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D E C I S I O N
of 6 December 2000

Case Number: T 0447/97 - 3.3.2

Application Number: 88302465.5

Publication Number: 0288151

IPC: A61K 7/09

Language of the proceedings: EN

Title of invention:
Permanent wave composition

Patentee:
L'OREAL, S.A.

Opponent:
Henkel Kommanditgesellschaft auf Aktien
Goldwell GmbH

Headword:
Hair wave composition/L'OREAL

Relevant legal provisions:
EPC Art. 123(2), 83, 56

Keyword:
"Main request - added matter - yes"
"First auxiliary request - inventive step - no -
arbitrary choice"
"Second auxiliary request - inventive step - yes - no hints"

Decisions cited:
T 0596/96, T 0863/96

Catchword:
-



Case Number: T 0447/97 - 3.3.2

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 6 December 2000

Appellant: Henkel Kommanditgesellschaft auf Aktien
(Opponent 01) TFP/Patentabteilung
D-40191 Düsseldorf (DE)

Other party: Goldwell GmbH
(Opponent 02) Zerninstrasse 10-18
D-64280 Darmstadt (DE)

Respondent: L'OREAL S.A.
(Proprietor of the patent) 14, Rue Royale
FR-75008 Paris (FR)

Representative: Parry, Christopher Stephen
Saunders & Dolleymore
9 Rickmansworth Road
Watford
Hertfordshire WD18 0JU (GB)

Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office posted 11 April
1997 concerning maintenance of European patent
No. 0 288 151 in amended form.

Composition of the Board:

Chairman: U. Oswald
Members: J. Riolo
R. E. Teschemacher

Summary of Facts and Submissions

- I. European patent No. 0 288 151 based on application No. 88 302 465.5 was granted on the basis of 15 claims.

The independent claims as granted read as follows:

1. A water based hair waving composition comprising ammonium thioglycolate and monoethanolamine thioglycolate characterized by presence of ammonium thioglycolate plus monoethanolamine thioglycolate in the range of from 3% to 9% by weight, the ratio of ammonium thioglycolate to monoethanolamine thioglycolate being in the range of from 2:1 to 8:1, the ammonium thioglycolate being present in the range of from 6% to 8% by weight and the monoethanolamine thioglycolate being present in the range of from 1% to 3% by weight, and the composition having a pH in the range of from 9 to 9.5 and comprises from 0,1% to 2% by weight aqua ammonia.

5. A water based hair waving composition comprising ammonium thioglycolate and monoethanolamine thioglycolate characterized by presence of ammonium thioglycolate plus monoethanolamine thioglycolate in the range of from 3% to 12% by weight, the ratio of monoethanolamine thioglycolate to ammonium thioglycolate being in the range of from 2:1 to 8:1, and the composition having a pH in the range of from 6.8 to 7.2.

- II. Notices of opposition were filed against the granted patent by the appellant (opponent O1) and the opponent O2.

The patent was opposed under Article 100(b) EPC and under Article 100(a) EPC for lack of novelty and lack of inventive step.

The following documents inter alia were cited during the proceedings.

(1): GB-A-889572

(3): US-A-4192863

III. The interlocutory decision of the Opposition Division established that the patent could be maintained in an amended form on the basis of the text as submitted during the oral proceedings.

Amended independent claim 1 read as follows:

1. A water based hair waving composition comprising ammonium thioglycolate and monoethanolamine thioglycolate characterized by presence of ammonium thioglycolate plus monoethanolamine thioglycolate in the range of from 7% to 9% by weight, the ratio of ammonium thioglycolate to monoethanolamine thioglycolate being in the range of from 2:1 to 8:1, the ammonium thioglycolate being present in the range of from 6% to 8% by weight and the monoethanolamine thioglycolate being present in the range of from 1% to 3% by weight, and the composition having a pH in the range of from 9 to 9.5 and comprises from 0,1% to 2% by weight aqua ammonia.

Claims 2 to 15 were identical to claims 2 to 15 as granted.

The Opposition Division expressed the view that the term "aqua ammonia" used in claim 1 of the patent in suit fulfilled the requirement of Article 83 EPC, although the concentration of ammonia in "aqua ammonia" was not indicated. It found that, as this base served merely to adjust the pH to a value between 9 to 9.5, it was not necessary for the skilled person to know the exact ammonia concentration in "aqua ammonia" to achieve the desired pH.

As regards novelty, the Opposition Division considered that the composition of independent claim 1 of the contested patent was novel over document (1) because of the presence of "from 0.1% to 2% aqua ammonia".

