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Datasheet for the decision of 3 July 2014

Case Number: T 1113/10 - 3.3.10

Application Number: 98870137.1

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Title of invention:
Perfume compositions

Patent Proprietor:
THE PROCTER & GAMBLE COMPANY

Opponent:
Henkel Kommanditgesellschaft auf Aktien

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (no) all requests - improvement not shown - reformulation of problem - obvious solution

Decisions cited:
T 0020/81, T 0219/83

Catchword:

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Case Number: T 1113/10 - 3.3.10

D E C I S I O N
of Technical Board of Appeal 3.3.10
of 3 July 2014

Appellant: (Opponent)	Henkel Kommanditgesellschaft auf Aktien Patente (VTP) 40191 Düsseldorf (DE)
Respondent: (Patent Proprietor)	THE PROCTER & GAMBLE COMPANY One Procter & Gamble Plaza Cincinnati, OH 45202 (US)
Representative:	Howard, Paul Nicholas Carpmaels & Ransford LLP One Southampton Row London WC1B 5HA (GB)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 18 March 2010 concerning maintenance of the European Patent No. 0965326 in amended form.**

Composition of the Board:

Chairwoman	C. Komenda
Members:	J. Mercey
	F. Blumer

Summary of Facts and Submissions

I. The Appellant (Opponent) lodged an appeal against the interlocutory decision of the Opposition Division that European patent No. 965 326 in the amended form based on the then pending auxiliary request 2 met the requirements of the EPC. Independent claim 1 of said request reads as follows:

"A perfume composition comprising:
a) at least 10% by weight of at least one High Impact Accord ("HIA") perfume ingredient of Class 1, the Class 1 perfume ingredient having (1) a boiling point at 1013 hPa (760 mm Hg), of 275°C or lower, (2) a calculated CLogP of at least 2.0, and (3) an odor detection threshold ("ODT") less than or equal to 50 ppb; and
b) at least 30% by weight of at least one High Impact Accord ("HIA") perfume ingredient of class 2, the Class 2 perfume ingredient having (1) a boiling point at 1013 hPa (760 mm Hg), of greater than 275°C, (2) a calculated CLogP of at least 4.0, and (3) an odor detection threshold ("ODT") less than or equal to 50 ppb; and wherein the composition is microencapsulated to provide a capsule core which is coated completely with a polymeric material."

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

(8) EP-A-392 606 and
(15) EP-A-478 326.

III. The Opposition Division found that the invention as defined in claim 1 of the then pending auxiliary request 2 was sufficiently disclosed, the subject-matter thereof was novel, and involved an inventive step in the light of document (15) as closest prior art.

IV. With letter dated 29 November 2010, the Respondent (Patent proprietor) filed a main request and auxiliary requests 1 to 5.

The main request differs from auxiliary request 2 as maintained by the Opposition Division only in that dependent claims 4 and 5 have been cancelled and the dependencies of the remaining claims have been amended accordingly.

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the Class 1 perfume ingredients are further defined as being selected from
4-(2,2,6-trimethylcyclohex-1-enyl)-2-but-en-4-one;
2,4-decadienoic acid, ethyl ester (E, Z)-;
6-(and-8) isopropylquinoline;
acetaldehyde phenylethyl propyl acetal;
acetic acid, (2-methylbutoxy)-, 2-propenyl ester;
acetic acid, (3-methylbutoxy)-, 2-propenyl ester;
2,6,10-trimethyl-9-undecenal;
glycolic acid, 2-pentyloxy-, allyl ester;
hexanoic acid, 2-propenyl ester;
1-octen-3-ol;
trans-anethole;
iso butyl (z)-2-methyl-2-butenoate;
anisaldehyde diethyl acetal;
benzenepropanal, 4-(1, 1-dimethylethyl)-;
2,6-nonadien-1-ol;
3-methyl-5-propyl-cyclohexen-1-one;

