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D E C I S I O N
of 7 February 1995

Case Number: T 0573/92 - 3.3.1

Application Number: 84308963.2

Publication Number: 0147191

IPC: C11D 3/50

Language of the proceedings: EN

Title of invention:
Perfume and compositions containing perfume

Patentee:
UNILEVER N.V.

Opponent:
(01) Henkel Kommanditgesellschaft auf Aktien
(02) Bayer AG, Leverkusen Konzernverwaltung RP Patente Konzern
(03) PROCTER & GAMBLE E.T.C.

Headword:
Deodorant bleaching composition/UNILEVER

Relevant legal provisions:
EPC Art. 54(1)(2), 56, 83, 87(1)

Keyword:
"Priority entitlement (no)"
"Sufficiency of disclosure (yes)"
"Main request - novelty (yes); inventive step (yes) - non-obvious solution"

Decisions cited:
T 0073/88; T 0219/83; T 0182/89; T 0014/83; T 0305/87

Catchword:
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Case Number: T 0573/92 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 7 February 1995

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office dated issued orally on 31 March 1992, with the reasoned decision being issued on 12 May 1992, revoking European patent No. 0 147 191 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: A. J. Nuss
Members: P. M. I. Bracke
J. A. Stephens-Ofner

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Summary of Facts and Submissions

I. European patent application 84 308 963.2, filed on 20 December 1984, was granted as European patent No. 0 147 191 with 19 claims, whereby priority was claimed from British application 8 334 159 of 22 December 1983. The only independent Claim 1 read as follows:

"1. A bleaching composition comprising a peroxy bleach compound and a deodorant perfume, characterised in that the composition additionally comprises an activator for the peroxy bleach compound, the deodorant perfume being a bleach-stable deodorant perfume comprising from 50 to 100% by weight of bleach-stable components which are judged to be stable in the presence of sodium perborate tetrahydrate and N,N,N'N'-tetraacetyl ethylenediamine (TAED) according to the Bleach Stability Test; said Bleach Stability Test comprising the steps of:

(i) dosing a perfume material under test into a standard unperfumed washing powder containing the following ingredients:

	Parts by weight
Sodium dodecylbenzene sulphonate	9
C_{13-15} alcohol 7EO	4
Sodium tripolyphosphate	33
Alkaline sodium silicate	6
Sodium carboxymethyl cellulose	1
Magnesium silicate	1
Ethylenediamine tetraacetic acid	0.2
Sodium sulphate	15
Water	10.8

and incubating the dosed powder at 20°C in a sealed container for seven days;

(ii) dividing the dosed powder into two portions and adding to each portion sodium perborate tetrahydrate, together with either TAED granules or sodium sulphate (to act as an inert filler in place of TAED) to provide test and control formulations having the following constitution:

	% w/w	
	Test powder	Control powder
Standard unperfumed powder	76	76
Perfume material under test	0.2	0.2
Sodium perborate tetrahydrate	13	13
TAED granules (65% TAED)	10.8	-
Sodium sulphate	-	10.8

(iii) incubating both test and control powders in sealed containers at 45°C for a further seven days; and

(iv) assessing samples of the test and control powders according to a standard triangle test as described in "Manual on Sensory Testing Methods" published by American Society for Testing and Materials (1969), using a panel of 20 assessors, who are instructed to judge by smell which of the three powder samples is the odd one out, the perfume material being designated a bleach-stable deodorant perfume component when the odd one out of the three is correctly identified by no more than 9 of the 20 assessors; the bleach-stable deodorant perfume components each have a Lipoxidase-Inhibiting Capacity of at least 50% or a Raoult Variance Ratio of at least 1.1, said components being allocated to one of six classes consisting of:

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Class 1: Phenolic substance;
Class 2: Essential oils, extracts, resins and synthetic oils (denoted "AB");
Class 3: Aldehydes and ketones;
Class 4: Nitrogen-containing compounds;
Class 5: Esters;
Class 6: Alcohols and ethers;

provided that where a bleach-stable deodorant perfume component could be assigned to more than one class, said component is allocated to the class having the lower or lowest number;

said components being so selected that:

(a) the bleach-stable deodorant perfume contains at least five different components;

(b) the bleach-stable deodorant perfume contains components from at least four of the six classes; and

(c) any component present in the bleach-stable deodorant perfume at a concentration of less than 0,5% by weight of the said perfume is eliminated from the requirements of (a) and (b);

the bleach-stable deodorant perfume having a Malodour Reduction Value of from 0.25 to 3.0 as measured by the Malodour Reduction Value Test; said Malodour Reduction Value Test comprising the steps of:

i) selecting pieces of 100%-bulked polyester sheet shirt fabric of 20 cm X20 cm;

ii) washing the selected pieces of fabric in a front-loading drum-type washing machine with the standard unperfumed washing powder;

iii) rinsing the washed pieces of fabric and drying them to provide "untreated" fabric;
(iv) re-washing half of the "untreated" pieces of fabric in the washing machine with the standard washing powder to which has been added 0.2% by weight of a bleach-stable perfume under test, rinsing and re-drying to provide "treated" pieces of fabric;
v) inserting the "treated" and "untreated" pieces of fabric into clean polyester cotton shirts in the underarm region so that in each shirt, one underarm region receives a "treated" fabric insert and the other underarm region receives an "untreated" fabric insert in accordance with a statistical design;
vi) placing the shirts carrying the inserts on a panel of 40 Caucasian male subjects of age within the range of from 20 to 55 years (the subjects being chosen from those who develop axillary body malodour that is not unusually strong and who do not develop a stronger body malodour in one axilla compared with the other);
vii) assessing the body malodour of the fabric inserts after a period of five hours whereby three trained female assessors record the olfactory intensity of malodour on a 0 to 5 scale, 0 representing no odour and 5 representing very strong malodour, the strenght of the odour in each instance being related for the purposes of comparison to standard odours produced by aqueous solutions of isovaleric acid at different concentrations according to the following table:

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Score	Odour level	Conc. of aqueous isovaleric acid (ml/l)
0	No odour	0
1	Slight	0.013
2	Definite	0.053
3	Moderate	0.22
4	Strong	0.87
5	Very Strong	3.57

viii) calculating the average scores for both treated fabric and untreated fabric, and subtracting the average score of the treated fabric from the average score of the untreated fabric to arrive at the Malodour Reduction Value for the bleach-stable perfume."

II. The patent was opposed by three opponents. Revocation of the patent was requested on the grounds of lack of novelty and inventive step as well as insufficiency of disclosure. From the cited prior art documents the following remained relevant during the appeal proceedings:

(1) US-A-4 304 679;
(3) US-A-4 289 641;
(6) an article "Fragrance Performance" by Dr Ir. P.C. Traas, Naarden International, dated February 1984; and
(21) Tensid-Taschenbuch, 2. edition, 1981, pages 284-285.

III. By a decision issued orally on 31 March 1992, with the reasoned decision being issued on 12 May 1992, the patent was revoked.

The Opposition Division held essentially that the claimed compositions were novel over (1) and (3), but were obviously derivable therefrom.

More especially, they held that,(i) starting from documents (1) or (3), the problem underlying the invention was the improvement of the bleach performance, combined with the maintenance of the stability and deodorant properties; (ii) the claimed compositions differed from the bleach compositions known from the said documents only by the presence of a bleach activator, the use of which was specifically recommended in (3); and (iii) since there did not exist a technical prejudice in using a bleach activator with a bleaching agent in the presence of a perfume, an improved bleaching performance resulting from the presence of an activator could be expected.

Moreover, they held that the selection of the perfumes by the Bleach Stability Test (BST) described in the patent in suit was obvious.

Additionally, the Opposition Division expressed its opinion that the invention was sufficiently described and that the patent was not entitled to the priority date claimed.

IV. The Appellants (Proprietor of the patent) lodged an appeal against this decision.

Oral proceedings were held on 7 February 1995.

The Appellants submitted that the patent was entitled to the priority date since the general basic approach of selecting the individual ingredients of the deodorant perfume composition in the priority document was the

same as in the patent in suit. This approach was said to be in conformity with the principle described in decision T 73/88 (OJ EPO, 1992, 557-570).

Additionally, they contested Opponent's (Respondent's) objection that the BST was not sufficiently described, because neither the chemical nor the physical nature of the TAED (N,N,N',N'-tetraacetyl ethylenediamine) particles were specified. To substantiate their argument they referred to the data provided during the opposition proceedings with letters of 31 May 1991 and 23 January 1992 showing that the results of the BST are only slightly influenced by the content of TAED in the bleach activator. Finally, they contended that in the BST the size of the TAED particles was less relevant because the BST is a qualitative, not a quantitative test.

Furthermore, they submitted that the problem underlying the invention was the improvement of the bleaching performance while providing a deodorant perfume which is stable and which is, after storage, available for providing deodorant performance and that documents (1) and (3) neither reveal that stable deodorant perfume compositions could be achieved by selecting individual components of the composition nor how such selection could be made.

Additionally, they stated that a skilled man reading document (3) would not seriously contemplate combining the examples with the teaching of column 14, lines 18-20, mentioning the use of bleach activators.

Finally, they stated that in the BST the individual perfume ingredients are selected by a sensory test (the human nose) and that it was nowhere suggested that it would be possible to select individual ingredients of a

deodorant perfume composition by such sensory test, which could not be selected by analytical analysis methods, such as gas chromatography (GC).

V. The Respondents contended that the patent in suit was not entitled to the claimed priority, since other ingredients were selected by conducting the BST described in the priority document than these described in the contested patent.

They also maintained their objection of insufficiency of disclosure, stating that it is only specified in the patent in suit that the granules contain 65% TAED and, since the results of the BST depend upon the physical and chemical composition of the TAED granules used, different individual ingredients will be selected.

As far as novelty was concerned, the Respondents essentially argued that document (3) did not disclose the claimed compositions.

With respect to inventive step, they essentially argued that (i) the claimed compositions differ from the ones of (3) (especially deodorant composition 4) only by the presence of an activator; (ii) it was known, e.g. from (6), that by adding an activator to a composition containing a bleaching agent and a perfume a stability problem may arise; and (iii) selecting a bleach/activator stable perfume by bringing the perfume in contact with sodium perborate tetrahydrate and TAED cannot be considered surprising.

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VI. The Appellants requested that the decision under appeal be set aside and that the patent be maintained on the basis of the claims as granted (main request), or on the basis of one of the auxiliary requests 1-7 submitted with the Statement of Grounds of Appeal and as amended on 27 January 1995.

The Respondents requested that the appeal be dismissed.

VII. At the conclusion of the oral proceedings, the Board's decision to maintain the patent with the claims as granted (main request) was announced.

Reasons for the Decision

1. The appeal is admissible.

2. *Priority*

A comparison of the priority document and the contested patent reveals several differences. For example, the BST described in the priority document differs from the BST described in the patent in suit at least in a different formulation of the detergent powder base, a different storage temperature and a different method of assessment (compare the priority document, page 5, lines 1 to 10, and page 5, line 28 to page 6, line 11, with the disputed patent, page 6, lines 15 to 24 and 40 to 58), resulting in the fact that according to the priority document the compositions described therein might contain patchouli oil, coumarin, p-t-butylcyclohexyl acetate and phenylethyl alcohol, which ingredients are specifically excluded according to the contested patent (compare page 7, lines 9, 20, 28 and 32 of the priority document with page 9, lines 8, 11, 18 and 20 of the patent in suit).

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In view of the fact that different ingredients may be selected depending on whether the selection is operated according to the test described in the priority document or according to that of the patent in suit, both documents cannot be considered as being in respect of "the same invention", as required in Article 87(1) EPC.

The principle discussed in decision T 73/88 (OJ EPO 1992, 557-570), referred to by the Appellants, and saying that "in a case where a feature in a claim is not related to the function and effect of the invention ... the absence of such feature from the disclosure of the priority document does not cause loss of priority" is not applicable in the present case, because the selected ingredients as a result of the non-identical test may be different. It is thus not credible that the test features are not related to the function and effect of the invention, as contended by the appellants. In other words, the claimed invention is not in substance the same as the invention disclosed in the priority document.

It follows from the above that the patent is not entitled to the priority date. Consequently, document (6), published in February 1984, is state of the art according to Article 54(2) EPC.

3. *Sufficiency of disclosure*

The respondents submitted that the BST was not sufficiently described, because in Claim 1 as well as in the description the TAED granules used in the BST were only defined as "TAED granules (65% TAED)", without further specifying the chemical nature of the remaining 35% and without specifying the physical nature of the granules. As a consequence thereof, a skilled person could not unambiguously define which components meet the

requirement of the BST. To substantiate their submissions, they referred to Table I in document (6), clearly illustrating that the stability of fragrances in the presence of TAED is different when using "a recent TAED formulation" than when using "an old TAED formulation".

However, since neither the chemical composition nor the physical form of the used TAED were further specified in document (6) this reference cannot be considered as sufficient proof that a skilled reader of the patent in suit would not have sufficient information with the information from Claim 1 and page 6, line 37 "TAED granules (65% TAED)" unambiguously to select bleach stable perfume components by applying the BST. Without any, let alone any credible evidence in support, the appellants argument must fail (see T 219/83, OJ EPO 1986, 211-225, item 12, and T 182/89, OJ EPO 1991, 391-401, item 2).

On the other hand, the data provided by the Appellants with letters of 31 May 1991 and 23 January 1992, merely show that the use of granules containing 65% w or 83% w TAED only slightly influence the result of the BST [an average score of 7.50 instead of the expected one third of 20 (6.6)]. There is no requirement under the EPC that identical results must be obtained with different compositions when applying the same testing method.

Moreover, a claim is not to be objected to under Article 83 EPC provided it is possible to get sufficient guidance from the description as a whole in respect of the action(s) to be taken for carrying out the invention as claimed (cf. T 14/83, OJ EPO 1984, 105). In the present case, the description contains clear instructions for preparing TAED granules. In particular, detailed information is provided on the usual size and

carrier materials (e.g. sodium and/or potassium tripolyphosphate) (see page 12, lines 30 to 54).

Consequently, the Board is satisfied that the disclosure is sufficient to enable the skilled person to carry out the invention as claimed.

4. *Main request*

4.1 *Novelty*

The only document cited during the opposition and appeal proceedings as being novelty-destroying for the claimed compositions is document (3), which is concerned with deodorant detergent compositions containing a bleaching agent and a deodorant composition comprising preferably 50 to 100% w of at least 5 deodorant components each having a lipoxidase-inhibiting capacity of at least 50% or a raoult variance ratio of at least 1.1, the said at least 5 deodorant components belonging to at least 4 of 6 classes and the said deodorant compositions having a deodorant value of from 0.50 to 3.5 (see column 1, line 48 to column 2, line 9; column 2, lines 28 to 30; column 9, lines 60 to 62; column 10, line 3 to column 11, line 54).

Since it is further mentioned in document (3) that the compositions may in addition to the bleaching agent also contain an activator for that bleaching agent (column 14, lines 10 to 22) the respondent held that document (3) was novelty-destroying for the claimed compositions.

In the Board's view, however, those combined teachings of a bleaching agent, a bleach activator and a deodorant composition cannot be considered to be disclosed, because (i) not all the deodorant compositions described

in document (3) are embraced within the definition according to the main request; (ii) there is no indication in document (3) as to which of the deodorant compositions described therein would be stable in the presence of a bleach and a bleach activator; and (iii), consequently, document (3) does not teach which deodorant compositions are stable enough to be used in combination with a bleaching agent and a bleach activator.

The Respondent contended that the combined teachings of (i) deodorant composition 4 in document (3), which is embraced within the definition of the deodorant perfume in Claim 1 according to the main request, (ii) the possible presence of an activator for the bleaching agent in column 14, lines 11 to 22, and (iii) the mentioning in column 15, lines 16 to 42, that solid detergent powders may be obtained by mixing a deodorant composition with a bleach and a bleach activator, would disclose the claimed compositions.

However, this argument lacks credibility, because the teachings in column 14, lines 11 to 22, and column 15, lines 16 to 42, are to be considered in combination with the complete teaching of document (3) and, consequently, with the complete experimental part of this document and there is not any suggestion that those teachings should be specifically combined with composition 4. Furthermore, from the experimental part of document (3) one could only deduce that:

(i) deodorant composition 4 is the only deodorant composition specifically described therein containing at least 50% w of at least 5 perfume components having a lipoxidase-inhibiting capacity of at least 50% or a raoult variance ratio of at

least 1,1, said 5 perfume components belonging to 4 of the 6 classes as defined in Claim 1,

(ii) deodorant composition 4 can be used as a possible deodorant composition in Examples 1 to 3 (column 20, lines 21 to 23) and

(iii) none of those Examples 1 to 3 describes compositions containing a bleaching agent and a bleach activator.

Consequently, it is not permissible to combine composition 4 with an oxygen bleach and a bleach activator, since document (3) does not specifically suggest such a combination (T 305/87, OJ EPO 1991, 429). The novelty objection must thus fail.

4.2 *Inventive step*

4.2.1 During the opposition and appeal proceedings it was accepted by all parties that documents (1) and (3), mentioned in the patent in suit, are the most relevant prior art and that document (3) should be regarded as the starting point for assessing inventive step since it is the only document which relates to deodorant detergent compositions suitable for deodorising fabrics and which mentions the possibility that such compositions contain a bleaching agent and possibly a bleach activator (see point 4.1 above). The Board accepts this point of view.

As stated in the patent in suit, these known deodorant compositions have been shown to be unstable, with a consequent loss during storage of the product of both perfumery and deodorant properties (see page 2, lines 18 to 32).

4.2.2 Starting from the teaching of document (3) the problem underlying the invention is thus to be seen in providing a deodorant bleaching composition with such an improved storage stability that, after storage, the deodorant perfume contained is available for effective delivery to the bleached fabric without being altered or destroyed by the bleach (see the patent in suit page 2, lines 8 to 11).

4.2.3 The patent in dispute claims to solve this problem essentially by selecting the deodorant perfumes in such a way (i) that they have a malodour reduction value of 0.25 to 3.0 and (ii) that they comprise 50 to 100% w of components, which are each stable in the BST, have each a lipoxidase-inhibiting capacity value of at least 50% or a raoult variance ratio value of at least 1.1 and are each allocated to one of 6 classes as defined in Claim 1.

4.2.4 That this problem is solved by the claimed compositions is made credible by the lipoxidase-inhibiting capacity value data, the raoult variance ratio value data and the BST panel score data presented on pages 8 and 9 of the contested patent, showing which deodorant components fulfil the test requirements specified in Claim 1 and by Examples 9 to 26, especially, Example 9, saying that, after storage, the ability of the claimed deodorant detergent compositions to reduce human body malodour is unimpaired and that fabrics washed with such compositions retain their freshness with absence of malodour even after subsequent wear or use in contact with human skin (see page 24, lines 25 to 31 of the disputed patent).

4.2.5 It remains to be decided whether, in the light of the cited state of the art, a person skilled in the art

would have chosen such deodorant perfumes with a view to solving the technical problem.

4.2.6 The Respondents argued that a skilled man would have done so, because the deodorant properties of very similar perfumes in detergent compositions were known from document (3) (see column 1, line 48 to column 2, line 9) and that it was known that stability problems may arise when incorporating a perfume in a composition containing a bleach and a bleach activator [see, for example, Table I of document (6)]. Since there were only two kinds of possible solutions for this stability problem, namely avoiding contact between the granule particles by encapsulating at least one of them, or selecting perfumes which are stable in the bleaching compositions, in their view the selection of bleach stable perfume compositions for incorporating them into bleach detergent compositions was obvious. Additionally, nothing surprising could be seen in the selection of the perfume compositions by the BST nor by the fact that in the BST the perfume components were evaluated by the triangle test.

Additionally, it was argued that the claimed compositions also obviously derived from a combination of the teachings of document (21), describing in Table 4 on page 284 a detergent composition containing a bleaching agent, an activator and a perfume, with the perfumes mentioned in Claim 1 of document (3).

4.2.7 Although it is true that document (3) is concerned with deodorant detergent compositions containing an oxygen bleach and, possibly, a bleach activator, this document is completely silent about the stability of deodorant perfumes in the presence of a bleaching agent and a bleach activator. Consequently, this document cannot suggest to select perfume compositions according to the

BST, let alone to select each component of the perfume instead of selecting the perfume composition as a whole.

Moreover, the deodorant perfume according to Claim 1 of the disputed patent may differ from the deodorant perfumes described in document (3) in several respects. Firstly, while five of the six structural classes are identical, class 4 according to document (3) consists of "polycyclic compounds" while class 4 according to the patent in suit consists of "nitrogen-containing compounds" and from a comparison of the disputed patent, page 8, lines 30 to 32, with column 11, lines 27 to 35, of document (3) it is clear that different components are comprised in such class 4-groups. Secondly, according to Claim 1 of the patent in suit the deodorant perfumes must not contain at least one component of each of class 1, 2 and 3, contrary to the requirement of document (3) (see Claim 1). Thirdly, according to document (3) the deodorant perfumes must have a deodorant value of from 0.50 to 3.5 (see column 2, lines 28 to 34, and column 4, lines 34 to 44) while the deodorant perfumes in Claim 1 of the disputed patent must have a malodour reduction value of 0.25 to 3.0, both values being obtained according to different non-comparable test procedures.

Since those different requirements may result in the selection of different components in the deodorant perfume and since document (3) is silent about the stability of deodorant perfumes in compositions containing an oxygen bleach and a bleach activator, this document cannot be regarded as suggesting the incorporation in a composition containing a bleach and a bleach activator of a deodorant perfume as defined in Claim 1 of the patent in suit in order to obtain stable deodorant bleaching compositions suitable for fabric

washing, wherein the deodorant perfume is still available for effective delivery to the bleached fabric.

This is even more true for document (1), which does not even mention the possibility of using a bleaching agent in combination with a bleach activator.

4.2.8 Considering the fact that the choice of the deodorant perfume as defined in Claim 1 of the patent in suit is not derivable from document (3) or from any other cited document, the claimed deodorant bleaching compositions suitable for fabric washing are not rendered obvious from such document or from a combination of such document with, for example, document (21), which merely describes a general formulation for washing compositions (see Table 4 on page 284).

Consequently, Respondent's argumentation that a skilled man would have chosen the deodorant perfumes defined in Claim 1 of the patent in suit cannot be accepted.

4.2.9 In these circumstances the question put by the Respondents whether something surprising can be seen in the selection of the perfume components by the BST or in the evaluation by a sensory test is not relevant.

4.2.10 Therefore, Claim 1 and Claims 2 to 19, which relate to preferred embodiments of the subject-matter according to Claim 1, involve an inventive step in the sense of Article 56 EPC.

5. *Auxiliary requests*

In the light of the above findings, there is no need to consider the auxiliary requests.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is maintained with the claims as granted (main request).

The Registrar: The Chairman:

E. Görgmaier A. Nuss