It also considered that the subject-matter of independent claim 5 was novel because of the selected pH range in combination with other selected features. This was not contested by the opponents.

The Opposition Division was moreover of the opinion that none of the cited prior art documents taught or indicated how to control the self-limiting action in a water-based hair waving composition as none of them dealt with self-limiting compositions. It therefore concluded that the independent claims 1 and 5 of the contested patent involved an inventive step.

- IV. The appellant lodged an appeal against the said decision.

- V. A main request and two auxiliary requests were filed by the respondent (patentee) on 2 November 2000.

The set of claims of the main request is identical to

the set of claims on the basis of which the patent was maintained in the interlocutory decision of the Opposition Division (see above under III) without dependent claims 4 and 9.

Claims 1 to 8 of the set of claims of the first auxiliary request correspond to claims 5 to 8 and 11 to 14 as granted respectively. Independent claim 9 of this request reads:

9. A water based hair waving composition comprising ammonium thioglycolate and monoethanolamine thioglycolate characterized by presence of ammonium thioglycolate and monoethanolamine thioglycolate in an amount of 9% by weight, the ratio of ammonium thioglycolate to monoethanolamine thioglycolate being 3.5:1, the ammonium thioglycolate being present in an amount of 7% by weight and the monoethanolamine thioglycolate being present in an amount of 2% by weight, and the composition having a pH of 9.2 and comprises 0.85% by weight aqua ammonia.

The set of claims of the second auxiliary request corresponds to the set of claims of the first auxiliary request without independent claim 9.

VI. In a communication dated 16 May 2000, the respondent was informed that the introduction in claim 1 of the main request of the value 7% for the amount of ammonium thioglycolate appeared to contravene Article 123(2) EPC since this value was not disclosed in the original disclosure.

VII. Oral proceedings were held before the Board on 6 December 2000.

VIII. The submissions of the appellant and of opponent O2, in the written procedure and oral proceedings, can be summarised as follows:

They maintained the grounds of opposition under Article 100(b) EPC and under Article 100(a) EPC as to the lack of inventive step of the patent in suit.

The appellant and opponent O2 submitted that, without the knowledge of the precise concentration of ammonia in the reagent "aqua ammonia" as used in the claimed composition, the patent in suit did not contain sufficient information to fulfil the requirements of Article 83 EPC.

As for inventive step, they disputed that document (1) did not deal with self-limiting compositions and argued that this fact was anyway irrelevant since the compositions were the same as those of the contested patent. They also disputed the relevance of the comparative examples of the patent in suit and repeated their objection, raised during the opposition proceedings, that the subject-matter of the patent in suit was not inventive because the use of water-based hair waving compositions, with a basic pH and comprising ammonium thioglycolate and monoethanolamine thioglycolate in weight amounts similar to those of the contested patent, was already known.

They also concluded that the subject-matter of the water-based waving compositions with a pH in the range of from 6.8 to 7.2 was obvious over document (3) which disclosed similar composition with a pH in the range of from 7 to 9.6.

IX. The arguments of the respondent submitted in the written procedure and oral proceedings can be summarised as follows:

In its view, the term "aqua ammonia" was a well-known term in the field. In that respect, with its letter of reply to the statement of grounds of appeal dated 21 May 1998, it submitted a declaration of one of the inventors and an extract of the Merk Index (1960) to show that the skilled person would clearly understand "aqua ammonia" to mean a solution of 28% to 29% by weight of ammonia in water.

As regards inventive step, the respondent argued that the results of the comparative tests in the description of the contested patent showed that, contrary to the prior art compositions, the claimed compositions with a basic pH were not only self-limiting in action but also quick. It also argued that the compositions disclosed in document (3) were remote from the claimed water-based waving compositions with a pH in the range of from 6.8 to 7.2, so that this document was not relevant for the assessment of inventive step.

X. In discussing the meaning of the term "aqua ammonia" used in claim 9 of the first auxiliary request, both the appellant and opponent O2 submitted that the letter of reply to the statement of grounds of appeal dated 21 May 1998 and its attached documents had not been communicated to them. A copy of this letter with its documents was handed to the opponents and the oral proceedings were interrupted to give them an opportunity to study it.

XI. The appellant and the other party (opponent O2)

requested that the decision under appeal be set aside and that European patent No. 0 288 151 be revoked.

In addition, they requested that they be given a further opportunity to comment on the question of the meaning of the term "aqua ammonia" for the skilled person, in case this question turned out to be relevant for the decision of the Board.

