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**Datasheet for the decision  
of 31 March 2017**

**Case Number:** T 0248/16 - 3.3.10

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**Language of the proceedings:** EN

**Title of invention:**  
FRAGRANCE COMPOSITIONS

**Patent Proprietor:**  
THE PROCTER & GAMBLE COMPANY

**Opponents:**  
UNILEVER PLC / UNILEVER NV  
Henkel AG & Co. KGaA  
Beiersdorf AG  
Intellectual Property - Patente

**Headword:**

**Relevant legal provisions:**  
EPC Art. 56, 108  
EPC R. 99(2)

**Keyword:**

Admissibility of appeal - appeal sufficiently substantiated  
(yes)

Main and auxiliary requests 1 to 7: inventive step (no) -  
obvious alternative

**Decisions cited:**

T 0220/83, T 0213/85, T 0922/05, T 0095/10

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

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Case Number: T 0248/16 - 3.3.10

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.10**  
**of 31 March 2017**

**Appellant:** Beiersdorf AG  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
8 January 2016 concerning maintenance of the  
European Patent No. 1289485 in amended form.

**Composition of the Board:**

**Chairman** P. Gryczka  
**Members:** J. Mercey  
T. Bokor

## Summary of Facts and Submissions

I. The Appellant (Opponent 3) lodged an appeal against the interlocutory decision of the Opposition Division which found that European patent No. 1 289 485 in amended form met the requirements of the EPC. Claim 1 of the main request maintained by the Opposition Division reads as follows:

"A composition comprising:

(a) a fragrance oil comprising:

(i) top note perfume raw material, or mixture of perfume raw materials, with a boiling point of less than, or equal to, about 250°C at 1 atmosphere pressure;

(ii) middle or base note perfume raw material, or mixture of perfume raw materials, with a boiling point of greater than 250°C at 1 atmosphere pressure

(b) an entrapment material which is selected from cyclic oligosaccharides;

(c) greater than 50% by weight of ethanol;

wherein the weight ratio of the top note perfume raw materials to middle or base note perfume raw materials within the fragrance oil is in the range from 1:20 to 20:1, and wherein, water, if present, comprises from 0.1 to 40% by weight of total composition."

II. Notice of Opposition had been filed by the Appellant and the parties as of right (Opponents 1 and 2) requesting revocation of the patent as granted in its entirety on the grounds of lack of novelty and inventive step (Article 100(a) EPC) and lack of sufficiency of disclosure (Article 100(b) EPC). *Inter alia* the following documents were submitted in opposition proceedings:

- (1) EP-A-303 461,
- (7) "Controlled Release Technology and Delivery Systems", Vol. 114, No. 5/May 1999, pages 53 to 60, and
- (17) WO-A-98/52527.

III. The Opposition Division found that the subject-matter of claim 1 of the then pending main request was sufficiently disclosed and inventive, document (1) or document (17) being considered to represent the closest prior art, document (7) not suggesting the use of cyclic oligosaccharides in ethanol-based fragrances with a prolonged top note character.

IV. With letter dated 22 September 2016, the Respondent (Patent proprietor) filed auxiliary requests 1 to 7 and submitted that all amendments to the claims fulfilled the requirements of Article 123(2) EPC.

Claim 1 of auxiliary request 1 differs from claim 1 of the main request only in that the weight ratio of the top note perfume raw materials to middle or base note perfume raw materials within the fragrance oil is in the range from 1:10 to 10:1.

Claim 1 of auxiliary request 2 differs from claim 1 of the main request only in that the composition comprises from 5 to 40% by weight of total composition of water.

Claim 1 of auxiliary requests 3 and 4 differs from claim 1 of the main request only in that the composition comprises from 2% to 8%, by weight, of entrapment material.

Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 3 (and 4) only in that the composition comprises from 2.5 to 25%, by weight, of the fragrance oil.

Claim 1 of auxiliary request 6 differs from claim 1 of the main request only in that the fragrance oil comprises from 25% to 60%, by weight of fragrance oil, of top note perfume raw materials.

Claim 1 of auxiliary request 7 is a combination of claim 1 of each of auxiliary requests 5 and 6.

V. The Appellant argued that the subject-matter of all requests was not inventive and that in view of either document (1) or document (17) as the closest state of the art, the problem to be solved by the invention was merely the provision of alternative fragrance compositions. Document (7) taught that fragrance compounds could be encapsulated within cyclodextrins, thereby providing a sustained release of fragrance on the body. Document (1) did not teach away from using cyclodextrins for this purpose, but rather taught that  $\beta$ -cyclodextrin was in fact a conventional encapsulating material. The Appellant no longer contested sufficiency of disclosure.

VI. The Respondent requested that the Appellant's appeal be rejected as inadmissible for failure to specify the legal or factual reasons on which the case for setting aside the Opposition's Division's decision was based.

The subject-matter of all requests was inventive, document (17) and not document (1) representing the closest prior art, document (1) being concerned with providing a sensory signal and not with prolonging

fragrance life. Document (7) did indeed suggest cyclodextrins for encapsulating fragrance compositions for increasing the staying power of fragrance products, but only in the context of solid consumer product compositions or aqueous solutions. Document (1), although referring to the use of *inter alia* cyclodextrins as encapsulating materials, in fact taught away from the use of  $\beta$ -cyclodextrin on the basis that it purportedly leached perfume over a period of one month.

- VII. The Appellant requested that the decision under appeal be set aside and that the patent be revoked.

The Respondent requested that the appeal be rejected as inadmissible or at least be dismissed i.e. that the patent be maintained in an amended form as held allowable by the Opposition Division (main request), or alternatively that the decision under appeal be set aside and the patent be maintained in an amended form on the basis of any of the Auxiliary Requests 1 to 7 filed with letter dated 22 September 2016.

The parties as of right made no submissions as to the substance of the appeal, nor did they file any requests.

- VIII. Oral proceedings were held on 31 March 2017 in the absence of both parties as of right, who, after having been duly summoned, informed the Board that they would not attend. At the end of the oral proceedings, the decision of the Board was announced.



## **Reasons for the Decision**

### *1. Admissibility of appeal*

1.1 In accordance with Article 108, third sentence and Rule 99(2) EPC, the statement setting out the grounds of appeal shall indicate the reasons for setting aside the decision impugned, and the facts and evidence on which the appeal is based. Decisions of the Boards of Appeal have established the requirement that the grounds for appeal should not be confined to an assertion that the contested decision is incorrect, but should state the legal and/or factual reasons which constitute the basis of its challenge to the validity of the decision. Grounds sufficient for the admissibility of an appeal must address one or more of the reasons on which the contested decision was based. Here it is not a matter of whether the arguments put forward are actually effective, but rather that circumstances are demonstrated which by their nature may in principle upset the reasons for the decision (cf. decisions T 220/83, OJ EPO 1986, 249, point 4 of the reasons and T 213/85, OJ EPO 1987, 482, point 3 of the reasons).

1.2 In the present case, the contested decision was based on *inter alia* the positive finding with respect to inventive step of the subject-matter of the then pending main request, on the basis of which the contested patent was maintained. The Appellant, which was adversely affected by the decision to maintain the patent on the basis of said request, addressed *inter alia* this ground in its statement of grounds of appeal, identifying either document (1) or document (17) as closest prior art, determining in the light thereof the technical problem which the invention addresses, and then explaining why the proposed solution to said

objective problem was obvious in the light of document (7) or document (1). The Appellant hereby provided reasons as to why the claimed subject-matter was not inventive and consequently as to why the disputed decision should be set aside, such that the requirement of Article 108, third sentence and Rule 99(2) EPC is met.

- 1.3 In the Respondent's submissions in support of its argument that the Appellant had failed to state legal or factual reasons against the contested decision, it stated that the Appellant contested the Opposition Division's findings in relation to two of the three stages of the problem-solution approach, namely by reformulating the problem and arguing that the solution to said reformulated problem was obvious, but failed to engage with the Opposition Division's reasoning, such that it was not possible to establish why the Appellant regarded the Opposition Division's decision to be incorrect. The Appellant had thus failed to establish a causal relationship between the reasons in the grounds of appeal and the Opposition Division's findings.

However, in the present case, the Opposition Division found the claims of the then pending main request to be inventive over a combination of either document (1) or (17) with document (7) or (1), such that by arguing that the subject-matter was not inventive on the basis of these documents, the Appellant has indeed indicated the reasons for setting aside the contested decision.