butanoic acid, 2-methyl-, 3-hexenyl ester, (Z)-;
acetaldehyde, [(3,7-dimethyl-6-octenyl)oxy]-;
lauronitrile;
2,4-dimethyl-3-cyclohexene-1-carbaldehyde;
2-buten-1-one, 1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-;
2-buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)-;
gamma-decalactone;
trans-4-decenal;
decanal;
2-pentylcyclopentanone;
1-(2,6,6-trimethyl 3-cyclohexen-1-yl)-2 buten-1-one);
2,6-dimethylheptan-2-ol;
benzene, 1,1'-oxybis-;
4-penten-1-one, 1-(5,5-dimethyl-1-cyclohexen-1-yl)-;
butanoic acid, 2-methyl-, ethyl ester;
ethyl anthranilate;
2-oxabicyclo[2.2.2]octane, 1,3,3-trimethyl-;
eugenol;
3-(3-isopropylphenyl)butanal;
methyl 2-octynoate;
4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one;
pyrazine, 2-methoxy-3-(2-methylpropyl)-;
quinoline, 6-secondary butyl;
isoeugenol;
2H-pyran-2-one, tetrahydro-6-(3-pentenyl)-;
cis-3-hexenyl methyl carbonate;
linalool;
1,6,10-dodecatriene, 7,11-dimethyl-3-methylene-, (E)-;
2,6-dimethyl-5-heptenal;
4,7 methanoindan 1-carboxaldehyde, hexahydro;
2-methylundecanal;
methyl 2-nonynonate;
1,1-dimethoxy-2,2,5-trimethyl-4-hexene;
benzoic acid, 2-hydroxy-, methyl ester;

4-penten-1-one, 1-(5,5-dimethyl-1-cyclohexen-1-yl);
2H-pyran, 3,6-dihydro-4 methyl-2-(2-methyl-1-propenyl)-;
2,6-octadienenitrile, 3,7-dimethyl-, (Z)-;
2,6-nonadienal;
6-nonenal, (Z)-;
nonanal;
octanal;
2-nonenenitrile;
acetic acid, 4-methylphenyl ester;
gamma undecalactone;
2-norpinene-2-propionaldehyde 6,6-dimethyl;
4-nonanolide;
9-decen-l-ol;
2H-pyran, tetrahydro-4-methyl-2-(2-methyl-1-propenyl)-;
5-methyl-3-heptanone oxime;
octanal, 3,7-dimethyl-;
4-methyl-3-decen-5-ol;
10-undecen-1-al;
pyridine, 2-(l-ethylpropyl)-;
spiro[furan-2(3H),5'-[4,7]methano[5H]indene],decahydro-;
anisic aldehyde;
flor acetate;
rose oxide;
cis 3-hexenyl salicylate;
methyl octin carbonate; and
ethyl-2-methyl butyrate,

and the Class 2 perfume ingredients are further defined as being selected from
naphtho(2,1-B)-furan,3A-ethyl dodecahydro-6,6,9A-trimethyl;
2-(cyclododecyl)-propan-1-ol;
oxacycloheptadecan-2-one;

ketone, methyl-2,6,10-trimethyl-2,5,9-cyclododecatriene-1-yl;
8alpha,12-oxido-13,14,15,16-tetranorlabdane;
cyclohexane propanol 2,2,6-trimethyl-alpha, propyl;
6,7-dihydro-1,1,2,3,3-pentamethyl-4(5H)-indanone;
8-cyclohexadecen-1-one;
2-(2-(4-methyl-3-cyclohexen-1-yl)propyl)-cyclopentanone;
oxacyclohexadecen-2-one;
3-methyl-4(5)-cyclopentadecenone;
3-methyl-5-(2,2,3-trimethyl-3-cyclopenten-1-yl)-4-penten-2-ol;
2,4-dimethyl-2-(1,1,4,4,-tetramethyl)tetralin-6-yl)-1,3-dioxolane;
tridecene-2-nitrile;
7-acetyl, 1,2,3,4,5,6,7,8-octahydro-1,1,6,7-tetra methyl naphthalene; and
5-cyclohexadecenone-1.

Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the feature that the composition is microencapsulated to provide a capsule core which is coated completely with a polymeric material composition has been deleted and replaced with the feature that the composition is encapsulated in a water-soluble modified starch solid matrix.

Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the Class 1 and Class 2 perfume ingredients are further defined as in auxiliary request 1.

Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 2 in that the composition is encapsulated by spray drying an emulsion containing the modified starch and the perfume composition.

Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 4 in that the Class 1 and Class 2 perfume ingredients are further defined as in auxiliary request 1.

V. The Appellant argued that the claimed perfume compositions were not inventive, starting from document (15) as closest prior art. More particularly, Example 11 thereof disclosed a starch microencapsulated perfume suitable for a carpet freshening product, the perfume comprising 20 wt.% Class 1 compounds and 25.5 wt.% Class 2 compounds. The comparative examples filed by the Respondent with letter dated 29 November 2010 were not a fair comparison with document (15), since they merely compared perfumes encapsulated with starch with perfumes adsorbed onto a zeolite and perfumes complexed with β-cyclodextrin. Perfumes adsorbed on/complexed with a zeolite/β-cyclodextrin did not, however, represent the closest prior art, namely Example 11 of document (15) which was already starch encapsulated. The only difference between the composition of said example and that of claim 1 of the contested patent was the amount of Class 2 perfume ingredient of ≥30 wt.%. However, no effect had been shown to be associated with said amount which was, therefore, arbitrary, perfume compositions comprising ≥10 wt.% Class 1 and ≥30 wt.% Class 2 perfume ingredients being well-known. Even if the ODT values of the two perfume ingredients claimed were also to be acknowledged as differences *vis-à-vis* the composition of Example 11, no unexpected effect had been shown to be associated therewith, it being common general knowledge that perfumes with a low ODT value were more perceivable. The subject-matter of claim 1 of each of the auxiliary requests was also not inventive, since no effect had been shown to be associated with

the particular Class 1 and Class 2 compounds specified in auxiliary requests 1, 3 and 5, which were thus arbitrary. With regard to auxiliary requests 2 to 5, Example 11 of document (15) already disclosed a water-soluble modified starch solid matrix as encapsulation material, and with regard to auxiliary requests 4 and 5, it had not been shown that capsules made by spray drying were structurally any different from those made by simply mixing.

The Appellant also submitted that the invention was insufficiently disclosed and that the auxiliary requests 2 to 5 offended against the principle of *reformatio in peius*.

VI. The Respondent submitted that the claimed subject-matter was inventive and that document (8) represented the closest prior art, since it taught a perfume composition encapsulated in cyclodextrin containing 15 wt.% of Class 1 and 30 wt.% of Class 2 perfume ingredients. In contrast, the composition of Example 11 of document (15) contained less than 30 wt.% Class 2 perfume ingredients and there was no indication in said example that capsules were formed at all. Starting, however, from document (15), the claimed polymer encapsulated compositions were inventive, since they provided an improved balance between the intensity of the perfume released by the neat product and that released during use of the product and thereafter from the laundered fabric, said problem not even having been recognised in the prior art. The success of the claimed solution was shown by the experimental data filed with letter dated 29 November 2010. The perfume composition disclosed in Example 11 of document (15) was enclosed in a microporous silica shell structure which was further treated with an aqueous starch solution such

that the resulting product was not completely coated and thus could not minimise the intensity of the perfume released by the neat product as successfully as the presently claimed (micro)encapsulates. Furthermore, the product of Example 11 was described as being suitable for a carpet freshening product and not for use in a laundry composition. Nor did document (15) disclose perfume ingredients having low ODTs, such that it could not have provided any motivation to combine Class 1 and Class 2 perfumes having ODTs of less than or equal to 50 ppb in the high concentrations claimed, nor to (micro)encapsulate such a combination in a starch coating.

The Respondent submitted that the invention was sufficiently disclosed and that the auxiliary requests 2 to 5 did not offend against the principle of *reformatio in peius*, or at least that an exception to this principle should be made in the present case as a matter of equity in order to protect the non-appealing proprietor.

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

The Respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of the main request or any of the auxiliary requests 1 to 5, all requests filed with letter dated 29 November 2010.

VIII. At the end of the oral proceedings held on 3 July 2014 the decision of the Board was announced.

Reasons for the Decision

1. The appeal is admissible.

Inventive step

Main request

2. The patent in suit is directed to a perfume composition (micro)encapsulated in a polymer coating.

2.1 Similar perfume compositions already belong to the state of the art in that document (15) describes a process for encapsulating a hydrophobic material with silica (see claim 1), wherein a further material, which may be starch, is coated onto the capsules to reduce their porosity (see claims 6 and 7), the resulting microencapsulates being formulated as a laundry wash product (see claim 18). The encapsulation is employed *inter alia* to assist triggered delivery or to extend activity (e.g. of fragrance) through controlled delivery (see col. 2, lines 40 to 59). More particularly, Example 1 describes the preparation of an emulsion in which droplets of a perfume comprising dihydromyrcenol (10 wt.%) and citronellol (10 wt.%), which have boiling points and calculated CLogP values corresponding to those defined for the Class 1 perfume ingredients according to present claim 1, and benzyl salicylate (10 wt.%), Traseolide (7.5 wt.%) and hexyl cinnamic aldehyde (8 wt.%), which have boiling points and calculated CLogP values corresponding to those defined for the Class 2 perfume ingredients according to present claim 1, are encapsulated in silica, the capsule size being in the range 2-5µm. In Example 5, the pH of this emulsion is adjusted using HCl and the

thick cream formed is shaken to give a fluid emulsion. In Example 11, the gelled product of Example 5 is dispersed in an aqueous solution of starch in the form of Capsul to give a product which is described as being suitable for a carpet freshener product. The product of Example 11 thus contains *inter alia* 20 wt.% Class 1, and 25.5 wt.% Class 2 perfume ingredients, as far as their boiling points and calculated CLogP values are concerned, the Respondent not contesting these findings. However, no ODT values for these perfume ingredients are given in this document and none have been provided by either party.

2.1.1 The Respondent argued that not document (15), but rather document (8), was the closest state of the art, since document (8) taught perfume compositions encapsulated in cyclodextrin containing 15 wt.% of Class 1 and 30 wt.% of Class 2 perfume ingredients. In contrast, the composition of Example 11 of document (15) contained less than 30 wt.% Class 2 perfume ingredients and there was no indication in said example that capsules were formed at all.

2.1.2 However, the Board holds that the product of Example 11 does indeed comprise microencapsulates which are coated completely with a polymeric material, since it has been made from an emulsion comprising perfume encapsulated with silica (see Example 1, col. 5, line 6 to 11), which is then gelled by acidification (see Example 5 and col. 3, lines 36 to 38), the resulting gel being blended with starch in the form of Capsul from National Starch (see Example 11), document (15) teaching that by blending the gelled material with a polymer such as starch (see col. 3, lines 48 to 50, col. 3, line 56 to col. 4, line 1 and lines 14 to 15) an outer coating is applied to the silica capsules and the porosity of the

capsules is reduced. This method further corresponds to one of the methods described in the patent in suit for manufacturing the starch encapsulates, namely by simply mixing the perfume with the encapsulating matrix (see page 9, lines 16 to 19), Capsul modified starch manufactured by National Starch being specifically described in the patent in suit as a suitable encapsulating material (see page 8, lines 32 to 33 and 41).

2.1.3 In contrast hereto, document (8) (see claim 1) discloses perfume/cyclodextrin **complexes** i.e. the perfume is not encapsulated but molecules thereof are merely accommodated within the cyclodextrin ring, as argued by the Respondent itself in its letter dated 25 November 2009 before the Opposition Division.

2.1.4 Thus, the Board sees no reason to deviate from the finding of the Opposition Division, which was supported by the Appellant, that the fragrance compositions of document (15) represent the closest state of the art and, hence, takes this document as the starting point when assessing inventive step.

2.2 In view of this state of the art, the problem underlying the patent in suit as formulated by the Respondent was the provision of a perfume composition having an improved balance between the intensity of the perfume released by the neat product and that released during use of the product and thereafter from the laundered fabric.

2.3 As the solution to this problem, the patent in suit proposes a perfume composition as defined in claim 1 of the main request characterised in that it comprises at least 30 wt.% Class 2 perfume ingredients as defined in

said claim, and in that both Class 1 and Class 2 perfume ingredients have ODTs of less than or equal to 50 ppb.

2.3.1 The Respondent additionally argued that microencapsulation of the composition to provide a core which is coated completely with a polymeric material was a characterising feature of the invention. However, as indicated in point 2.1.2 above, the Board holds that document (15) already discloses the complete encapsulation of perfume ingredients with a polymeric material, namely starch.

2.4 To demonstrate that the claimed perfume compositions have an improved balance between the intensity of the perfume released by the neat product and that released during use of the product and thereafter from the laundered fabric, the Respondent relied on comparative data filed with its letter dated 29 November 2010 which compare perfumes encapsulated with starch with perfumes adsorbed onto a zeolite and perfumes complexed with β-cyclodextrin. Said data show that the odour of the neat detergent product in which the perfume is encapsulated is less pungent and the character of the odour released from washed fabric changed less substantially than for detergents containing perfume-loaded zeolite or perfume-loaded cyclodextrin. The Respondent conceded that perfumes adsorbed on/complexed with a zeolite/β-cyclodextrin did not correspond exactly to the closest prior art, namely the product of Example 11 of document (15). However, it argued that a perfume adsorbed onto zeolite was not far removed from the perfume droplets within a porous silica shell dispersed in a starch solution of said Example 11, such that the data nevertheless rendered it credible that the perfume encapsulates of the invention which were coated

completely with a polymeric material solved the problem underlying the invention whereas the porous silica particles of document (15) would not, since the perfume would escape through the pores leading to an overly pungent odour in the neat product.

