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**Datasheet for the decision  
of 14 December 2022**

**Case Number:** T 0586/20 - 3.3.10

**Application Number:** 13722366.5

**Publication Number:** 2846758

**IPC:** A61K8/04, A61K8/19, A61K8/81,  
A61Q5/06, A61K8/02

**Language of the proceedings:** EN

**Title of invention:**  
AEROSOL DEVICE BASED ON A CALCIUM SALT AND A FIXING POLYMER

**Patent Proprietor:**  
L'Oréal

**Opponent:**  
Henkel AG & Co. KGaA

**Headword:**

**Relevant legal provisions:**  
EPC Art. 54, 56

**Keyword:**  
Main request - Novelty (yes)  
Main request - Inventive step (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**

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Case Number: T 0586/20 - 3.3.10

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.10**  
**of 14 December 2022**

**Appellant:** L'Oréal  
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**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
7 January 2020 concerning maintenance of the  
European Patent No. 2846758 in amended form.**

**Composition of the Board:**

**Chairman** P. Gryczka  
**Members:** A. Zellner  
T. Bokor

## Summary of Facts and Submissions

- I. The appeals of the opponent and the proprietor of the patent lie from the decision of the opposition division to maintain European patent No. 2 846 758 in amended form under Article 101(3) (a) EPC.
- II. Notice of opposition had been filed on the grounds of lack of novelty and lack of inventive step (Article 100(a) EPC), as well as insufficiency of disclosure (Article 100(b) EPC).
- III. Reference is made to the following documents, relevant to the present decision:
- D1: DE 10 2009 054 978 A1
  - D4: US 2004/0170575 A1
  - D5: DE 10 2006 045964 A1
  - D6: LAPONITE-XLG XR
  - D8: CTFA Hair Fixatives
  - D9: CTFA Oryza Sativa (Rice) Starch
  - D10: CTFA ALUMINIUM STARCH OCTENYLSUCCINATE
  - D13: LAPONITE-XLS XR
  - D14: Comparative experiments (Essais Comparatifs), submitted by the proprietor on 21 August 2019
  - D15: CTFA Film Formers
  - D16: International Cosmetic Ingredient Dictionary and Handbook, Eight Edition 2000, CORN STARCH /ACRYLAMIDE/SODIUM ACRYLATE COPOLYMER
  - D18: CTFA Hydrolyzed Corn Starch Octenylsuccinate
  - D19: International Cosmetic Ingredient Dictionary and Handbook, Eight Edition 2000, STARCH/ACRYLATES/ACRYLAMIDE COPOLYMER

- IV. In the opposition proceedings, the patent proprietor defended the patent in amended form.

In its decision, the opposition division came to the conclusion that the main request met the requirements of Article 123(2) and (3) EPC as well as Article 83 EPC. The opposition division further concluded that the claimed subject-matter was novel in view of D1 to D3 (Article 54 EPC), but was not based on an inventive step considering document D1 as closest prior art (Article 56 EPC).

The claims of auxiliary request 1 were held to be clear and the claimed invention to be sufficiently disclosed (Articles 84 and 83 EPC). The claimed subject-matter was also considered to be novel in view of D1 to D3 (Article 54 EPC), and based on an inventive step in view of D4 as closest prior art (Article 56 EPC).

- V. This decision was appealed by both parties.

According to the appellant proprietor (hereinafter the proprietor), the opposition division erred when holding the subject-matter of claim 1 of the main request to lack an inventive step (Article 56 EPC). The proprietor filed with its grounds of appeal a main request, corresponding to the main request in opposition, and auxiliary requests 1 to 7.

The appellant opponent (hereinafter the opponent) argued that the division erred when holding the subject-matter of claim 1 of the main request to be novel over D1 (Article 54 EPC). The amended claim 1 of auxiliary request 1 added subject-matter (Article 123(2) EPC).

VI. In reply to the opponent's appeal, the proprietor filed auxiliary requests 3 to 5 and 10 to 12. The previously filed auxiliary requests 3 to 6 and 7 were renamed auxiliary requests 6 to 9 and 13, respectively.

VII. In a communication under Article 15(1) RPBA the Board informed the parties of its preliminary opinion on the ground of opposition under Article 100(a) EPC and the issues to be discussed during the oral proceedings.

