an additional difference over D1 in terms of technical features of the claim. However, in view of the findings below this question is not decisive for the present case.

5. Objective technical problem and its solution

5.1 The respondent did not argue that the claimed process achieves any particular technical effect with respect to the disclosure of D1. Thus, the formulation of the objective technical problem to be solved in the

decision under appeal is correct, see point 4.6. This problem was the provision of an alternative hair dyeing method leading to homogeneous dyeing and maintaining natural cosmetic properties of the hair, see paragraph [0005] of the description.

5.2 This problem has been solved by the method defined in claim 1, and the corresponding kits defined in claim 14, which are characterized by the ratio of separated compositions A (aqueous alkaline dye), B (aqueous acidic oxidizing agent) and C (carboxylic acids) of 1:2:0.1 to 1:1:1.

5.3 The formulation of the objective technical problem was undisputed, as well as the finding that the claimed methods and kits provide a solution to this problem.

6. Obviousness of the solution.

6.1 The appellant argued that the objective technical problem was solved in an obvious way.

Regarding the ratio of the ingredients A, B and C the appellant referred to example 5 of D1, in which a higher concentration of acid was used, leading to a ratio falling inside of the one defined in the claims.

Regarding the separation of the components A, B and C the appellant referred to column 2, lines 52-56 of D1 where it was disclosed that components A, B and C could also be stored separately before their use.

6.2 The Board is not convinced by these arguments.

- 6.2.1 Example 5 of D1 does not use an aqueous, alkaline composition of a dye as required by claim 1 for composition A, but a powder composition. A skilled person would not have extracted a ratio of components from this example and applied it to the different components in example 3.
- 6.2.2 Moreover, the compositions corresponding to B (acid hydrogen peroxide) and C (two different carboxylic acids) as defined in the claim are provided as one single composition, in example 3 as well as in example 5 of D1. It is correct that according to column 2, lines 52-56 of D1 the compositions corresponding to the dye base (corresponding to A), the oxidant (corresponding to B) and the microencapsulated acids (corresponding to C) may be provided also separately. However, even if applying this knowledge to the compositions of example 5 one does not arrive at a composition as defined in the claims, since there is no information about the mixing ratio of the original, "virtual" components B and C, and no information about the original composition of these virtual components. It is of course possible, as done by the appellant, to just take the encapsulated acids as powder composition out of the "Formula for Hydrogen Peroxide Emulsion" shown in the table of example 5, in order to arrive at a ratio B:C as defined in the claims. However, proceeding in such a way is only possible with hindsight knowledge of the claimed invention. There is no teaching in D1 to proceed in such a way.
- 6.2.3 D1 addresses the problem of homogeneously dyeing virgin hair (regrowth) and aged hair (lengths and ends) by providing a alkaline dyeing composition that undergoes a pH change after a certain application time when combing the composition into the hair ends, so that

these may be dyed under milder, i. e. less alkaline, conditions. The process defined in claim 1 of the patent, on the other hand, addresses this problem by using a three-component kit of dye, oxidant and acids in a defined ratio, the components of the kit to be combined freshly before use. This is a different, alternative approach, which is not rendered obvious by the teaching of D1.

7. Thus, a skilled person would not have derived the hair dyeing method defined in granted claim 1 and the kit defined in granted claim 14 in an obvious way from D1.

8. In summary, the Board confirms the Opposition Division's decision to reject the opposition against the patent as granted, Article 101(2) EPC. The respondent's auxiliary requests do not need to be addressed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated