Datasheet for the decision of 24 November 2015

Case Number: T 0404/12 - 3.3.07

Application Number: 01100036.1

Publication Number: 1118319

IPC: A61Q5/00, A61K8/36, A61K8/34

Language of the proceedings: EN

Title of invention:
Treatment composition for dyed hair

Patent Proprietor:
KAO CORPORATION

Opponents:
Henkel AG & Co. KGaA
Beiersdorf AG

Relevant legal provisions:
EPC Art. 54(2), 56, 100(b)

Keyword:
Sufficiency of disclosure - (yes)
Novelty - novelty of use - second (or further) non-medical use
Inventive step - main request (yes)

Decisions cited:
G 0002/88, G 0006/88
Case Number: T 0404/12 - 3.3.07

DECISION of Technical Board of Appeal 3.3.07 of 24 November 2015

Appellant: KAO CORPORATION
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Decision under appeal: Decision of the Opposition Division of the European Patent Office posted on 9 December 2011 revoking European patent No. 1118319 pursuant to Article 101(3)(b) EPC.
Composition of the Board:

Chairman  J. Riolo
Members:   D. Semino
          D. T. Keeling
Summary of Facts and Submissions

I. European Patent No. 1 118 319 was granted on the basis of 5 claims, independent claim 1 reading as follows:

"1. Use of a treatment composition for hair dyed with an acid-dye-type hair dye composition wherein the treatment composition comprises the following components (A) (B), and (C):
(A) an organic solvent selected from benzyl alcohol, benzyloxyethanol, phenethyl alcohol, γ-phenylpropyl alcohol, cinnamyl alcohol, anise alcohol, p-methylbenzyl alcohol, α-α-dimethylphenethyl alcohol, α-phenyl ethanol, and phenoxy ethanol, lower alkylene carbonates, N-alkylpyrrolidones, and formamides;
(B) an organic carboxylic acid or a salt thereof; and
(C) a lower alcohol, a polyhydric alcohol, or a lower alkyl ether of a polyhydric alcohol; wherein the pH of the composition falls within the range of 1-6 inclusive, and the composition is dye-free, for preventing fading of color of the dyed hair."

Independent claim 5 concerned a method for treating hair comprising the application of a treatment composition as described in the previous claims.

II. Two notices of opposition were filed in which revocation of the patent in its entirety was requested.

III. During opposition proceedings, the following documents inter alia were cited:

D1: WO-A-98/23247
D2: JP 9-20625
D3: JP 10-182373
D5: DE-U-92 10 516

together with comparative experimental data filed by the patent proprietor with letter of 30 December 2010 (numbered as D13 in appeal).

IV. The decision of the opposition division to revoke the patent was announced at the oral proceedings on 26 October 2011. It was based on a set of claims filed with letter of 30 December 2010 as main request and on a further set of claims filed with letter of 23 September 2011 as auxiliary request.

The claims of the main request differed from the granted claims only in that claim 5 had been deleted. The claims of the auxiliary request differed from those of the main request in that "N-alkylpyrrolidones, and formamides" had been deleted in the definition of component (A) in claim 1.

V. The decision of the opposition division, as far as relevant to the present decision, can be summarised as follows:

a) The amendment in the main request, namely the deletion of claim 5, was intended to overcome an objection of lack of novelty over document D5 and it was not objectionable under Article 123 EPC. As to sufficiency of disclosure, while it was true that examples 4 and 5 of D1 showed the use of compositions within the scope of claim 1 as decolorising agent (i.e. the opposite effect), the examples in the patent were sufficient in order to enable the skilled person to carry out the invention. With regard to novelty of claim 1 of the main request, the case law of non-medical use
claims applied and the feature "for preventing fading of color of the dyed hair" represented a functional technical feature which distinguished the claimed use from the disclosure of D5 and D1.

b) The use of claim 1 of the main request differed from the disclosure of document D2, which was the closest prior art, in that as component (A) other solvents than 2-hydroxybenzyl alcohol were used. While an improvement in preventing fading of color of dyed hair was shown in tests in which 2-hydroxybenzyl alcohol was replaced by benzyl alcohol, examples 4 and 5 of D1 showed that compositions including components (A), (B) and (C) could have decolorising effect, so that the technical effect was not present over the whole scope. The relevance of D1 was linked to the fact that there was no limitation to hair dyed exclusively with acid-type dyes, as the term "acid-dye-type hair dye composition" required the presence of one acid dye, but did not exclude that non-acidic dyes were present. On that basis the subject-matter of claim 1 was not inventive.

c) The use of claim 1 of the auxiliary request, which differed from the one of claim 1 of the main request only in that it contained a shortened list for component (A), did not involve an inventive step for the same reasons.

VI. The patent proprietor (appellant) lodged an appeal against that decision. With the statement setting out the grounds of appeal the appellant filed six sets of claims as main request and as first to fifth auxiliary requests, whereby the main request corresponded to the main request on which the decision was based. An
additional auxiliary request was filed with letter dated 22 April 2013.

VII. During the appeal proceedings the following additional pieces of evidence were filed *inter alia*:

D2b: German translation of D2 filed by respondent-opponent 1
D3b: German translation of D3 filed by respondent-opponent 1

VIII. In a communication sent in preparation of oral proceedings, the Board summarised the points to be dealt with, and provided a preliminary view on the disputed issues pointing out that treating hair dyed with a composition including several different dyes, an acid dye being present in minor quantity, as was the case in the examples of D1, corresponded to an embodiment which would not be envisaged by the skilled person aiming at carrying out the invention of claim 1 of the main request and that the prevention of color fading of the dyed hair was a technical feature of the claim (points 2.1, 3.1 and 4.3).

IX. With letter of 23 October 2015 the appellant filed a main request and eight auxiliary requests, whereby the main request still corresponded to the main request on which the decision was based and contained therefore granted claim 1 as a single independent claim.

X. Oral proceedings were held on 24 November 2015. During the oral proceedings it was contested for the first time by the respondents (opponents 1 and 2) that the comparative test in D13 was a repetition of example 1 of D2. The appellant offered a declaration to counter
that objection, which the Board considered not necessary.

XI. The arguments of the appellant, as far as relevant to the present decision, can be summarised as follows:

Main request - sufficiency

a) The term "acid-dye-type hair dye composition" had been misinterpreted. While these compositions might include further ingredients, they could not comprise dyes other than acidic dyes. Moreover, the dyes present therein were directly adsorbed onto the hair due to the ionicity of the composition. On that basis examples 4 and 5 of D1 were not relevant, as they showed decoloration of hair dyed with a composition which was not an acid-dye-type hair dye composition. Moreover, the patent in suit clearly showed by means of its examples that the claimed invention was workable. On that basis, sufficiency of disclosure should be acknowledged.

Main request - novelty

b) Shine performance, as disclosed in D5, related to reflection of light and was independent of the hair being dyed or non-dyed. It had nothing to do therefore with the effect present in claim 1, namely the prevention of fading of color of the dyed hair. Moreover, following the case law on non-medical use claims, prevention of color fading of dyed hair was a technical feature which distinguished the claimed use from the disclosure of D5.
Main request - inventive step

c) The use of claim 1 of the main request differed from the disclosure in D2, which was the closest prior art, in that the composition used comprised as component (A) an organic solvent selected from a list of aromatic alcohols, lower alkylenecarbonates, N-alkylpyrrolidones, and formamides instead of 2-hydroxybenzyl alcohol and/or phenylethylene glycol. In view of the examples in the patent and of the tests in D13, the problem was the provision of an improved composition for prevention of color fading, as far as the aromatic alcohols were concerned, and the provision of an alternative composition for the same scope for compositions containing the other organic solvents. The data in D13, which compared a composition according to example 1 of D2 with one according to the patent in suit, showed an improvement when benzyl alcohol was used in place of 2-hydroxybenzyl alcohol and the result could be extended to the other aromatic alcohols, which shared a similar chemical structure. The comparative example in D13 containing cetanol was a correct reproduction of example 1 of D2. The fact that the compound had been translated as ethanol in D2b was a clear mistake which was recognisable from the comparison of different parts of D2 with the translation in D2b, as different Japanese signs had been translated as ethanol. The breadth of the claim was not sufficient to question the presence of an effect in the absence of evidence on the side of the respondents. A pH of 1, even if possibly unpleasant for same subject, could also be employed in the absence of counter-evidence and
the absorbance values were measured and reported with respect to the values found for water as control. Neither D2 itself, nor the further prior art documents cited by the respondents (D1, D3, D4, D12) pointed at the listed compounds in the context of a treatment composition for dyed hair meant at preventing fading of color, so that the solutions to the two partial problems were equally inventive. The examples in D1 were not relevant for the same reasons as outlined in the context of sufficiency of disclosure.

XII. The arguments of the respondents, insofar as relevant to the present decision, can be summarised as follows:

Main request - sufficiency

a) Examples 4 and 5 of D1 showed that compositions including components (A), (B) and (C) acted as decolorising agents for dyed hair. These examples were relevant, as the term "acid-dye-type hair dye composition" referred to any hair dye composition comprising a so-called acid-dye, which did not exclude the presence of other dyes. This definition given in the patent could not be changed by any evidence filed at a later stage. On that basis, an effect contrary to the desired one was obtained for compositions falling under those covered by claim 1 of the main request and the skilled person was not in the position of carrying out the claimed invention without undue burden.

Main request - novelty

b) The use of claim 1 of the main request was not novel over the disclosure of D5, which disclosed
treatment of human hair after washing, dyeing or perm treatment with compositions including components (A), (B) and (C) in order to maintain shine. As maintenance of shine of dyed hair was possible only if hair was not discoloured, it was nothing different from prevention of color fading and there was therefore lack of novelty.

Main request - inventive step

c) The use of claim 1 of the main request differed from the disclosure in D2, which was the closest prior art, in that the composition used comprised as component (A) an organic solvent other than 2-hydroxybenzyl alcohol and/or phenylethylene glycol, which was selected from a specific list. As D1 showed that compositions as the one used in claim 1 acted as decolorising agents, the prevention of colour fading did not take place over the whole breadth of the claim and no inventive activity could be acknowledged. In any case, no improvement over D2 could be accepted in view of the opposite effect shown in D1 and in view of the fact that the tests in D13 did not offer a reproduction of example 1 of D2, as cetanol was used in place of ethanol. Reference in this respect was made to the composition of example 1 according to the translation D2b. Moreover, in D13 water was used as a control, which was not appropriate, and it was not clear whether proper measurements were done, as an absorbance value of 1 was assumed for the control. On top of that, the claim was so broad in view of the classes of compounds, of the lack of a limitation on the quantities of the compounds and of the inclusion of possibly irritating
compositions with pH 1, that it was not credible that an effect could be achieved over the whole breadth. The problem was therefore the provision of alternative compositions and the solution was obvious in view of D2 itself, which disclosed benzyl alcohol as a known penetration agent and as an alternative to 2-hydroxybenzyl alcohol, D3, which disclosed the use of benzyl alcohol or N-methylpyrrolidone in combination with citric acid and ethanol in a pretreatment composition for increasing the stability to washing of acid dyes, D4, which disclosed benzyl alcohol, cinnamyl alcohol and N-methylpyrrolidone in a hair treatment composition, or D12, which disclosed the use of benzyl alcohol and propylene carbonate in combination with citric acid and ethanol in an acid dye composition for increasing the color stability to washing.

XIII. The appellant requested that the decision under appeal be set aside and the patent be maintained on the basis of the claims of the main request or, in the alternative, on the basis of the claims of one of the auxiliary requests, all filed by letter of 23 October 2015.

XIV. The respondents requested that the appeal be dismissed.

Reasons for the Decision

Documents filed in appeal

1. None of the parties contested the admittance into the proceedings of the documents filed by the opposing parties in appeal. Also the Board sees no reason not to admit these documents into the proceedings.
Main request - sufficiency

2. The respondents objected to the sufficiency of the disclosure of the patent in suit on the basis of document D1, in particular its examples 4 and 5.

2.1 It was not disputed that examples 4 and 5 of D1 (pages 28 to 30) disclose compositions comprising benzyl alcohol (falling under component (A) of claim 1 of the main request), malonic acid (falling under component (B)) and N-propanol (falling under component (C)) as decolorising agent for dyed hair, wherein the dye compositions comprise several dyes, including 3-hydroxy-4-[(2'-hydroxy-1'-napthyl)azo]-7-nitro-1-napthalen sulfinic acid-sodium salt, which is an acid dye. The acid dye is present in a quantity of 0.10 g out of 1.29 g total dye in example 4 and of 0.20 g out of 1.72 g total dye in example 5. After application of the decolorising composition 70% of the dye is eliminated from the hair.

2.2 Claim 1 of the main request concerns the use of a composition for preventing fading of color of hair dyed with an acid-dye-type hair dye composition. While it is true that formally it is not excluded that an acid-dye-type hair dye composition as mentioned in claim 1 contains other dyes, the fact that the composition is named by direct reference to the acid dye clearly indicates that the acid dye is the crucial element thereof. In view of this, treating hair dyed with compositions including several different dyes, an acid dye being present in minor quantity, as is the case in the examples of D1, corresponds to an embodiment which already for this reason would not be envisaged by the
skilled person aiming at carrying out the invention of claim 1.

2.3 The fact that the description includes a sentence indicating that the term acid-dye-type hair dye composition refers to any hair dye composition containing a so-called acid dye (paragraph [0030]) is in no contradiction with this understanding of the claim, which implies no close definition of the composition, but only that the acid dye is the crucial element thereof.

2.4 For these reasons, the fact that in examples 4 and 5 of D1 70% of the dye (including an acid dye only in minor quantity) is eliminated from the hair (with no information of how much of the acid dye is removed) is not relevant for the sufficiency of disclosure of the patent in suit.

2.5 In addition, the Board agrees with the appellant in that examples are present in the patent (paragraphs [0033] to [0048]) falling under claim 1 to guide the skilled person in carrying out the invention.

2.6 For these reasons the objection of lack of sufficiency does not hold good.

Main request - novelty

3. The objection of lack of novelty over document D5 was based on the central argument that maintenance of shine of dyed hair, as disclosed in D5, was nothing different from prevention of color fading, the effect of the use of claim 1 of the main request.
3.1 It was not disputed that document D5 discloses compositions falling under those used in claim 1 of the main request (examples 7 to 10 in table 1) as conditioning compositions for treating hair (page 1, first paragraph), wherein the application of the composition may follow washing, dyeing or perm treatment (second full paragraph on page 4), and that maintenance of shine is also mentioned (page 1, end of first paragraph).

3.2 The Board cannot see, however, how this disclosure may be seen as anticipating the prevention of color fading of hair dyed with an acid-dye-type hair dye composition. Shine is a property of treated or untreated hair which is independent of whether the hair has been dyed or not. This is clear from document D5 itself, which discloses maintenance of shine for any kind of hair within the scope of the invention (page 1, paragraph 1) and the possibility of the hair being dyed as an optional unrelated feature (second full paragraph of page 4). In addition, no evidence has been provided by the respondents with regard to equivalence of shine maintenance with prevention of color fading in any specific condition and document D5 does not make any mention of the difficulty in color maintenance for dyed hair.

3.3 The prevention of color fading of hair dyed with an acid-dye-type hair dye composition is to be considered a functional technical feature of use claim 1 of the main request in line with the case law on second non-medical use (see in particular G 2/88 and G 6/88, OJ EPO 1990, pages 93 and 114). As this feature has not been made available to the public in D5, this document cannot take away the novelty of claim 1 of the main request.
3.4 For these reasons, also the objection of lack of novelty is not successful.

Main request - inventive step

4. The parties agree that document D2 is the closest prior art and that it discloses the use of treatment compositions comprising 2-hydroxybenzyl alcohol and/or phenylethylene glycol and having a pH of 2 to 7 for preventing fading of color of hair dyed with an acid-dye-type hair dye composition (D2b, page 3, first three paragraphs), wherein an exemplary composition comprises 2-hydroxybenzyl alcohol, cetanol as a lower alcohol (see point 4.3.1, below) and citric acid as an organic carboxylic acid (D3b, table on page 9, example 1). Moreover, they agree that the use of claim 1 of the main request differs from the disclosure therein in that the composition used comprises as component (A) an organic solvent selected from a list of aromatic alcohols, or from lower alkylene carbonates, N-alkylpyrrolidones and formamides instead of 2-hydroxybenzyl alcohol and/or phenylethylene glycol. The Board has no reason to take a different approach.

4.1 With regard to the evaluation of the technical effects or advantages of the claimed use with respect to the one disclosed in D2, it is first noted that the examples in D1 are not relevant already for the reasons outlined in the analysis of sufficiency of disclosure (points 2.1 to 2.4, above). Moreover, the fact that the desired effect is not achieved in the examples of D1 (which achieve decolorisation of hair) clearly indicates that these examples are outside the scope of claim 1 in which the prevention of color fading of the dyed hair is a technical feature of the claim (see
point 3.3, above). On that basis the examples of D1 can be disregarded in the analysis of inventive step.

4.2 A comparison between the composition of example 1 of D2 and a composition according to claim 1 in which 2-hydroxybenzyl alcohol is replaced by benzyl alcohol is presented in the test report D13 (where document D2 is indicated as D7). The two compositions are alternatively applied to a bundle of hair dyed with an acid hair dye followed by immersion in a shampoo solution which is then diluted and evaluated for elution of the dye. Evaluation of color fastness is based on the ratio of the absorbance at 565 nm to that of a control constituted by pure water, whereby the smaller the absorbance ratio, the better the color fastness is. The results show that the color fastness as evaluated by the absorbance ratio is improved for a composition according to claim 1 over the composition of example 1 of D2.

4.3 The respondents contested the validity of the test report on several aspect, none of which is considered convincing by the Board.

4.3.1 The fact that the comparative example in D13 is a reproduction of example 1 of D2 was disputed for the first time at the oral proceedings on the basis of the fact that cetanol is used in place of ethanol, which should be the correct lower alcohol used in example 1 of D2 according to the translation D2b. As the appellant noted, different Japanese signs present in D2 have been translated as ethanol in D2b (see example 1, ingredient (8) vs example 13, ingredient (9)). In its opinion, this contradiction which could not be explained by the respondents, which both provided the translation and raised the objection, is a clear sign
that an error took place in the translation. According to the Board, already this fact plays in favour of the argument of the appellant that the lower alcohol present is a different one, namely cetanol as used in D13. In addition, the Board points out that a party (in this case the respondents) cannot take advantage of an uncertainty present in a document it provided, all the more if, as in the present case, the relevance of the uncertainty becomes apparent at a stage of the procedure (at the oral proceedings) in which it was no longer possible to establish with absolute certainty what was the correct teaching of the document. Under such circumstances, the objection raised cannot be decided in favour of the respondents and the Board comes to the conclusion that, with the evidence available on file, the comparative example in document D13 is a correct reproduction of example 1 of document D2.

4.3.2 As to the arguments that it is not appropriate to use water as the control and that it is not clear on what basis an absorbance value of 1 is assumed for the control, they have not been corroborated by any counter-evidence to show why the tests in D13 should be incorrect or not relevant. On top of that, as a ratio is used as the indicator of the desired property, it is irrelevant whether the control value is taken as 1 or as any other value (the ratio of the measurements would not change anyway).

4.4 On that basis the tests in D13, in which example 1 of D2 is reproduced and compared with a composition according to claim 1 which differs therefrom only in the distinguishing feature, convincingly show that by virtue of the distinguishing feature an improvement in the prevention of color fading takes place.
4.5 While comparative tests are available only for benzyl alcohol with respect to 2-hydroxybenzyl alcohol, the Board finds it credible to assume that similar results are obtained for compounds with a similar chemical structure, namely for the other aromatic alcohols listed in claim 1 (all containing a benzyl ring with an hydroxyl group on an attached side chain, while 2-hydroxybenzyl alcohol has an hydroxyl directly attached to the ring). On the other hand, for the other classes of compounds listed in claim 1 (namely lower alkylene carbonates, N-alkylpyrrolidones, and formamides), for which some examples are present in the patent (working examples 2, 3, 4, 5, and 9), no comparison with the composition of D2 is available.

4.6 As claim 1 lists clearly defined alternatives, whereby for some of the alternatives ("benzyl alcohol, benzyloxyethanol, phenethyl alcohol, γ-phenylpropyl alcohol, cinnamyl alcohol, anise alcohol, p-methylbenzyl alcohol, α-α-dimethylphenethyl alcohol, α-phenyl ethanol, and phenoxy ethanol") an improvement over D2 can be acknowledged by virtue of the comparative examples in D13, while for the remaining alternatives ("lower alkylene carbonates, N-alkylpyrrolidones, and formamides") the presence of the desired effect by virtue of the examples in the patent, but not an improvement with respect to D2 can be acknowledged, two separate technical problems must be formulated for the two groups of alternatives.

4.7 For the first group the technical problem is the provision of a use of a composition with improved prevention of color fading of hair dyed with an acid-dye-type hair dye composition and for the second group it is the provision of a use of an alternative
composition for the prevention of color fading of hair dyed with an acid-dye-type hair dye composition.

4.8 As to the objection of the respondents that the breadth of the claim is such that the thus formulated problems (in the two alternatives) cannot be credibly solved over the whole breadth of the claim, the Board considers that, in view of the evidence on file (in D13 and in the examples in the patent) and of the lack of counter-evidence, the objection cannot be followed.

4.9 With regard to the first group, document D2 mention in its introductory part the addition of benzyl alcohol to hair dyes of the acid type as a penetration agent for improving colour fastness (paragraph [0002] of D2b, last sentence). However, this does not relate to the use in dye-free compositions for treatment of already dyed hair and no hint is given in the document that by means of the use of benzyl alcohol in place of the penetration agent suggested therein (2-hydroxybenzyl alcohol and/or phenylethylene glycol) in a composition for treating dyed hair an improvement in color fastness can be obtained.

4.10 Nothing better is to be found in the other cited documents with regard to the first group.

4.10.1 Document D3 relates to pretreatment compositions to improve dye behaviour and color fastness (first and last paragraphs of page 2 in D3b). The fact that benzyl alcohol is mentioned as an organic solvent to be used in such compositions (first full paragraph on page 4 and examples) does not provide any hint with regard to compositions to be used on dyed hair and improvements to be achieved by their use.
4.10.2 Document D4 related to conditioning compositions (page 2, lines 5 to 8) and mentions among others benzyl alcohol and cinnamyl alcohol as organic solvents to be used therein (page 3, lines 37 to 41). The document does not relate to treatment of dyed hair in any respect.

4.10.3 Document D12 discloses the use of benzyloxyethanol and/or benzyl alcohol in a hair dye composition having excellent hair-day ability and good fastness to shampoo (paragraphs [0003] to [0007]). Nothing is said about the treatment of already dyed hair.

4.11 For these reasons, the use of claim 1, as far as the first group is concerned, is not rendered obvious by the available prior art.

4.12 With regard to the second group the same passages of documents D3 (first full paragraph of page 4 of D3b, mentioning N-methylpyrrolidone in the same list of organic solvents as benzyl alcohol), D4 (page 3, lines 37 to 41, mentioning N-methylpyrrolidone in the same list of organic solvents as benzyl alcohol and cinnamyl alcohol) and D12 (paragraphs [0003] to [0007], mentioning propylene carbonate to be used in combination with benzyloxyethanol and/or benzyl alcohol in a hair dye composition) were cited by the respondents. However, as detailed above (points 4.10.1 to 4.10.3) these citations do not relate to compositions for treatment of dyed hair and do not provide on that basis any hint to prompt the skilled person to use the mentioned compounds as alternative to 2-hydroxybenzyl alcohol and/or phenylethylene glycol when looking for an alternative composition for the prevention of color fading of hair dyed with an acid-dye-type hair dye composition. The use of claim 1, as
far as the second group is concerned, is thus also not rendered obvious by the available prior art.

4.13 It is therefore concluded that the composition of claim 1 of the main request involves an inventive step.

Order

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

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent on the basis of the main request, as filed by letter of 23 October 2015, and a description to be adapted.

The Registrar: The Chairman:

S. Fabiani J. Riolo

Decision electronically authenticated