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**D E C I S I O N**  
**of 14 April 2005**

**Case Number:** T 0246/01 - 3.3.2

**Application Number:** 97111884.9

**Publication Number:** 0818192

**IPC:** A61K 7/13

**Language of the proceedings:** EN

**Title of invention:**

Hair dyeing composition

**Patentee:**

KPSS-Kao Professional Salon Services GmbH

**Opponent:**

L'OREAL

**Headword:**

Hair dyeing composition/KPSS

**Relevant legal provisions:**

EPC Art. 54, 56

EPC R. 57a

**Keyword:**

"Main request - inventive step - no: arbitrary choice within the teaching of a document of the state of the art"

"First auxiliary request - inventive step - yes: new combination of compounds exhibiting special basic colour"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0246/01 - 3.3.2

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.2  
of 14 April 2005

**Appellant:** L'OREAL  
(Opponent) 14, rue Royale  
F-75008 Paris (FR)

**Representative:** -

**Respondent:** KPSS-Kao Professional Salon Services GmbH  
(Proprietor of the patent) Pfungstädter Str. 92-100  
D-64297 Darmstadt (DE)

**Representative:** -

**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 3 January 2001  
rejecting the opposition filed against European  
patent No. 0818192 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** J. Riolo  
**Members:** H. Kellner  
J. H. P. Willems

## Summary of Facts and Submissions

- I. European patent No. 0 818 192 based on application No. 97 111 884.9 was granted with 3 claims.

Claim 1 as granted read as follows:

"Hair dyeing composition, comprising at least one substance selected from 1,4-diaminobenzene, 1-methyl-2,5-diaminobenzene and (or) a triaminohydroxypyrimidine, or the water-soluble salts thereof and one or more coupling agents, characterized in that it contains a combination of

- a) 4-amino-3-methyl phenol and
- b) 2-amino-3-hydroxypyridine."

- II. Opposition was filed against the granted patent by the appellant. The patent was opposed under Article 100(a) EPC for lack of inventive step.

The following documents were cited inter alia during the proceedings before the opposition division and the board of appeal:

- (1) US-A-5 494 489
- (2) EP-A-0 709 365
- (3) Maison G. deNavarre, "The Chemistry and Manufacture of Cosmetics", Volume IV, Second Edition, Orlando, Florida: Continental Press 1975, 868 and 870-873

III. The opposition division rejected the opposition.

Concerning Article 54 EPC, it observed that novelty was not contested. Nevertheless, the opposition division had examined novelty and came to the conclusion that the subject-matter of the patent as granted was new.

As to Article 56 EPC, the opposition division found that the subject-matter of claim 1 as granted was not obvious with respect to the then cited state of the art (document (1)), because the opponent had not proved its submission that the problem was not solved throughout the whole scope of the claim. Additionally, the teaching of (1) was directed to hair dyeing compositions providing an improved wet combability of the hair. Thus, it would not have been obvious to add the 4-amino-3-methyl phenol to the composition of example 2 of (1) to arrive at the claimed compositions rendering an expressive orange/copper red colour to the hair.

IV. The appellant (opponent) filed an appeal against that decision and submitted grounds of appeal. It introduced document (2) with respect to novelty and inventive step and submitted one sheet of paper setting out concentrations of 4-amino-3-methyl phenol added to the composition of example 2 of document (1) and describing the corresponding results of dyeing tests.

V. With a letter, dated 4 January 2002, the respondent (patentee) introduced two sets of amended claims as main and auxiliary request into the appeal proceedings and submitted some hair streaks as a result of

comparative tests according to "examples 7a, 7b and 7c" of the patent in suit.

On 14 March 2005 it submitted another six sets of claims and corrected the indication of the streaks to refer to example 7 and comparisons 7a and 7b of the patent in suit. Furthermore, it stated that it had repeated the appellant's tests and wanted to demonstrate the results during the oral proceedings.

VI. On 14 April 2005, oral proceedings took place before the board.

The claims filed on 14 March 2005 as well as the "repeated" appellant's tests were not admitted to the proceedings because in the absence of any sound explanation from the respondent as to their filing at that stage of procedure, they were considered as late-filed.