The respondent requested that the appeal be dismissed and that the patent be maintained on the basis of one of the requests submitted with the letter dated 30 October 2000 (main request and auxiliary requests 1 and 2).

Reasons for the Decision

1. The appeal is admissible.
2. *Main request*
 - 2.1 Article 123(2) EPC
 - 2.1.1 Claim 1 of the main request is identical to claim 1 on the basis of which the patent was maintained in the interlocutory decision of the Opposition Division (see above under III).

As regards the value of 7% instead of 3% for the amount of ammonium thioglycolate (ATG) plus monoethanolamine thioglycolate (MEATG) introduced in claim 1 of this set of claims, the Board notes that said value was not disclosed in the original disclosure.

This amendment therefore does not fulfil the requirements of Article 123(2) EPC.

2.1.2 The patentee submitted that, although there was no direct basis in the original disclosure for the lower end of the range of ATG plus MEATG being 7% by weight, it was immediately evident from the statement in claim 1 - that ATG was present in the range from 6% to 8% by weight and MEATG was present in the range from 1% to 3% by weight - that the combined lowest percentage of ATG plus MEATG by weight could not be less than 7%. It also argued that this amendment to claim 1 was in essence a disclaimer, disclaiming values between 3% and 7%.

2.1.3 The Board accepts that there was a clear discrepancy in claim 1 as granted between the range of ATG plus MEATG of 3% to 9% and the statement in the same claim that ATG was present in the range from 6% to 8% by weight and MEATG in the range from 1% to 3% by weight.

The Board notes however that the limitation of the amount of ATG plus MEATG to a range from 7% to 9% is not the sole and unique way to suppress this discrepancy since, for instance, an amended range of ATG of **2%** to 8% by weight would also do. Moreover, the **individualised** value of 7% remains in any case a novel feature, not originally disclosed, over the **purely intellectual** disclosure of the sum of the values 1% and 6%.

Nor does the Board accept that the amendment should be allowable as a disclaimer. As a matter of fact, the use of a disclaimer to disclaim a feature not disclosed in the filed document is an exceptional measure that can

only be allowed under very specific circumstances, namely when it excludes the **precise content** of a well-defined **accidental novelty-destroying** prior art (T 596/96 of 14 December 1999 and T 863/96 of 4 February 1999, point 3.2, both cited in EPO Board of Appeal Case Law in 1999, Special ed. of the OJ 2000, Part II, section III.A.1.4), which is not the case here.

Accordingly, the set of claims of the main request is not allowable under Article 123(2) EPC.

3. *First auxiliary request*

3.1 Articles 123(2) and (3) and 84 EPC

No objection under Articles 123(2) and (3) and 84 EPC was raised with respect to this set of claims and the Board sees no reason to differ.

3.2 Article 83 EPC

3.2.1 In response to the objection that, without the knowledge of the precise concentration of ammonia in the reagent "aqua ammonia" as used in the claimed composition, the patent in suit did not contain sufficient information to fulfil the requirements of Article 83 EPC, the respondent submitted, with its letter dated 21 May 1998, a declaration from one of the inventors and an extract from the Merk Index (1960) containing the definition of "aqua ammonia", to show that the skilled person could only understand "aqua ammonia" to mean a solution of 28% to 29% by weight of ammonia in water.

Having regard to these documents and to the disclosure in technically-related prior art document (3), wherein "ammonia water", a synonym for "aqua ammonia", is also unambiguously described as being a water solution of ammonia containing 28% of ammonia, the Board may proceed on the assumption in favour of the respondent that the skilled person understands "aqua ammonia" to mean a solution of 28% to 29% by weight of ammonia in water (see examples, column 5, lines 34 and 35).

Having regard to the outcome of the decision under point 3.4 below, this question can be left undecided.

- 3.2.2 The appellant and opponent O2 submitted that the appellant's letter dated 21 May 1998 and its attached documents had not been communicated to them and therefore requested the opportunity to provide counter-arguments in case this question turned out to be relevant for the Board's decision.

In view of the outcome of the inventive step issue (see below point 3.4), this request is pointless.

3.3 Novelty

No objection under Article 54 EPC was raised with respect to this set of claims and the Board sees no reason to differ.

3.4 Inventive step

- 3.4.1 As independent claim 9 of this request represents a specific embodiment falling within the scope of claim 1 of the main request, considering this subject-matter first appears appropriate.

- 3.4.2 The contested patent relates to water-based hair waving compositions comprising ammonium thioglycolate (ATG) and monoethanolamine thioglycolate (MEATG) which are self-limiting in that they limit further reaction which may degrade the hair.