- 1.4 The Respondent cited decisions T 922/05 and T 95/10 (neither published in OJ EPO) in support of its argumentation that the appeal was not admissible. However, in the case underlying the decision T 922/05, the Appellant-Patentee filed a new set of claims

together with its grounds of appeal and argued merely that it was clear that the subject-matter now claimed was not known from any of the cited prior art documents, such that the Article 100(a) EPC objections were overcome, without, however, explaining why. Said case is thus not relevant, because the present Appellant has indeed provided arguments, albeit succinct ones, as to why the subject-matter of the patent as maintained is not inventive, whereas in the case underlying the decision T 922/05, it was merely stated that "the subject-matter now claimed was not known". In the case underlying the decision T 95/10, the Appellant-Patentee had merely argued in its grounds of appeal that the Opposition Division had not taken the comments filed by the Patentee before the Opposition Division into consideration, such that it had violated the Patentee's right to be heard. The Board found that the appeal was inadmissible, because the Appellant had not addressed **any** of the Opposition Division's argumentation **at all**, whereas in the present case, argumentation as to why the claimed subject-matter is not inventive, has indeed been provided.

1.5 Hence, the Appellant's appeal is admissible.

*Main request*

2. *Inventive step*

2.1 The present invention is directed to fragrance compositions having prolonged top note character (see paragraph [0001] of the patent in suit).

2.2 Document (17) relates to perfume fixatives to enhance fragrance life of *inter alia* ethanol-based leave-on skin products (see page 1, first two paragraphs).

Example 1 discloses a cologne comprising a fragrance composition with a ratio of top note to middle or base note perfume raw materials falling within the range from 1:20 to 20:1, ca. 80 wt.% ethanol, ca. 18 wt.% water and 1 wt.% perfume fixatives. The Opposition Division considered documents (17) and (1) to be equally close, but the Respondent argued that document (17) was closer to the invention than document (1), since document (17), like the patent in suit, was concerned with enhancing fragrance life, whereas document (1) was concerned with providing a sensory signal. Moreover, document (1) was concerned with capsules and not inclusion complexes, as in the patent in suit.

2.2.1 Thus, the Board considers, in agreement with both the Appellant and the Respondent, that Example 1 of document (17) represents the closest state of the art for the subject-matter of the main request and, hence, takes this document as the starting point when assessing inventive step.

2.3 In view of this state of the art, the problem underlying the subject-matter of the main request, as formulated by the Respondent, was the provision of alternative fragrance compositions having a prolonged noticeable top note character.

2.4 As the solution to this problem, claim 1 of the main request proposes a fragrance composition comprising an entrapment material selected from cyclic oligosaccharides.

2.5 The Appellant and the Respondent were divided as to whether or not the available evidence convincingly

showed that the problem defined in point 2.3 above was successfully solved.

- 2.5.1 To demonstrate that the fragrance compositions as defined in claim 1 of the main request achieved a prolonged noticeable top note character, the Respondent relied on the statement in paragraph [0085] of the patent in suit, which indicated that when examples VIII-XV were applied to the substrate, the light, fresh, fruity, citrus, green or delicate floral "top note" fragrance characters could still be determined at least two hours after application. By contrast, the same long lasting "top note" effect was not achieved when control compositions, comprising the same fragrance oil but without the entrapment material, were applied to a substrate.
- 2.5.2 The Appellant argued that it had not been convincingly shown that the problem had been solved, since no direct comparison with the closest state of the art had been carried out.
- 2.5.3 However, in view of the fact that the problem merely consists of the provision of **alternative** fragrance compositions having a prolonged noticeable top note character, and it has been shown that the top note fragrance characters of the compositions according to the invention could still be determined at least two hours after application, the Board holds that it is credible that the problem is solved.
- 2.6 Finally, it remains to be decided whether or not the proposed solution to the objective problem underlying the patent in suit is obvious in view of the state of the art.