During the oral proceedings, the respondent submitted a new main request and two auxiliary requests. Claim 1 of the main request reads as follows:

"Hair dyeing composition, comprising at least one substance selected from 1,4-diaminobenzene, 1-methyl-2,5-diaminobenzene and (or) a triaminohydroxypyrimidine, or the water-soluble salts thereof and one or more coupling agents, characterized in that it contains a combination of

a) 4-amino-3-methyl phenol and

b) 2-amino-3-hydroxypyridine,

and hair dye also comprises an oxidizing agent."

Claim 1 of the first auxiliary request reads like claim 1 as granted, with the only difference that optionally contained developers 1,4-diaminobenzene and 1-methyl-2,5-diaminobenzene were deleted:

"Hair dyeing composition, comprising a triaminohydroxypyrimidine, or the water-soluble salts thereof and one or more coupling agents, characterized in that it contains a combination of  
a) 4-amino-3-methyl phenol and  
b) 2-amino-3-hydroxypyridine."

VII. The submissions of the appellant can be summarised as follows:

It stated that the subject-matter of the main request did not involve novelty and an inventive step in view of document (2), and that there was no inventive step with respect to document (1).

Document (2) disclosed a hair dye containing a mixture of six components, three of them being 1-methyl-2,5-diaminobenzene (p-toluylenediamine), 4-amino-3-methyl phenol and 2-amino-3-hydroxypyridine. Additionally, it contained an oxidising agent in the form of the oxidation-catalyst, at least oxygen from the air, starting at the moment of application of the dyeing mixture to the hair.

Moreover, it was obvious to the person skilled in the art that this mixture could be used together with standard oxidising agents.

Additionally, the appellant referred to the comparative tests it had sought to submit during the oral proceedings before the opposition division, setting out that the addition of different percentages of 4-amino-3-methyl phenol influenced the colouring disclosed in example 2 of (1) in a way that brown/grey shades instead of orange/copper red colours were obtained.

These comparative tests showed that the problem was not solved over the full range of the claims and therefore it was obvious to the person skilled in the art to use the three developer and coupler components set out in claim 1 of the main request, in order to provide another colouring composition. Thus, with respect to document (1), the subject-matter of the main request did not involve an inventive step.

Such arguments applied as well to the subject-matter of the auxiliary requests. It was obvious to the skilled person to mix well-known developers and couplers to arrive at certain colour shades and it was not possible to define a certain colour shade as the problem to be solved, while, with respect to claim 3, claiming mixtures of components that could result in any possible colour of the dyed hair.

VIII. The respondent's arguments may be summarised as follows:

In its view, the subject-matter of the main request was novel with respect to document (1) and document (2), as there was no direct and unambiguous disclosure of all claim features in both documents. The claimed subject-matter was also inventive because in the entire disclosure of (1) there was not the slightest

suggestion that 4-amino-3-methyl phenol should be added to the composition of example 2 in order to achieve orange/copper red colours. Additionally, in document (1), the problem to be solved was to improve the wet combability of hair and not the provision of a special shade in dyed hair. Document (2) was remote from the invention, inter alia as it only related to dyeing compositions wherein oxidation was achieved with air.

Finally, the respondent had carried out the comparative tests "in the same way as the opponent" and it had found that the addition of 4-amino-3-methyl phenol resulted in the addition of more yellow colour to the hair which turned the existing red brown colour to copper brown. It wanted to provide the board with the coloured hair streaks together with a description of the exact parameters of the tests for inspection during the oral proceedings.

With respect to the auxiliary requests, triaminohydroxypyrimidine as one of the compulsory components of the composition was not mentioned in any of the cited documents.

- IX. The appellant (opponent) requested that the decision under appeal be set aside and that the European patent No. 0 818 192 be revoked.
  
- X. The respondent (patentee) requested that the appeal be dismissed and that the patent be maintained on the basis of the main request or, alternatively, the first or second auxiliary request, all filed during today's oral proceedings.



## **Reasons for the decision**

1. The appeal is admissible.
2. *Admissibility of the requests filed during the oral proceedings:*

The board considers that, compared with the claims as granted, the corresponding amendments are occasioned by the arguments of the appellant and the board set out during the oral proceedings.

Accordingly, the requests fulfil the requirements of Rule 57a EPC and they are admitted into the procedure.