2.4.1 However, as indicated in point 2.1.2 above, the product of Example 11 is not only encapsulated with silica, but also additionally coated completely with a polymeric material, such that any argumentation based on a difference in the coating is redundant, present claim 1 not excluding additional silica encapsulation. Hence, a perfume loaded zeolite is not representative of the closest prior art, namely the starch encapsulated perfume composition disclosed in document (15). Nor is the nature of the comparison such that the effect is convincingly shown to have its origin in the characterising features of the invention, namely the amount of at least 30 wt.% Class 2 perfume ingredients and the ODT values of less than or equal to 50 ppb of the Class 1 and Class 2 perfume ingredients. Thus, these comparative Examples relied upon by the Respondent for supporting the alleged improvement cannot demonstrate that the technical problem has been solved *vis-à-vis* this prior art.

2.4.2 The Respondent further argued that by virtue of the higher amount of Class 2 perfume ingredients in the perfume composition, namely ingredients with a boiling point greater than 275°C, it was credible even in the absence of comparative data, that the strength of the odour in the neat product containing such a perfume composition was reduced and longevity on the fabric was increased, in view of the lower volatility of these ingredients.

However, according to present claim 1, the Class 1 and Class 2 perfume ingredients are differentiated essentially by virtue of whether they have a boiling point of 275°C or lower, or greater than 275°C, respectively, since their calculated CLogP and their ODTs may be the same. There is thus a smooth transition from one class to the other, such that it is not credible that a surprising effect on the longevity of the product enters into force at exactly 275°C. Indeed, as pointed out by the Appellant, in Example 11 of document (15), the perfume composition (see Example 1) also includes methyl cedryl ketone which has a calculated CLogP of 5.02 and a boiling point of 272°C, such that it is formally a Class 1 perfume ingredient according to claim 1 of the contested patent. However, in view of the presence of a significant amount (8 wt. %) of this perfume ingredient having a boiling point very close to the limit of 275°C, and the fact that the various perfume ingredients physically interact which each other, no reasonable prediction concerning an improved or reduced longevity of this perfume composition as a whole *vis-à-vis* a similar composition containing a little more Class 2 perfume ingredients can be made. Thus, this limit of 275°C separating the two classes of perfume ingredients from one another is arbitrary.

2.4.3 According to the jurisprudence of the Boards of Appeal, alleged but unsupported advantages cannot be taken into consideration in respect of the determination of the problem underlying the invention (see e.g. decision T 20/81, OJ EPO 1982, 217, point 3, last paragraph of the reasons). Since in the present case the alleged improvement, namely the provision of a perfume composition having an improved balance between the intensity of the perfume released by the neat product

and that released during use of the product and thereafter from the laundered fabric, lacks the required experimental support, the technical problem as defined in point 2.2 above needs reformulation.

2.5 Thus, in view of the teaching of document (15), the objective problem underlying the invention is merely the provision of further encapsulated perfume compositions.

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 Neither the amount of Class 2 perfume ingredients of at least 30 wt.%, nor the ODT values of both Class 1 and Class 2 perfume ingredients of less than or equal to 50 ppb, are critical or purposive choices, since no unexpected effect has been shown to be associated with these particular ranges (see points 2.4.1 and 2.4.2 above). Moreover, with regard to the ODT values, these are not known for the perfume ingredients in the product of Example 11 of document (15). The upper limit of 50 ppb defined in the present claim indicates merely that said perfume ingredients are particularly pungent, it being however common general knowledge that perfumes with a low ODT are more perceivable. Hence, the act of picking out at random an amount of Class 2 perfume ingredients of at least 30 wt.% and ODT values of both Class 1 and Class 2 perfume ingredients of less than or equal to 50 ppb is within the routine activity of the skilled person faced with the mere problem of providing further encapsulated perfume compositions and cannot provide the claimed composition with any inventive

ingenuity. For these reasons, the subject-matter of claim 1 is obvious.

2.7 For the following reasons the Board cannot accept the Respondent's arguments designed for supporting inventive step.

2.7.1 The Respondent argued that since the technical problem underlying the invention, namely that of providing perfume compositions having an improved balance between the intensity of the perfume released by the neat product and that released during use of the product and thereafter from the laundered fabric, had not even been recognised in the prior art, the solution could not be obvious.

However, since this technical problem has not been shown to have been successfully solved, it has been reformulated as merely the provision of further perfume compositions (see points 2.4 and 2.5 above), such that this argument of the Respondent is devoid of merit.