2.6.1 Document (7), which provides an overview of controlled release technology and delivery systems, teaches in the section entitled "Polymeric Materials" (see page 54), that cyclodextrins have been used as "hosts" for "guest" molecules for the past two decades, the resulting inclusion compounds having been used in the cosmetic industry. In the section entitled "Fragrance longevity" (see page 58), it is stated that delivery systems can be used to increase the staying power of fragranced products. More particularly, it teaches that fragrance compounds can be encapsulated within cyclodextrins, the natural moisture of the skin being sufficient to dissolve the cyclodextrin-fragrance complex, thereby providing a sustained release of fragrance on the body. It was thus well within the routine activity of the skilled person, faced with the mere problem of providing alternative fragrance compositions having a prolonged noticeable top note character, to replace the perfume fixatives of document (17) with a cyclodextrin, without having to exercise inventive step. For these reasons, the subject-matter of claim 1 of the main request is obvious.

2.6.2 The Respondent argued that although document (7) taught cyclodextrins for encapsulating fragrance compositions in order to increase the staying power of fragrance products, this teaching was restricted to solid consumer product compositions or aqueous solutions. More particularly, in the section entitled "Polymeric Materials", it was taught that in aqueous solutions, hydrophobic guests were forced into the cavity of cyclodextrins through a hydrophilic-hydrophobic interaction. The Respondent submitted that when such a hydrophilic aqueous solution was replaced with an ethanolic solution, in view of the higher hydrophobicity of ethanol as compared to water, the

skilled person would have expected the ethanol to compete with the fragrance to enter the cavity, such that the skilled person would not have reasonably expected that a fragrance and cyclic oligosaccharide in ethanolic solution would also produce prolonged noticeable top note character.

The Board notes, however, that the fragrance compositions of claim 1 of the main request may contain up to 40wt.% of water, such that the fragrance and cyclic oligosaccharide are in fact in an ethanol-water, i.e. a polar, solution. In addition, ethanol, in view of its hydroxy group and very short alkyl chain, can hardly be considered to be hydrophobic and is well-known to mix completely with water. The Board thus holds that the Respondent's argumentation is merely speculation as to what the skilled person at the time of filing of the patent in suit might have expected, the Respondent not having provided a document suggesting that hydrophobic molecules would not form inclusion complexes in cyclic oligosaccharides in ethanolic solution.

- 2.6.3 The Respondent also submitted that document (1) (see page 4, lines 52 to 55) taught away from the use of  $\beta$ -cyclodextrin as an encapsulating material on the basis that on extraction with ethanol, it leached perfume over a period of one month.
- 2.6.4 However, as argued by the Respondent itself (see point 2.2 above), document (1) is concerned with providing a sensory signal and describes capsules, not inclusion complexes, such that the Board holds that the skilled person, seeking to solve the problem of providing alternative fragrance compositions having a prolonged

noticeable top note character, would not even have turned to this document.

- 2.6.5 The Respondent also argued that document (7) (see end of section entitled "Polymeric Materials" on page 55) teaches the use of cyclodextrins in cosmetics to trap malodorous molecules and not fragrances, and that document (7) did not specifically teach that the top note character of the fragrance would be prolonged.

However, said section teaches that hydrophobic guests are forced into the cavity of cyclodextrins through a hydrophilic-hydrophobic interaction (see point 2.6.2 above), a cyclodextrin molecule neither distinguishing between hydrophobic guests which are fragrant or malodorous (whether a compound has a pleasant odour or is malodorous being in any case a purely subjective matter), nor between top, middle or base note perfume raw materials, said top, middle and base note perfume raw materials differing in terms of their boiling points and not their hydrophobicity. Thus, the skilled person would not conclude from document (7) that cyclodextrins would not be suitable for trapping fragrances, nor that the top note character of the resulting entrapped fragrance would not be prolonged.

- 2.7 For these reasons, the subject-matter of claim 1 as maintained by the Opposition Division, i.e. of the main request, is not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 1*

3. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the weight ratio of the top note perfume raw materials to middle or base note



perfume raw materials within the fragrance oil is in the range from 1:10 to 10:1.

- 3.1 The Respondent argued that the ratio of the top note perfume raw materials to middle or base note perfume raw materials in Example 1 of document (17) was ca. 13:1, such that it was unexpected that when the maximum ratio of top to middle or base note perfume raw materials was reduced to 10:1, that a prolonged noticeable top note character was still obtained.

However, the Board holds that even when the maximum ratio of top to middle or base note perfume raw materials is reduced to 10:1, the skilled person would still have expected that the top note perfume raw materials present would be prolonged, the cyclic oligosaccharides not distinguishing between top, middle or base note perfume raw materials (see point 2.6.5 above). Therefore, the weight ratio is merely arbitrary, the act of picking out at random such a range being within the routine activity of the skilled person faced with the mere problem of providing alternative fragrance compositions having a prolonged noticeable top note character.

- 3.2 Thus, auxiliary request 1 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

#### *Auxiliary request 2*

4. Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the composition comprises from 5 to 40% by weight of total composition of water.
- 4.1 However, since the closest prior art document (17) already discloses compositions having ca. 18% by weight

of total composition of water (see Example 1), this amendment cannot contribute to inventiveness of the subject-matter of claim 1 of this request *vis-à-vis* this document.

- 4.2 Thus, auxiliary request 2 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary requests 3 and 4*

5. Claim 1 of auxiliary requests 3 and 4 differs from claim 1 of the main request in that the composition comprises from 2% to 8%, by weight, of entrapment material.

- 5.1 The Respondent argued that Example 1 of document (17) comprised merely 1% by weight of perfume fixatives, said document teaching (see page 4, penultimate paragraph) that higher levels of said materials were discernible by the user, which was undesirable.

However, the skilled person would select the amount of entrapment material to be used by standard experiments depending on the olfactory effect wished to be achieved. Indeed document (17) itself teaches that the most effective level of fixative depends on the nature of the perfume and the amount in which this perfume is used, "and this can be determined by experiment (see page 5, second full paragraph). Document (7) does not teach that cyclodextrins are discernible by the user, such that the skilled person would not consider that he may not use more than 1% by weight thereof in a fragrance composition.

- 5.2 Thus, auxiliary requests 3 and 4 are also not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 5*

6. Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 3 (and 4) in that the composition comprises from 2.5 to 25%, by weight, of the fragrance oil.
- 6.1 In this request, both the weight amounts of entrapment material and fragrance oil are defined. As outlined in point 5.1 above, it is well within the standard practice of the skilled person to determine experimentally how much entrapment material per amount of perfume fragrance is required. Indeed, the ratios for the amount of perfume:fixative of 2:1 and 9:1 specifically disclosed in document (17) (see paragraph bridging pages 4 and 5) fall within the weight ratio range for these two components (0.31:1 to 12.5:1) which result from the absolute weight amounts defined in claim 1 of auxiliary request 5.
- 6.2 Thus, auxiliary request 5 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 6*

7. Claim 1 of auxiliary request 6 differs from claim 1 of the main request in that the fragrance oil comprises from 25% to 60%, by weight of fragrance oil, of top note perfume raw materials.
- 7.1 The Respondent submitted that the fragrance oil of Example 1 of document (17) comprised 93% by weight of fragrance oil, of top note perfume raw materials, such that it was unexpected that a prolonged noticeable top note character was still obtained by the composition

according to claim 1 of auxiliary request 6, which comprised a lower amount of top note perfume raw materials.

However, for the same reasons given in point 3.1 above, said weight amount is merely arbitrary, the act of picking out at random such an amount being within the routine activity of the skilled person faced with the mere problem of providing alternative fragrance compositions having a prolonged noticeable top note character.

- 7.2 Thus, auxiliary request 6 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

*Auxiliary request 7*

8. Claim 1 of auxiliary request 7 is a combination of claim 1 of each of auxiliary requests 5 and 6.

- 8.1 In this request, the weight amounts of entrapment material, fragrance oil, and top note perfume raw materials in said fragrance oil, are defined. For the reasons given in point 6.1 above for auxiliary request 5, the weight ratio of entrapment material to fragrance oil is not inventive, and for the reasons given in point 7.1 above for auxiliary request 6, nor is the amount of top note perfume raw materials in said fragrance oil. The Respondent has not provided any arguments as to why the combination of these three features results in an inventive step, and the Board also fails to identify an inventive step therein.

- 8.2 Thus, auxiliary request 7 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

## Order

### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:



C. Rodríguez Rodríguez

P. Gryczka

Decision electronically authenticated