VIII. Oral proceedings were held on 14 December 2022.

IX. Claim 1 of the main request reads as follows:

*"Aerosol device containing a cosmetic composition comprising:*

- (i) from 0.1% to 15% by weight relative to the total weight of the composition, of one or more water-insoluble calcium salts, the one or more water-insoluble calcium salts including calcium carbonate and /or calcium stearate,*
- (ii) one or more fixing polymers,*
- (iii) one or more C<sub>2-4</sub> monoalcohols, and*
- (iv) one or more propellants."*

X. The proprietor's arguments can be summarised as follows:

Neither the examples, nor the preferred embodiments (A) to (L), nor the general disclosure of D1 disclosed an aerosol device comprising a cosmetic composition according to claim 1 of the main request. D1 did not disclose a fixing polymer in the meaning of the patent, nor did it directly and unambiguously disclose the combination of all of the remaining features of the claim. Novelty was thus given (Article 54 EPC).

The D4 was to be considered closest prior art. The claimed device differed from the example 3 of document D4 in the nature of the water-insoluble calcium salt, *i.e.* calcium carbonate and/or calcium stearate instead of Laponite XLS. This difference led to more volume and body of hair when treated with the composition of claim 1. Since the prior art did not disclose a link between the differing feature and the technical effect, inventive step had to be acknowledged (Article 56 EPC).

Even if, as argued by the opponent, document D1 were seen as closest prior art, inventive step would still be present, since the use of a composition comprising a fixing polymer instead of rice starch would lead to an unexpected effect, as shown by the experiments in D14.

XI. The opponent's arguments can be summarised as follows:

The aerosol device according to claim 1 of the main request was not novel in view of D1 (Article 54 EPC). D1 disclosed in par. [0005] a cosmetic composition comprising all of the ingredients in claim 1 of the main request, in particular in view of at least par. [0003], [0010], [0022] and [0023]. According to the opponent, D1 only required a single selection - calcium distearate in par. [0022] - in order to arrive at the subject-matter of claim 1 of the main request. The device was also not novel in view of par. [0040] of D1.

D1 was a more suitable closest prior art than D4. The claimed device differed from D1 in that it comprised a composition comprising calcium stearate and a fixing polymer. A technical effect, however, has only been shown for the fixing polymer. The forming effect of a fixing polymer was, however, known and the solution provided was thus not based on an inventive step.

Starting from D4 as closest prior art, the claimed device was still not inventive, because the differing feature, *i.e.* calcium carbonate and/or calcium stearate, did not lead to an unexpected technical effect and the use of these compounds was known in the field. The device comprising a cosmetic composition according to claim 1 of the main request did thus not involve an inventive step.

XII. The appellant proprietor requests that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed on May 18, 2020. Auxiliarily they request to maintain the patent on the basis of auxiliary requests 1 to 13.

XIII. The appellant opponent requests that the decision under appeal be set aside and the patent be revoked, and the non-admission of auxiliary requests 1 and 8. The request not to admit D15 to D21 was withdrawn during the oral proceedings.

## **Reasons for the Decision**

### *Main request - Novelty (Article 54 EPC)*

1. The opponent challenged the decision of the opposition division concerning novelty of the claimed aerosol device in view of D1. They argued that D1 disclosed the combination of the features "*one or more C<sub>2-4</sub> monoalcohols*" and "*from 0.1% to 15% by weight relative to the total weight of the composition, of one or more water-insoluble calcium salts, the one or more water-insoluble calcium salts including calcium carbonate and / or calcium stearate*". This was disputed by the proprietor. The parties also disagreed whether D1



disclosed a "*fixing polymer*".

2. The Board finds the proprietor's arguments convincing.

2.1 D1 discloses aerosol devices comprising cosmetic compositions (see paragraphs [0001], [0072] and [0080]). The compositions comprise a cosmetic carrier, a starch compound, a monocarboxylic acid compound, and a blowing agent (see paragraph [0005] and claim 1). These ingredients are further defined in paragraphs [0008] to [0010], [0012] to [0018], [0019] to [0023] and [0025] to [0027], respectively. D1 further discloses preferred embodiments of the cosmetic compositions (embodiments (A) to (L), see paragraphs [0029] to [0040]), as well as specific examples thereof (examples E1 to E3, see paragraph [0079]).

2.2 The Board concludes that the device of claim 1 of the main request is novel over examples E1 to E3.

2.2.1 The parties agreed that the claimed device comprised a calcium salt as ingredient (i), whereas the compositions in the examples E1 and E3 of D1 contained zinc- or magnesium distearate, but no calcium salt.

The Board concurs. For that reason alone, the claimed device is novel over the examples E1 to E3 of D1.

