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Datasheet for the decision of 17 December 2013

Case Number: T 2492/10 - 3.3.07

Application Number: 05023847.6

Publication Number: 1655056

IPC: A61Q5/04, A61Q5/10, A61K8/00, A61K8/365

Language of the proceedings: EN

Title of invention:
Process to colour and permanently restructure hair

Patent Proprietor:
Wella GmbH

Opponents:
Henkel AG & Co. KGaA
Kao Germany GmbH

Headword:

Relevant legal provisions:
EPC Art. 100(a)

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

Decisions cited:

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Case Number: T 2492/10 - 3.3.07

D E C I S I O N
of Technical Board of Appeal 3.3.07
of 17 December 2013

Appellant: (Opponent 1)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
Representative:	Henkel AG & Co. KGaA Intellectual Property (FJI) 40191 Düsseldorf (DE)
Appellant: (Opponent 2)	Kao Germany GmbH Pfungstädter Strasse 92-100 64297 Darmstadt (DE)
Representative:	Grit, Mustafa Kao Germany GmbH Pfungstädterstraße 92-100 64297 Darmstadt (DE)
Respondent: (Patent Proprietor)	Wella GmbH Sulzbacher Strasse 40 65825 Schwalbach am Taunus (DE)
Representative:	Holmes, Rosalind Procter & Gamble Service GmbH Patent Department Berliner Allee 65 64274 Darmstadt (DE)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted on 4 November 2010 rejecting the oppositions filed against European patent No. 1655056 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman:	J. Riolo
Members:	D. Semino
	D. T. Keeling

Summary of Facts and Submissions

I. The appeals of opponents 1 and 2 lie against the decision of the opposition division announced at the oral proceedings on 11 October 2010 to reject the oppositions against European Patent 1 655 056. The granted patent comprised 15 claims, claim 1 reading as follows:

"1. Process to color and permanently restructure hair, wherein
(a) an oxidative hair colorant is applied to the hair based on at least one developer substance and least one coupler substance,
(b) the oxidative hair colorant is left on for 5 to 60 minutes,
(c) the oxidative hair colorant is rinsed out of the hair,
(d) an acidic intermediate treatment agent with a pH of from 2 to 6 is applied to the hair,
(e) after an action period of from 1 to 10 minutes, the intermediate treatment agent is rinsed out, if necessary, and the hair is then rolled up onto curlers,
(f) a keratin-reducing permanent restructuring agent is applied to the hair,
(g) after an action period of from 1 to 30 minutes, the keratin-reducing agent is rinsed out, if necessary,
(h) the hair is fixed with an oxidative material,
(i) after an action period of from 3 to 15 minutes, the hair is rinsed with water, if necessary, and then treated with an acidic rinse."

II. Two notices of opposition were filed against the granted patent requesting revocation of the patent in its entirety on the grounds of lack of novelty and lack

of inventive step in accordance with Article 100(a) EPC.

III. The decision of the opposition division was based *inter alia* on the following documents:

D1: A.B. Coletti, "Cosmetology - The Keystone Guide to Beauty Culture", 6th edition, Keystone Publications, 1979, page 118
D2: H. Möller et al., "Chemie Arbeitsverfahren und Warenkunde in der modernen Friseurpraxis", 2nd edition, Handwerk und Technik, 1971, page 89
D3: EP-A-0 685 219
D4: EP-A-0 636 357
D7: Attenberger, "Fachkunde für Friseure", Kieser Verlag GmbH, 1992, pages 163-174 and 185-196
D8: Attenberger, "Fachkunde für Friseure. Grundlage und Technologie der Haar und Hautpflege", Paul Kieser Verlag GmbH, 1982, pages 166-193
D10: Experimental Report filed by the patent proprietor with letter of 27 August 2010 (referred to as Annex A in the decision)

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

a) The process of granted claim 1 was novel over the disclosure in D7 and D8, as they did not disclose the pH range and action period of the acidic intermediate treatment agent, the action period of the fixing agent and the final acidic rinse.

b) Taking D7 or D8 as the closest prior art, the decisive distinguishing feature was the presence of an intermediate acidic rinse at a certain pH

and for a certain time, by means of which an improvement in the maintenance of color intensity was obtained. As D7 and D8 suggested performing an intermediate step, but were silent as to its composition, the comparative data in D10, which were the only data available on file, were sufficient evidence to show such an effect. The problem effectively solved was therefore the provision of a process combining coloring and permanently restructuring hair having improved coloring effects. None of the documents cited by the opponents rendered it obvious to use the specific intermediate acidic rinse in order to improve the maintenance of hair color in a combined coloring and permanently restructuring process, as D7 and D8 were silent on the possible composition of an intermediate treatment, and D1, D2 and D3 disclosed per-perm compositions in different contexts and with little information on the actual composition. On that basis, the subject-matter of granted claim 1 involved an inventive step.