3. *Admissibility of comparative tests*

The comparative tests conducted by the appellant were filed with the grounds of appeal and, since the respondent had enough time to react to this submission, they were admitted into the proceedings. However, since the appellant had not given any information about the conditions under which the tests were accomplished, the board could not take these into account.

The results of the tests conducted by the respondent were described in the letter of 14 March 2005. As indicated during the oral proceedings, the respondent had prepared the sheets, setting out the detailed parameters of the experiments and bearing the streaks of dyed hair at end of March and had not presented them to the appellant. The board considers that this behaviour prevented the appellant from reacting to

these experiments. The appellant was not in the position to present its own results with respect to these experiments in the oral proceedings. Therefore, the board considers that the principle of equal treatment of the parties would be violated if the tests were to be admitted into the proceedings.

Accordingly, the respondent's tests were not introduced into the proceedings.

4. *Main and first auxiliary requests: Article 123(2) and (3) EPC and Article 54 EPC*

The features contained in the sets of claims of the main request may be found in the claims of the application as filed and on page 1, paragraph 1, together with page 5, paragraphs 2 and 3, of the application as filed. The feature added to claim 1 as granted restricts its scope.

The claims of the first auxiliary request correspond to the claims as granted, with the omission of two of three possible embodiments of their subject-matter.

Thus, the subject-matter of both requests is originally disclosed and does not extend the scope of the claims as granted. Consequently, there is no Article 123 EPC objection to these requests.

As to Article 54 EPC, none of the cited documents discloses a composition combining the three components claimed in the main request comprising an oxidising agent.

The composition claimed in the first auxiliary request contains triaminohydroxypyrimidine, which is not disclosed in the available state of the art.

5. *Inventive step*

5.1 Main request

5.1.1 The subject-matter of the main request concerns a "Hair dyeing composition".

Document (1) represents the closest state of the art.

According to the introduction in the description, column 1, paragraph 1, together with claim 1 of (1), the subject-matter of this prior art corresponds to an aqueous colourant for keratin fibres, and more particularly to a composition for dyeing pelts and human hair based on oxidation dye precursors which is mixed immediately before application with a peroxide-containing composition to form a total composition, comprising at least one developer substance and at least one coupler substance.

According to the description, column 2, lines 15 to 27, said colourant preferably contains one or more developer substances selected from the group consisting of p-phenylenediamine, p-toluylenediamine, 2-hydroxyethyl-1,4-diaminobenzene, p-aminophenol, 3-methyl-4-aminophenol and tetraaminopyrimidine. With regard to the coupler substance, the colourant contains one or more known coupler substances selected from the group consisting of  $\alpha$ -naphthol, resorcinol, 4-chlororesorcinol, 2-methylresorcinol, 2-aminophenol,

3-aminophenol, 4-amino-2-hydroxytoluene, 1-methoxy-2-amino-4-(2-hydroxyethyl)aminobenzene, 2-amino-3-hydroxypyridine and 2,6-diaminopyridine.

Example 2 of (1) contains p-toluylenediamine as developer and as coupler substances resorcinol, 2-amino-3-hydroxypyridine, 2-methylresorcinol and m-aminophenol.

Thus, in (1), a hair dyeing composition is disclosed, comprising two of three components as claimed in the main request, namely p-toluylenediamine and 2-amino-3-hydroxypyridine. With respect to this disclosure it is fully within the teaching of (1) to select 4-amino-3-methyl phenol from the list of components cited in column 2, lines 17 to 19, and add it as a further developer to this mixture of example 2.

In the absence of any reproducible comparison referring to example 2 of (1) (see point 3 above), the technical problem underlying the patent in suit can only be seen in the provision of a further hair dyeing composition representing one of the mixtures of compounds disclosed in (1).

The solution to this problem is the provision of a hair dyeing composition exhibiting the features of claim 1 of the main request.

Having regard to the worked examples of the patent in suit, the board is convinced that the problem has been plausibly solved.

In order to supply just another individualised embodiment of the hair dyeing compositions disclosed in document (1), it is obvious to the skilled person to add the 4-amino-3-methyl phenol mentioned in column 2, line 19, of (1) to the mixture disclosed in example 2.