2.2.2 The cosmetic composition according to claim 1 of the main request furthermore comprises "*one or more fixing polymers*". D1 discloses in examples 1 and 2 compositions comprising a rice starch. The opponent argued that rice starch is a fixing polymer, at least considering the definition according to paragraph [0025] of the description of the contested patent.

The Board disagrees. D1 does not disclose that rice starch is a fixing polymer, it refers in paragraph [0003] to cosmetic compositions for temporary hair forming, which concerns prior art. The compositions referred to comprise natural or synthetic polymers as a forming component. These polymers can be considered fixing polymers. In the same paragraph, reference is made to dry shampoos for degreasing hair, which contain starch. The paragraph does not, however, directly and unambiguously disclose that the starch, which is contained in the dry shampoos for degreasing, serves the same purpose as the natural or synthetic polymers used in hair forming compositions. This conclusion also holds in view of paragraph [0025] of the patent, which defines the term "*fixing polymer*" as "*any polymer capable of conferring shape on a head of hair or of maintaining a head of hair in a given shape.*" D1 also does not disclose that the starch contained in the dry shampoos for degreasing hair maintains a head of hair in a given shape.

2.2.3 The parties referred to additional documents for supporting their views that starch, in particular rice starch, is a fixing polymer, or not. None of the documents relied upon supports the opponent's view:

- D8 discloses hair fixing polymers. It provides a list of film formers which are believed to be particularly suitable hair fixatives (see page 1, first paragraph). Not every film former is thus necessarily a hair fixative. Rice starch is not on the list. D8 and D17 disclose "*hydrolyzed hydroxypropyl starch octenylsuccinate*" as hair fixative (see page 2, entry 19). There is, however, no disclosure that this also applies to rice starch, or to aluminium starch octenylsuccinate

according to paragraph [0014] of D1.

- D15 concerns film formers. Although it discloses several (corn) starch based compounds, e.g. corn starch/acrylamide/sodium acrylate copolymer (see page 4, entry 48), D15 refers to "*Hair fixatives*" (D8) in the context of that specific use. D8, however, fails to disclose that starch compounds according to D1 are fixing polymers (see above). Furthermore, although corn starch/acrylamide/sodium acrylate copolymer is a film former as well as a hair fixative (see D16, last column, second paragraph, "Functions"), this has not been shown to be the case for other compounds listed in D15.
- D18 and D19 disclose that hydrolyzed corn starch octenylsuccinate as well as starch/acrylates/acrylamide copolymer are film formers. Use of these compounds as fixing polymers is not disclosed.
- D9 and D10 disclose that rice starch, as well as aluminium starch octenyl succinate, (both compounds disclosed in document D1) are known for their function as absorbents. Their function as fixing polymers are not disclosed.

2.2.4 The Board concludes that the terms "*film former*" and "*fixing polymer*" are not synonymous. They describe different properties of chemical compounds. The Board also concludes that not every compound having film forming properties is also known to have fixing properties. Therefore, none of the documents referred to above supports the view that rice starch is a fixing polymer. Neither does any of these documents disclose that all of the polymers disclosed in D1 are fixing polymers in the sense of the contested patent, in

particular in view of paragraph [0025].

- 2.2.5 The claimed device is thus also novel in view of the examples of document D1 for this additional reason, *i.e.* the presence of a *"fixing polymer"*.
- 2.3 According to the opponent the claimed aerosol device was not novel in view of preferred embodiment (L) (see paragraph [0040]) of D1. The Board comes to the conclusion that this is not the case.
- 2.3.1 The cosmetic composition of claim 1 of the main request comprises *"one or more C<sub>2-4</sub> monoalcohols"*, whereas the composition of embodiment (L) of D1 comprises an alcohol comprising 2 to 6 carbon atoms and 1 to 3 hydroxyl groups. A composition comprising an alcohol having one hydroxy group must be selected from the more generic disclosure of embodiment (L) of D1.
- 2.3.2 Although, as argued by the opponent, the monoalcohol ethanol is a preferred alcohol according to paragraph [0010] of D1, the compound still has to be selected, since the document discloses further specific alcohols.
- 2.3.3 The cosmetic composition according to claim 1 furthermore comprises *"one or more water-insoluble calcium salts including calcium carbonate and/or calcium stearate"*. The composition according to embodiment (L) of document D1 comprises a C<sub>8-20</sub> mono carboxylic acid compound selected from a list of 8 compounds, one of them being calcium distearate. A composition comprising that compound is also a composition to be selected from the more generic disclosure of embodiment (L) of D1.