V. Both opponents (appellants) appealed that decision. With the statement of grounds, both of them submitted document D11 (K. Schrader, "Grundlage und Rezepturen der Kosmetika", Hüthig Buch Verlag Heidelberg, 1989, pages 722-733 and 822-835).

VI. With letter of 16 October 2013 the patent proprietor (respondent) filed nine sets of claims as auxiliary requests 1 to 9.

VII. Oral proceedings were held on 17 December 2013.

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

Novelty

a) All of the differences indicated by the opposition division as distinguishing the process of claim 1 over the disclosure of D7 could not be identified as such. In particular, the pH and time of the intermediate step which was defined as "Haarkur" in D7 were part of the common general knowledge of what the skilled person understood under that term, as attested by D11. The last step of the process was irrelevant, as not present in the tests in D10 which were meant to reproduce the claimed process, and had therefore to be excluded in the evaluation of novelty.

Inventive step

b) Documents D7 and D8, which included a very similar teaching and could both be considered as closest prior art, were textbooks disclosing details about the coloring and the restructuring process and disclosing the possibility of running the two processes in sequence with an intermediate step defined as "Haarkur". The tests of D10 did not support the presence of an effect of the acidic intermediate treatment with respect to D7 or D8. They were not a reproduction of the closest prior art, as the comparative tests did not contain any intermediate treatment; while it was true that D7 and D8 did not give any detailed example, the meaning of "Haarkur" was clear to a skilled person, as attested by D11, which for the term "Haarkur" indicated that it had necessarily to be

acidic and indicated usual values of the pH and of the application time. In addition, for the tests according to the invention in D10 the pH of the acidic intermediate treatment was not given and the composition was not homogeneous due to the presence of solid and creamy products. Moreover, the variation in ΔE was not relevant, as due to the error bars no significant difference could be identified and as the small difference present could not be distinguished by the naked eye. As the onus to prove the presence of a technical effect lay with the proprietor and it had not been discharged, the solved problem was simply that of finding a further process. The addition of an acidic treatment with a given action time was obvious in view of D11, which indicated what was meant by "Haarkur", of D3 and D4, which disclosed acidic pre-perm treatments and also of D7 and D8 themselves, which disclosed an acidic treatment after coloring for neutralisation purposes. On that basis, the sequence of steps of the process of claim 1 corresponded to a sequence of known and usual measures and could not be acknowledged to be inventive.

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

Novelty

a) The process of claim 1 included nine steps in a specific sequence and with specific limitations which were not disclosed directly and unambiguously in D7. In particular the term "Haarkur" did not necessarily imply a specific pH and action time; a "Haarkur" could be acidic, but

was not necessarily so. All four differences identified in the decision under appeal with respect to the disclosure of D7 had to be acknowledged.

Inventive step

b) Documents D7 and D8 as closest prior art differed from the process of claim 1 in the four features identified in the decision under appeal. The tests in D10 showed that by means of the claimed process improved coloring and maintenance of color intensity could be obtained. The comparative tests therein were the fairest and most accurate reproduction of the closest prior art which was possible, as the relevant parts of D7 and D8 did not contain any examples which could be reproduced as such. While D11 indicated that a "Haarkur" could be acidic, it was not necessarily so; in this respect the appellants had cited some passages of D11 out of context. The other objections to the tests in D10 were speculations of the appellants with no foundation. There had been no attempts by the appellants to reproduce the tests, which were the only concrete experiments on file. In particular, a reduction in ΔE due to the addition of the specific intermediate treatment was shown by the tests and there was no evidence that such a reduction was not significant and not relevant. The solved problem was therefore the provision of a combined process with improved coloring and maintenance of color intensity. D7 and D8 indicated different routes for the combined process with respect to the claimed one and no hints at the proposed solution could be found in the other available

documents. To disregard the advice in D7 and D8 and to combine their teaching with specific elements of D11 could only be the result of an *ex post facto* analysis. Based on the available evidence the presence of an inventive step had to be acknowledged.

X. The appellants requested that the decision under appeal be set aside and the European patent be revoked.

XI. The respondent requested that the appeals be dismissed and the patent be maintained as granted or, in the alternative, on the basis of one of the auxiliary requests 1 to 9 filed with letter of 16 October 2013.

Reasons for the Decision

Novelty

1. Document D7 discloses a process to color and permanently restructure hair in which coloring takes place first, followed by restructuring (page 196, middle column, bottom table, central column; right column, last but one paragraph, last but one sentence).

1.1 While the section of D7 relating to color and restructuring in combination (page 196) does not give specific details of the two processes, the document contains lengthy sections relating to coloring (pages 185 to 195) and restructuring (pages 163 to 174) in which the usual steps of coloring and restructuring are illustrated, including, as far as coloring is concerned, application of an oxidative hair colorant on a developer and a coupler, which is thereafter rinsed (page 188, right column; pages 192 and 193), and, as far as restructuring is concerned, application of a

keratin-reducing permanent restructuring agent, rinsing thereof and then application of an oxidative fixing material followed by rinsing (page 165, right column; page 169, left column; page 173 and page 174, left column).

1.2 While the disclosure of these general steps and of the sequence coloring followed by restructuring was agreed by all parties, it was disputed by the appellants that the four features which were identified as distinguishing for the process of claim 1 with respect to the disclosure of D7 in the decision under appeal, namely the pH range and action period of the acidic intermediate treatment agent, the action period of the fixing agent and the final acidic rinse, were to be acknowledged as such.

1.3 As far as the final acidic rinse is concerned, the only argument of the appellants, who acknowledged the lack of a disclosure of such a step in D7, was that this step was irrelevant, as it was not even present in the tests meant to reproduce the claimed process and had therefore to be disregarded. Such an argument cannot be considered as satisfactory by the Board. There is no doubt that the application of an acidic rinse in a process for coloring and restructuring is a technical feature of the claimed process and as such cannot be disregarded in the analysis of novelty, regardless of whether such a step provides effects or advantages and whether it appears in the conducted tests or not. Novelty is therefore to be acknowledged on the basis of such a feature alone.

1.4 In addition, with regard to the action period of the fixing agent, no disclosure of a specific value or of a

range can be found in D7. Nor has any such disclosure been indicated by the appellants.

1.5 As to the acidic intermediate treatment in step (d) and (e) of granted claim 1, D7 discloses that, when it is desired to accomplish coloring and restructuring one after the other, one can mitigate the mutual interference by running an intermediate step indicated in D7 as "Haarkur" (page 196, last paragraph). However, no values are given in D7 with regard to the pH or the action period of that intermediate treatment.

1.6 With respect to the pH and action time of a step defined as "Haarkur" it remains to be determined whether values falling within the ranges of granted claim 1 can be considered as implicitly disclosed by the term "Haarkur" in view of the disclosure of D11 as supported by the appellants.

1.6.1 D11 is an extract from a cosmetic handbook in German, which contains a section concerning means for hair after-treatment ("Haarnachbehandlungsmittel", see section 2.2.6 starting on page 722). Also compositions described as "Haarkuren" are stated to belong to this general class (page 722, section 2.2.6, third sentence). The general class of means for hair after-treatment is subdivided into products which are washed off and products which stay on the hair (paragraph bridging pages 722 and 723); as to the former products it is stated that the action period is in general between 5 and 30 minutes (page 723, first full paragraph). A list of terms indicating means for hair after-treatment is then given (page 723, table in the middle of the page), including "Haarkur" (tenth term of the left column), followed by the general indication that is is difficult to classify the existing products

according to this terminology, as the terms are ambiguous and also subjective.

1.6.2 A subsection of D11 concerns more specifically "Haarkuren" (subsection 2.2.6.5, starting on page 729). It is stated that they are offered as specific treatment for damaged hair and for the scalp and that they are not applied often, but in largely spaced intervals and remain relatively long on the hair (page 729, subsection 2.2.6.5, first two sentences). In the subsection it is further stated that the addition of acids, such as citric and lactic acid, leads to the improvement of some hair properties (page 730, fourth paragraph from the bottom) and that "Haarkuren" as well as other similar products ("Haarkurspülungen") should be acidic, wherein the pH of normal products lies between 4,5 and 5,5 and in special products lower values (around 1,5 to 2,5) are used (page 732, last paragraph).