Additionally, in the list of probable components for a hair dyeing composition, mentioned in document (2), page 2, lines 38 to 39, under point 5, nearly all the components contained in example 2 of (1) appear, except 4-amino-3-methyl phenol and 2-hydroxy-4-aminotoluol. Since this has to be seen as a further suggestion that 4-amino-3-methyl phenol should be added to the mixture of example 2 in (1) to arrive at another hair dyeing composition, the obviousness of the features of claim 1 of the main request is all the clearer to the skilled person.

Accordingly, the board can only conclude that the subject-matter of claim 1 of the main request does not involve an inventive step as it merely amounts to an arbitrary choice within the teaching of the prior art document (1).

5.1.2 In these circumstances the arguments of the appellant cannot succeed:

Even when the problem to be solved, as is written down in the cited state of the art, was to improve the wet combability of dyed hair (1) and to use air as the oxidising agent (2), both documents are concerned primarily with oxidising compositions for the dyeing of hair as the contested patent.

Thus, the cited state of the art in any case closely correlates with the problem to be solved by the teaching of the patent in suit and therefore is highly relevant for the examination of its patentability.

5.2 First auxiliary request:

5.2.1 The subject-matter of the first auxiliary request concerns a "Hair dyeing composition".

Document (1) represents the closest state of the art.

There, in column 2, lines 15 to 27, inter alia two of the components contained in the claimed composition, namely 3-methyl-4-aminophenol and 2-amino-3-hydroxypyridine are mentioned and in the composition of example 2 only one of these two compounds is comprised. Triaminohydroxypyrimidine as another developer is not mentioned, neither in document (1) nor in the other available documents.

The only information about this compound comes from the patent in suit itself (see page 2, lines 9 to 11) where it merely is mentioned that this product is known in the art without any further relevant detail.

The technical problem underlying the patent in suit is the provision of a hair dyeing composition achieving an orange/copper brown-red basic colouring as basic shade that can also be varied (page 1 of the description, lines 3 to 5).

The solution to this problem is the provision of a hair dyeing composition exhibiting the features of claim 1 of the first auxiliary request.

Having regard to worked examples 7, 7a and 7b of the patent in suit and in the absence of any counter-evidence provided by the appellant, the board is convinced that the problem has been plausibly solved.

Thus, with reference to the available state of the art it was not obvious to add triaminohydroxypyrimidine and 4-amino-3-methyl phenol to the composition containing 2-amino-3-hydroxypyridine, in order to achieve an orange/copper brown-red basic colouring.

5.2.2 With respect to the first auxiliary request the arguments of the appellant cannot lead to success:

The appellant submitted that experiments 7, 7a and 7b were not enough to show that the problem was solved. They only showed that triaminohydroxypyrimidine had no remarkable colouring effect. The appellant stated that 4-amino-3-methyl phenol and 2-amino-3-hydroxypyridine alone rendered the effect. In the absence of any experiment using these two compounds alone in order to substantiate the appellant's allegation, the board cannot take it into consideration for the assessment of inventive step.

Additionally, the appellant stated that it was the usual task of the person skilled in the art to mix well-known developers and couplers to obtain certain colour shades; in particular p-aminophenols (as well as

their derivatives) were known to provide red and orange shades (Table 11 of (3), page 871).

With regard to this usual task of the skilled person, it may be true that he will be able to produce variations based on a special hair dyeing composition, particularly when the starting colour of the hair to be dyed is known. The problem solved by the subject-matter of the first auxiliary request, however, is to provide for a basic shade that can now be varied by the person skilled in the art. Additionally, the appellant's argument with respect to citation (3) cannot suggest to the skilled person how he should create orange or red shades based on triaminohydroxypyrimidines, since 4-amino-3-methyl phenol is not the same as "p-aminophenols" (including derivatives) and particularly since table 11 of (3) refers to p-aminophenol oxidised in the presence of certain coupler compounds, none of them being the sole coupler compound claimed in the first auxiliary request, namely 2-amino-3-hydroxypyridine.

- 5.3 Thus, in view of the amendments made by the respondent during the appeal proceedings with respect to the first auxiliary request, the patent and the invention to which it relates meet the requirements of the EPC.



**Order**

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

1. The decision under appeal is set aside.
  
2. The case is remitted to the first instance with the order to grant a patent on the basis of the first auxiliary request and a description to be adapted thereto.

The Registrar:

The Chairman:

U. Bultmann

J. Riolo