2.7.2 The Respondent also submitted that the product of Example 11 of document (15) was described as being suitable for a carpet freshening product, there being no indication that it would also be useful in laundry products.

However, present claim 1 is not restricted to laundry products but is directed to perfume compositions *per se*. In any case, document (15) teaches the use of the microencapsulates disclosed therein in laundry wash products (see col. 2, lines 34 to 37).

Auxiliary request 1

3. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the Class 1 and Class 2 perfume ingredients are further defined as being selected from a list of specific compounds.

3.1 The Respondent submitted that these amendments were primarily in response to objections under Article 83 EPC. Nevertheless, they resulted in the claimed subject-matter being further removed from that of document (15) which did not disclose any of these specific perfume ingredients, let alone in the required proportions.

3.2 However, since no effect has been shown to be associated with these particular perfume ingredients, their choice is also merely arbitrary and cannot confer inventiveness upon the already obvious perfume compositions.

3.3 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 feature that the composition is microencapsulated to provide a capsule core which is coated completely with a polymeric material composition has been deleted and replaced with the feature that the composition is encapsulated in a water-soluble modified starch solid matrix.

4.1 However, since the closest prior art document (15) already discloses that the encapsulation material may be a modified starch such as Capsul (see Example 11 and col. 4, lines 14 to 15), this amendment cannot

contribute to inventiveness of the subject-matter of claim 1 of this request *vis-à-vis* this document.

4.2 The Respondent argued that in Example 11 of document (15) the perfume droplets within a porous silica shell were merely dispersed in an aqueous starch solution such that any starch "coating" was thus not solid, as required by claim 1 of this request.

However, since the product of Example 11 has a starch coating made by a method similar to one of those described for making the modified starch encapsulated perfume products of the present invention, namely by mixing a perfume composition with an aqueous solution of starch (see point 2.1.2 above), the physical state of the coating cannot be regarded as a difference *vis-à-vis* the product of Example 11 of document (15), and thus cannot contribute to inventive step.

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

Auxiliary request 3

5. Claim 1 of auxiliary request 3 differs from claim 1 of auxiliary request 2 in that the Class 1 and Class 2 perfume ingredients are further defined as in auxiliary request 1.

5.1 Since there is no inventiveness in the choice of these particular perfume ingredients (see point 3.2 above), nor in the encapsulation material being a water-soluble modified starch solid matrix (see point 4.1 above), nor has the Respondent argued that the combination of these two features leads to any unexpected effect, this request also does not involve an inventive step.

Auxiliary request 4

6. Claim 1 of auxiliary request 4 differs from claim 1 of auxiliary request 2 in that the composition is encapsulated by spray drying an emulsion containing the modified starch and the perfume composition.

6.1 However, no evidence has been provided that capsules made by spray drying are structurally any different from those made by simple mixing of the perfume with the encapsulating matrix, nor did the Respondent argue that this was the case. Hence, this product-by-process feature cannot be regarded as a difference *vis-à-vis* the product of Example 11 of document (15), and thus cannot contribute to inventive step.

6.2 In the absence of such a structural difference, all the argumentation of the Respondent based on the inventiveness of the spray drying process is irrelevant, since the claimed product *per se* has to be patentable (see T 219/83, OJ EPO 1986, 211, point 10 of the reasons).

6.3 Thus, auxiliary request 4 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

Auxiliary request 5

7. Claim 1 of auxiliary request 5 differs from claim 1 of auxiliary request 4 in that the Class 1 and Class 2 perfume ingredients are further defined as in auxiliary request 1.

7.1 Since there is no inventiveness in the choice of these particular perfume ingredients (see point 3.2 above),

nor in the composition being encapsulated by spray drying (see point 6.1 above), this request also does not involve an inventive step.

7.2 Thus, auxiliary request 5 is also not allowable for lack of inventive step pursuant to Article 56 EPC.

8. Other issues

The Appellant had no objections to the claims of any of the requests under Article 123(2) EPC, nor did the Board see any reason to question their allowability under this article of its own motion.

The Appellant submitted that the invention was insufficiently disclosed and that the auxiliary requests 2 to 5 offended against the principle of *reformatio in peius*.

In view of the negative conclusion in respect of inventive step for the subject-matter of all requests as set out in points 2 to 7 above, a decision of the Board on these issues is unnecessary.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairwoman:

M. Kiehl C. Komenda

Decision electronically authenticated