- 2.3.4 The double selection of a specific alcohol and a specific calcium salt already confers novelty to the device according to claim 1 of the main request.
- 2.3.5 Furthermore, the cosmetic composition according to claim 1 of the main request additionally comprises "*one or more fixing polymers*". D1 discloses in embodiment (L) a composition comprising a starch composition dispersed as a solid particle. The starch is selected from a number of plants, e.g. rice. Since it has not been shown that rice starch is a fixing polymer (see points 2.2.3 and 2.4 of this decision), the claimed device is also novel over the disclosure of embodiment (L) of D1 for that additional reason.
- 2.3.6 Embodiment (L) of D1 therefore does not directly and unambiguously disclose an aerosol device comprising the cosmetic composition of claim 1 of the main request.
- 2.4 The claimed device is also novel in view of the further preferred embodiments (A) to (K) of D1. None of the compositions in the embodiments (A), (B), (D), (E), (G), (H), (J) and (K) comprises "*one or more water-insoluble calcium salts, the one or more water-insoluble calcium salts including calcium carbonate and / or calcium stearate*". Instead, they comprise a compound of the more generic definition of formula (I), wherein the metal ion is a divalent cation, rather than calcium. The compositions in embodiments (C) and (I) do not specify the liquid cosmetic carrier. Embodiment (F) requires - as does embodiment (L) (see above) - at least the selection of the feature "*one or more C<sub>2-4</sub> monoalcohols*" and the feature calcium distearate.
- 2.5 The opponent argued that the aerosol device also lacked novelty over the general disclosure of D1. The Board

comes to the conclusion that this is not the case.

2.5.1 The aerosol devices according to D1 comprise cosmetic compositions, comprising a cosmetic carrier, a starch compound, a monocarboxylic acid compound, and a blowing agent (see paragraphs [0072], [0005] and claim 1). The device of claim 1 of the main request is not directly and unambiguously disclosed in the general teaching of D1 because the skilled person has (a) to select at least *"one or more C<sub>2-4</sub> monoalcohols"* from the disclosure of paragraphs [0008] to [0010], (b) to select and modify a starch from the disclosure of paragraphs [0012] to [0018] in order to obtain a *"fixing polymer"*, and (c) to select *"calcium stearate"* from the disclosure of paragraphs [0019] to [0023]. These selected ingredients have to be combined with a propellant as disclosed in paragraphs [0025] to [0027]. The need for multiple selections renders the claimed device novel over the general disclosure of D1.

3. D1 therefore does not directly and unambiguously disclose an aerosol device comprising components (i) to (iv) of claim 1 of the main request. The claimed device is therefore novel (Article 54 EPC).

*Main request - Inventive step (Article 56 EPC)*

4. The opposition division held the device according to claim 1 of the main request to lack inventive step in view of D1 as closest prior art. The opponent argued D1 and the proprietor D4 to be the closest prior art.

5. *Closest prior art*

5.1 The patent relates to aerosol devices comprising cosmetic compositions for the treatment of hair (see

paragraph [0001]). It addresses the problem of fixing and holding a hairstyle, and of providing an aerosol medium which makes it possible to obtain a hairstyle with volume and texturizing (see paragraphs [0002] and [0006]). According to paragraph [0010], an aerosol device comprising a particular combination of ingredients has a noteworthy effect on the volume of the hairstyle. A composition giving volume and body to hair fibres is taught in paragraphs [0072] to [0075].

- 5.2 D1 also relates to aerosol devices comprising cosmetic compositions (see paragraphs [0001], [0072] and [0080]). D1, however, teaches that the use of starch containing cosmetic compositions in aerosol devices leads to clogging or even blocking of the valve (see paragraph [0004]). It does not address the problem of hairstyle or the volume of hairstyle. D1 discloses in example E2 a specific composition comprising rice starch and magnesium stearate, and refers to dry shampoos (see paragraphs [0002] and [0003]).
- 5.3 Document D4 relates to hairstyling products (see paragraph [0001]). It also discloses cosmetic hair compositions in an aerosol device (see paragraph [0007]). D4 addresses the problem of fixing and maintaining hair in a desired form (see paragraph [0012]), and teaches an aerosol spray comprising a fixing polymer and silicate particles leading to good hair-styling effect (see example 3).
- 5.4 D4 thus concerns a technical problem which is the same as the problem addressed by the patent, *i.e.* hair styling products and their effect on hair, whereas D1 is mainly concerned with a problem related to the dispensing of a cosmetic composition. D4 furthermore discloses cosmetic compositions for aerosol devices

which differ only in a single feature from the compositions of claim 1 of the main request (see the following point 6.1), whereas the compositions of D1, in particular example E2, differ in more than one feature (see point *Novelty* of this decision).