The Board agrees with the parties that document (1), concerning waving compositions which effectively wave the hair without deleterious effect on it, represents the closest prior art (see page 1, lines 53 to 58).

This document discloses in Example 1 a water-based hair waving composition comprising ATG and MEATG characterised by the presence of ATG and MEATG in an amount of about 11% by weight, the ratio of ATG to MEATG being about 3.5:1, the ATG being present in an amount of about 8% by weight and the MEATG being present in an amount of about 3% by weight, and the composition having a pH of 9.45.

- 3.4.3 The difference between the composition of claim 9 of the first auxiliary request and the composition disclosed in document (1) is that the ATG is present in a weight amount of 7% instead of 8%, the MEATG is present in a weight amount of 3% instead of 2% and the pH is 9.2 instead of 9.45.

Neither the contested patent nor the various documents on file show any particular effect for these differences over prior art document (1).

The Board notes that Example 3 Table II of the contested patent does indeed concern a composition comprising 7% ATG and 2% MEATG. The pH of said composition is however not mentioned in the example.

Moreover, the only passage relating to the pH of the compositions of the comparative examples merely indicates that the pH is "raised to about 9 to 9.5 by addition of ammonia, monoethanolamine or the like". It cannot therefore be concluded that the pH of Example 3 has been raised to 9.2 by the addition of 0.85% by weight aqua ammonia as required by claim 9 of the patent in suit.

The Board agrees with the respondent that the contested patent mentions on page 3, lines 21 and 22, that "at a pH of 9.2 a mixture of 7% ATG and 2% MEATG gave a curl efficiency of 72%". This disclosure is, firstly, in no way related to Example 3 of Table II and, secondly, it gives no information about the time required to achieve said effect.

Moreover, the Board points out that the results obtained in comparative Example 2, which concerns a composition having a proportion of an admixture of ATG and MEATG different from the claimed one (ie 8% ATG and 1% MEATG), are nevertheless identical to those of the claimed composition for the first 30 minutes.

In view of the foregoing, the Board concludes that no particular effect has been demonstrated for the specific combination of features according to claim 9.

Accordingly, the problem to be solved by the subject-matter of claim 1 of the patent in suit as against document (1) can only be seen in the provision of an alternative hair waving composition.

3.4.4 This problem is solved by the particular composition of claim 9 and, in the light of the description of the

patent in suit, the Board is satisfied that the problem has been plausibly solved.

- 3.4.5 Thus the question to be answered is whether the proposed solution, ie providing a composition having the specific pH and comprising ATG and MEATG in the specific weight amount and ratio as stated in claim 9, would have been obvious to the skilled person in the light of the prior art.

Document (1) states that the amount of ATG and MEATG can vary depending on the hair type and that simple experiment may readily determine suitable concentrations of the ingredients. The pH value between 9.4 and 9.7 and the amounts of ATG and MEATG used in Example 1 are moreover merely mentioned as suitable. (See page 1, lines 53 to 68, and page 1, line 70, to page 2, line 4).

Having regard, on the one hand, to the fact that the differences between the claimed composition and the prior art composition disclosed in Example 1 of document (1) are minimal (see point 3.4.2, paragraph 3) and, on the other hand, to the fact that this prior art is clearly not limited to the specific composition of Example 1 (see above), the Board concludes that the particular pH and the particular ATG and MEATG weight amount and ratio of claim 9 of the contested patent represent nothing more than a technical meaningful choice within the general teaching of document (1).

- 3.4.6 The main argument submitted by the respondent was that an improved effect with respect to **speed** and efficiency could be observed for the claimed combination of a specific proportion of an admixture of 7% ATG and 2%

MEATG with a pH of 9.2. The comparative examples of Table II of the patent in suit were referred to in that respect.

- 3.4.7 As no further argument was put forward and as the alleged effect has not been plausibly demonstrated (see above under 3.4.3), the Board judges that the subject-matter of claim 9 of the first auxiliary request of the patent in suit does not involve an inventive step as required by Article 56 EPC.

Since claim 9 of the set of claims of the first auxiliary request is not allowable, there is no need for the Board to consider the remaining claims.

4. *Second auxiliary request*

- 4.1 Articles 123(2) and (3) and 84 EPC.

No objection under Articles 123(2) and (3) and 84 EPC was raised with respect to this set of claims and the Board sees no reason to differ.

- 4.2 Novelty

No objection under Article 54 EPC was raised with respect to this set of claims and the Board sees no reason to differ.

- 4.3 Inventive step

- 4.3.1 The subject-matter of claim 1 of the second auxiliary request concerns water based hair waving compositions comprising ATG and MEATG characterised by the presence of ATG plus MEATG in the range of 3% to 12% by weight,

the ratio of MEATG to ATG being in the range of from 2:1 to 8:1 and the composition having a pH in the range of 6.8 to 7.2.

The Board agrees with the parties that document (3) could be regarded as the closest prior art for the subject-matter of claim 1 of the second auxiliary request since it also contemplates hair waving compositions having a neutral pH.

More particularly, document (3) concerns waving compositions having a pH in the range of 7 to 9.6 and comprising 2 to 5% ATG (column 5, lines 13 to 14, and claim 1).

This document discloses in Example 8 a water based hair waving composition comprising ammonium thioglycolate (ATG) in an amount of 5% and monoethanolamine, diethanolamine, triethanolamine or a mixture thereof in an amount of 1%.

- 4.3.2 The difference between the composition of claim 1 of the second auxiliary request and the composition disclosed in document (3) is that MEATG is present and that, moreover, the ratio of MEATG to ATG is in the specific range of from 2:1 to 8:1.

Neither the contested patent nor the various documents on file contain technical information which allows to deduce any particular effect or advantage for these differences over prior art document (3).

Accordingly, the problem to be solved by the subject-matter of claim 1 of the patent in suit as against document (3) can only be seen in the provision of a

further neutral hair waving composition.

4.3.3 This problem is solved by the particular composition of claim 1, and in the light of the description of the patent in suit the Board is satisfied that the problem has been plausibly solved.

4.3.4 Thus the question to be answered is whether the proposed solution, ie providing a neutral composition comprising not only ATG but also MEATG and in the specific weight amount and ratio as stated in claim 1, would have been obvious to the skilled person in the light of the prior art.

In the absence of counter-arguments, the Board accepts the submissions of the appellant and opponent O2 made during oral proceedings that neutral hair waving compositions are usual in the field and needed for treating fragile hair (see point 4.3.5 below).

In this respect, document (3) confirms that the pH of the hair waving mixture may be adjusted to 7 to 9.6. This document is however silent on any practical means to that end. Instead, all the examples of this specification contain caustic potash or caustic soda and 28% ammonia water. Example 8, for instance, contains 2.4 g of 28% ammonia water and 0.1 g of potash or caustic soda. In other words, all the concrete examples given in this prior art obviously concern basic compositions.

Moreover, since the addition of MEATG in a **neutral** hair waving composition is not foreseen at all in document (3), there is nothing to indicate that a specific amount and ratio of MEATG to ATG must be respected (ie

in the range of from 2:1 to 8:1) either.

In that respect, document (1) does disclose the presence of MEATG in hair waving compositions. This teaching is however related to **basic** hair waving compositions, and moreover, the ratio of MEATG to ATG advocated in this document (ie 1:2 to 8:1) is precisely the **reverse** of the one prescribed in claim 1.

Accordingly, the Board concludes that nothing in the available prior art suggested to the skilled person the features of the neutral hair waving composition according to claim 1 of the second auxiliary request.

4.3.5 The main argument submitted by the appellant and opponent O2 was that as a rule, in the field of hair waving, hair waving compositions were available at a pH in the range of 7 to 10. In fact, the waving efficiency and the deleterious effect on the hair of hair waving compositions were known to increase with increasing pH. Therefore, in practice, the pH of the hair waving composition to be used was primarily dependent on the quality of the hair to be treated as a compromise between efficiency and damage had to be found. Accordingly, they argued that no inventive step could be acknowledged for the claimed neutral hair waving composition, which was obvious in relation to the disclosure in document (3) and in particular Example 8.

4.3.6 The Board accepts that a hair waving composition does not, *a priori*, involve an inventive step merely because of its neutral pH. The relevant question is, however, whether or not the combination of a neutral pH with the other features of the claimed compositions (ie the presence of not only ATG but also MEATG and their

specific weight amount and ratio as stated in claim 1) was obvious vis-à-vis the teaching of document (3) and by taking account of the common general knowledge in the particular field.

As no further argument was put forward in that respect, the Board's considerations and conclusions under point 4.3.4 hold good.

Accordingly, the Board considers that the subject-matter of claim 1 of the second auxiliary request of the patent in suit involves an inventive step as required by Article 56 EPC. The same applies to its dependent claims 2 to 8.

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 maintain the patent with claims 1 to 8 submitted as auxiliary request 2 in the letter dated 30 October 2000 and a description yet to be adapted.

The Registrar:

The Chairman:

A. Townend

U. Oswald