1.6.3 The Board cannot consider the disclosure of D11 as pointing unequivocally to the conclusion that the term "Haarkur" alone in D7 would imply an action time of 1 to 10 minutes and a pH in the range 2 to 6. There is actually no indication in D11 of an action time specific for "Haarkuren", which are stated to remain relatively long on the hair, while values partially overlapping with the action time in the claim (5 to 30 minutes) are indicated as usual action times for a much more general class of products. Also with regard to the pH, while values partially overlapping with the range in the claim are mentioned, there is no unambiguous disclosure that a product described as "Haarkur" must necessarily have a pH between 2 and 6. In addition the general sentence indicating that the terms used in this field have generally an ambiguous and subjective

meaning reinforces the fact that the term "Haarkur" alone cannot imply for a skilled person reading that term in D7 any direct and unambiguous disclosure of a specific pH value and a specific action time.

1.7 The process of granted claim 1 is therefore new with respect of the disclosure of D7 on the basis of the distinguishing features as identified in the decision under appeal.

Inventive step

2. *Closest prior art*

2.1 In the decision under appeal and in the arguments of the parties documents D7 and D8 have been considered as the closest prior art and essentially the same arguments have been developed starting from one or the other of the two documents. The Board has no reason to depart from that choice.

2.2 A detailed analysis of document D7 has been carried out in the section related to novelty (see point 1, above). Essentially the same considerations apply to document D8, which with regard to a process to color and permanently restructure hair in sequence contains a practically identical disclosure to the one of D7 (see section 9.3.8 of D8 on page 193 and section 3.7 of D7 on page 196). In particular, with regard to the critical feature of an intermediate treatment between coloring and restructuring, documents D7 and D8 include exactly the same sentence with a reference to "Haarkur" (see D8, page 193, last sentence and D7, page 196, last sentence), which has not been considered as implying any direct and unambiguous disclosure of a

specific pH value and of a specific action time in the analysis of novelty (see point 1.6, above).

3. *Problem solved*

3.1 With regard to the problem solved by the process of granted claim 1, it was disputed by the appellants that the evidence on file represented by document D10 supports the presence of an improvement in maintenance of color intensity, thereby avoiding a strong loss in color as a result of restructuring after coloring. This effect, which in line with the object in the patent in suit (see paragraphs [0011], [0012] and [0015] in the patent), has been claimed by the respondent to be related to the specific acidic intermediate step as evidenced by D10, while no effect has been associated with the addition of the other distinguishing features with respect to the process of D7 or D8.

3.2 Document D10 contains the results of a number of tests undertaken by the respondent.

3.2.1 In particular tests #02, #03 and #04 concern processes in which coloring and restructuring are accomplished using several known oxidative hair colorants, developers and keratin-reducing permanent restructuring agents with an intermediate acidic treatment according to granted claim 1 (see section II.2 of D10 on pages 5 and 6 for the treatment compositions; section III on page 6 for a schematic representation of the treatments; section IV on pages 6 and 7 for a detailed description of the processes). As far as the intermediate treatment is concerned, an aqueous composition including among others 2,0% citric acid by weight of the total composition (see section II.2.3 on page 5) was applied for 4 minutes (hair is rubbed with

the composition for 1 minute and then left stand for 3 minutes, see section IV.2 on pages 6 and 7).

3.2.2 Comparative tests #06, #07 and #08 concern processes which are identical to those of tests #02, #03 and #04 respectively with the exception that the intermediate acidic treatment is not carried out.

3.2.3 The color loss for the processes including the intermediate acidic treatment and for those without that treatment is shown in Table III of D10 (page 4). The measured value ΔE refers to the loss in color after the restructuring treatment with respect to the color after dying (as defined in section V.3 on pages 8 and 9). In all three cases (process #02 vs process #06; process #03 vs process #07; process #04 vs process #08) the color loss when the process includes the intermediate acidic treatment is smaller than when that intermediate treatment is omitted (Table III on page 4).

3.3 The relevance of the results in D10 was disputed by the appellants based on a number of alleged weaknesses of the tests and of the results, namely that the pH of the intermediate acidic treatment is not given, that the composition used for such a treatment is not homogeneous and that the variation in ΔE is not relevant, and due to the lack of an intermediate treatment in the comparative tests, which could not be considered on that basis a reproduction of the closest prior art, in which an intermediate "Haarkur" was disclosed.

3.3.1 As to the alleged weaknesses of the tests, they were not supported by evidence on the side of the appellants. In spite of the fact that the precise

composition of the intermediate treatment was given (section II.2.3 in D10) and that it is credible in view of the presence of the citric acid that the pH falls within the range in granted claim 1, the appellants did not provide any measurement or calculation to support the view that the composition did not have a pH within the range. As to the lack of homogeneity of the composition which could render its application difficult, again no evidence was provided that such was the case. With regard to the relevance of the differences in ΔE, in spite of the presence of error bars a clear trend could be seen that smaller values were obtained when an intermediate acidic treatment was undertaken and no evidence was available that the measured difference of one unit was insignificant, as the appellants contended. As each of the parties bears the burden of proof for the facts they allege (Case Law of the Boards of Appeal of the EPO, 7th edition 2013, III.G.5.1.1), in the absence of evidence on the side of the appellants, these arguments concerning the tests in D10 must be disregarded.

3.3.2 With regard to the lack of reproduction of D7 or D8 in view of the absence of an intermediate treatment in the comparative tests, the Board notes that documents D7 and D8 do not contain any detailed example which can be reproduced. In particular with regard to the possibility of an intermediate treatment, it is indicated that one could insert a step called "Haarkur" without giving any information on a possible composition or a possible duration of the treatment.

3.3.3 Under such circumstances the comparative tests in D10 can be considered as a reasonable attempt on the side of the respondent to produce a comparison with the disclosure of D7 and D8.

3.4 In the absence of any counter-evidence on the side of the appellants, the Board has no element to put into question the validity of the tests meant to show the desired effect and and it is therefore accepted that the tests in D10 show that an improvement in maintaining color intensity is obtained by modifying the process of D7 and D8 with the addition of an intermediate acidic treatment as in granted claim 1.

3.5 On that basis the problem solved by the process of granted claim 1 with respect to those of document D7 or D8 is the provision of a process for coloring and restructuring hair in which the color intensity obtained by coloring is maintained and whereby the loss in color due to restructuring is minimized.

4. *Obviousness*

4.1 It remains to be analysed whether the addition of an intermediate acidic treatment with a pH and an action time within the ranges of granted claim 1 is an obvious solution to the posed problem in view of the evidence cited by the appellants.

4.2 None of the documents cited by the appellants in this respect gives any hint that an intermediate acidic treatment at a pH between 2 and 6 and with an action period of 1 to 10 minutes is a solution to the problem solved by the process of granted claim 1.

4.2.1 Document D3 discloses a hair treatment composition comprising among others 0,01 to 2,0% by weight of an organic acid (claim 1) with a most preferred pH in the range 2,5 to 4,5 (column 4, lines 48 to 50) and a typical action time of 5 to 15 minutes (column 7, lines

23 to 26). The hair treatment composition is used as a pre-treatment composition for a permanently restructuring process (claim 11) in order to protect the hair, in particular the hair tips, during the restructuring process, to permit a uniform shaping of the hair and to give luster to the hair without stressing it (column 2, lines 14 to 39). A similar disclosure is to be found in document D4 (claim 1; page 3, line 31; page 4, lines 48 and 49; page 2, lines 35 to 45). Neither of the documents makes any reference to the possibility of maintaining the color intensity or avoiding color loss of hair which has been previously colored by means of the application of the disclosed compositions.

4.2.2 Nothing more could be derived from the documents already discussed, as documents D7 and D8 generically mention the insertion of an intermediate "Haarkur" to mitigate the mutual interference of the coloring and the restructuring steps without defining what is meant by "Haarkur", nor specifying which interference should be mitigated (see points 1.5 and 2.2, above) and document D11 discusses "Haarkur" among many other possible hair treatments without mentioning the possibility of maintaining color intensity and avoiding color loss caused by a restructuring step (see point 1.6, above).

5. On that basis it is concluded that none of the arguments provided by the appellants is strong enough to call in question the decision under appeal, as no further evidence has been provided on the critical issues relevant to the formulation of the problem solved which could disqualify the evidence in D10 and no evidence on file hints at the key distinguishing feature (the intermediate acidic treatment at a certain

pH and for a certain time) in order to solve the posed problem.

5.1 In view of that the Board can only conclude that the decision of the opposition division that the process of granted claim 1 involves an inventive step should be upheld.

Order

For these reasons it is decided that:

The appeals are dismissed.

The Registrar: The Chairman:

L. Fernández Gómez J. Riolo

Decision electronically authenticated