5.5 The Board thus holds that D4 is the closest prior art.

6. *Differing feature*

6.1 D4 discloses in example 3 an aerosol spray which is applied to hair. The spray composition comprises 0,4% Laponite XLS (silicate particles, paragraph [0019]), the fixing polymer Luviset Si Pur (a polyurethane, see paragraphs [0201] and [0027], as well as paragraph [0031] of the patent), the C<sub>2</sub>-monoalcohol ethanol (see paragraph [0049] of the patent), and the propellant dimethylether (see paragraph [0054] of the patent). The device according to claim 1 of the main request differs therefrom in that the cosmetic composition comprises calcium carbonate and/or calcium stearate, rather than Laponite XLS. This was undisputed.

7. *Technical effect and objective technical problem*

7.1 The proprietor relied on the experimental data in D11 to show an improvement over the closest prior art. D11 discloses the application of two compositions (see Table 1) via an aerosol device on hair. Both compositions comprise Luviset Si PurA, ethanol, water and dimethylether in equal amounts, and only differ in that Laponite XLG in composition 1 has been replaced by the same amount of calcium carbonate in composition 2.

Table 2 of D11 discloses that composition 2 allows obtaining hair with more volume and body. Treated hair



was also found to be more texturizing and having better workability. The comparison shows that these improvements are the result of the replacement of Laponite XLG (composition 1) by calcium carbonate (composition 2). The findings as such were not challenged by the opponent.

7.2 According to the proprietor, composition 1 of D11 corresponds to the composition of example 3 of D4, whereas composition 2 of D11 is a composition according to the claimed invention. The proprietor concluded that the data proved that an aerosol device comprising a composition according to claim 1 of the main request led to an improvement of the treated hair. The objective technical problem was thus the provision of an aerosol device with improved cosmetic composition.

7.3 The opponent disagreed and argued that the results relied upon by the proprietor did not show a technical effect for the composition according to claim 1 of the main request. Composition 1 of document D11 was not identical to example 3 of document D4 because Laponite XLG was used instead of Laponite XLS. Furthermore, in D14 only calcium carbonate was used as a comparison to Laponite XLG, whereas no comparison was available for calcium stearate, which was also claimed. Therefore, the differing feature did not lead to a particular technical effect, at least not over the whole claimed scope. The objective technical problem could thus only be seen as the provision of an alternative to D4.

7.4 The opponent's argumentation is not convincing.

Although composition 1 of D11 comprises Laponite XLG instead of Laponite XLS, the opponent did not provide any proof or reasoning why the technical effects shown

by D11 would not have been observed in case Laponite XLS had been used. According to D6 and D13, the two compounds are very similar and it can be expected that they both lead to the same, or at least a similar, result. Furthermore, D4 discloses them as alternative compounds (see paragraph [0019]).

It is correct that D11 only provides experimental data for a composition comprising calcium carbonate, but not calcium stearate. The opponent did not, however, provide any arguments why the results cannot be transferred to compositions with calcium stearate.

The Board is thus convinced that the differing feature "calcium carbonate and/or calcium stearate" leads to the improvements identified by the opponent. The objective technical problem can thus be seen in the provision of an aerosol device comprising an improved cosmetic composition.

8. *Solution*

8.1 The solution is the aerosol device according to claim 1, which comprises a cosmetic composition comprising calcium carbonate and/or calcium stearate. The Board is satisfied that the solution solves the problem.

9. *Inventiveness of the solution*

9.1 The use of calcium stearate in cosmetic compositions is known, as submitted by the opponent (see paragraph [0186] of document D5). It is not known, however, that the use of calcium carbonate and/or calcium stearate instead of Laponite in a composition as disclosed in example 3 of D4 leads to improved hair characteristics, in particular to an increase in hair volume. The

solution to the technical problem is thus based on an inventive step and the main request meets the requirements of Article 56 EPC.

10. Since the claimed device is based on an inventive step, the ground of opposition under Article 100(a) EPC does not prejudice the maintenance of the contested patent based on the claims of the main request. There is thus no need to decide on the auxiliary requests.
11. With the agreement of the parties, the Board decides to remit the case for the adaptation of the description.

## 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 with the following claims and a description to be adapted thereto:  
Claims: No. 1 to 16 of the main request, filed with the grounds of appeal dated 18 May 2020.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated