

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 233 055 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

21.08.2002 Bulletin 2002/34

(51) Int Cl.7: **C11D 3/39**, C11D 3/50,
C11D 17/00

(21) Application number: **01103702.5**

(22) Date of filing: **15.02.2001**

(84) Designated Contracting States:

**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**

Designated Extension States:

AL LT LV MK RO SI

(71) Applicant: **Givaudan SA**

1214 Vernier (CH)

(72) Inventors:

- **Blondeau, Philippe**
75010 Paris (FR)

- **Audibert, Thierry**

95230 Saint Leu la Forêt (FR)

- **Picci, Sébastien**

68260 Kingersheim (FR)

(74) Representative: **Patentanwälte**

Schaad, Balass, Menzl & Partner AG

Dufourstrasse 101

Postfach

8034 Zürich (CH)

(54) **Bleaching composition**

(57) This invention relates to a bleaching composition comprising a bleach in a water solution forming a water phase, characterized by a separate organic phase comprising a fragrance. The fragrance present in the organic phase is not stable under oxidative conditions.

EP 1 233 055 A1

Description

[0001] The present invention relates to a bleaching composition comprising a bleach in a water solution forming a water phase.

[0002] Bleaching compositions have a rather unpleasant odor. The odor improving of bleach compositions is an unsolved problem until now. Due to the inherent characteristics of bleaches to oxidize fragrances, it is difficult to scent a bleaching composition in such a way that the odor of the fragrance remains stable. The fragrance has to be compatible and stable under highly oxidative conditions as well as show a good consumer acceptance. Amongst the fragrances which are available to the perfumers, only a few (less than 20) are sufficiently stable under such conditions. Presently the only formulation comprising stable fragrances in the presence of sodium hypochlorite exhibit agrestic, piney odors. Moreover the fragrance dosage is limited to 0.1% due to chlorine stability and solubility.

[0003] Bleaches are substances which lighten or whiten a material by chemical reaction. This can involve either oxidative or reducing reactions. E.g. decolorization can often be achieved by destroying one or more of the double bonds in the conjugated ring system of a chromophor.

[0004] PCT/US98/02897 discloses a solid fragrant bleaching block as well as methods for making and employing such a block. Said block comprises a fragrance which is stable to the bleach, does not decompose the bleach and is not substantially hygroscopic.

[0005] It is an object of the present invention to provide a stable liquid bleaching composition.

[0006] Surprisingly it has been found that a bleaching composition comprising a bleach in a water solution forming a water phase, characterized by a separate organic phase comprising fragrance has an outstanding odor stability. The composition of the present invention allows to have all kinds of fragrances, therefore new odor directions such as compositions exhibiting a floral, woody or fruity odor. Compositions according to the present invention comprising fragrances having a woody characteristic like georywood, sandalwood notes, peonile and ionone have been found to be stable after aging in the two phase system. Said fragrances are oxidizable by bleaches and therefore not stable in traditional mono phase products.

[0007] A further advantage of the composition according to the present invention is that the bleach is stable over time as well due to the two phase system.

[0008] In a preferred embodiment the composition according to the present invention comprises 2 to 30% (v/v) of the organic phase and 70 to 98% (v/v) of the water phase. Compositions according to the present invention comprising 10% (v/v) of the organic phase and 90% (v/v) of the water phase are especially preferred.

[0009] The main component of the organic phase of the composition according to the present invention is preferably a linear or branched alkane having 5 to 16 carbon atoms or a mixture of such alkanes. These alkanes are preferred due to their characteristic of being not miscible with water and their high evaporation rate, which guarantees that they do not disturb the odor of the fragrance.

[0010] The bleaches which may be employed in the present invention may be selected from a wide variety of known compounds. Preferably, the bleaches is selected from the group of chlorine containing bleaches, peroxides and reducing bleaches. The chlorine containing bleaching compounds may be selected from the group of chlorine, hypochlorite, and chlorite as well as chlorine dioxide. In a most preferred embodiment of the present invention sodium hypochlorite is used in the presence of sodium hydroxides. The composition according to the present invention comprises preferably 1 to 5% by total weight of the active chlorine.

[0011] The composition of the present invention allows to have all kinds of fragrances. In a composition according to the present invention a fragrance may be used alone or in combination with further fragrances of natural and/or synthetic origin. The term "fragrance" is used within the context of the present invention for a compound or a mixture of compounds which stimulate/s the sense of smell. The range of the natural fragrances includes in addition to readily volatile, also moderately and only slightly volatile components. The synthetic fragrances embrace representatives from practically all classes of fragrance substances.

[0012] A further advantage of the composition according to the present invention is the possibility of higher fragrances concentrations in the product. Due to the two phase system a fragrance concentration of 0.1% up to 2% or even more can be solved.

Example 1**Stability Test**

[0013] Perfumery raw materials were tested for a period of 1 month at 37°C and evaluated each week. The dosage of perfumery raw material was 0.2%. Stability tests were shaken twice a week during the test in order to simulate the real in use conditions. Stability tests results are compiled into the following tables.

EP 1 233 055 A1

Fragrance	STABILITY (37°C) 3% active chlorine			
	7 days	14 days	21 days	30 days
ACETATE BORNYLE LIQUID	1	1	1	1
ALLYL AMYL GLYCOLATE	1	1	1	1
DIHYDROMYRCENOL	1	1	1	1
EBANOL	1	1	1	1
IONONE BETA	1	1	1	1
JAVANOL	1	1	1	1
MANZANATE	1	1	1	1
PATCHOULI ESS SANS FER	1	1	1	1
PEONILE	1	1	1	1
UNDECAVERTOL	1	1	1	1
DECALACTONE GAMMA	1	1	2	2
FRESKOMENTHE	1	1	1	2
GALBANONE 10	1	2	2	2
GEORGYWOOD	1	2	2	2
LAVANDIN GROSSO ESS ORPUR	2	2	2	2
PETITGRAIN ECO ESS	1	1	1	2
PRUNOLIDE	2	2	2	2
SALICYLATE AMYLE	2	2	2	2
TUBEREUSE	1	1	1	2
YLANG ECO ESS	2	2	2	2
AGRUMEX	1	1	1	1
DECANONITRILE	1	1	1	1
TETRAHYDROLINALOL	1	1	1	1
DIPHENYLOXIDE	1	1	1	1
PHENOXANOL	1	1	1	1
1 = unchanged fragrance (stable) 2 = slightly changed fragrance				

Example 2

[0014] A fragrance tested in the bleaching composition with a water and an organic phase for a period of 1 month at 40°C.

Bleaching composition with a water and an organic phase	
Phase A	parts per weight
Sodium Hypochlorite (3.5%)	93.80
Sodium Hydroxide (50%)	0.90
Hydroxy Ethylene Diphosphonic Acid	0.30
Phase B	
Isoparaffinic Hydrocarbon Oil	4.50

(continued)

Bleaching composition with a water and an organic phase	
Phase A	parts per weight
Phase B	
Fragrance	0.50 100.00

[0015] The fragrance comprises agrumex, decalactone gamma, manzanate, tetrahydrolinalol, peonile, galbanone, diphenyloxide, damascenone total, galaxolide and hexyl isobutyrate.

[0016] Olfactive stability was assessed after ageing. Quality and intensity of fragrance composition were judged stable.

[0017] Chlorine stability results are summarized below.

Fragrance dosage : 0.5%

[0018]

Product/Conditions	Chlorine loss (%) after 30 days
Unperfumed base /4°C	9
Unperfumed base /40°C	22
Perfumed base /4°C	9
Perfumed base /40°C	23

Claims

1. A bleaching composition comprising a bleach in a water solution forming a water phase, **characterized by** a separate organic phase comprising a fragrance.
2. Composition according to claim 1 comprising 70 to 98% (v/v) of the water phase and 2 to 30% (v/v) of the organic phase.
3. Composition according to any of the preceding claims comprising 90% (v/v) of the water phase and 10% (v/v) of the organic phase.
4. Composition according to any of the preceding claims wherein the organic phase comprises a linear or branched alkane having 5 to 16 carbon atoms or a mixture of such alkanes.
5. Composition according to any preceding claims wherein the fragrance in the organic phase is selected from the group of acetate bornyle, allyl amyl glycolate, dihydromyrcenol, ebanol, ionone beta, javanol, manzanate, patchouli, peonil, undecavertol, decalactone gamma, freskomenthe, galbanone, georgywood, lavandin, petitgrain, prunolid, salicylate amyle, tubereuse, ylang, agrumex, decanonitrile, tetrahydrolinalol, diphenyloxide and phenoxanol.
6. Composition according to any of the preceding claims wherein the fragrance present in the organic phase is not stable under oxidative conditions.
7. Composition according to any of the preceding claims wherein the bleach is selected from the group of chlorine containing bleaches, peroxides and reducing bleaches.
8. Composition according to any of the preceding claims comprising 0.1 to 2% by total weight of the fragrance.
9. Composition according to claim 8 comprising the chlorine containing bleach in an amount of 1 to 5% by total weight of active chlorine.

10. Household product comprising a composition according to any of the preceding claims.

5

10

15

20

25

30

35

40

45

50

55



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 10 3702

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 466 235 A (QUEST INTERNATION) 15 January 1992 (1992-01-15) * page 3, line 22 - line 32 * * page 7, line 57 - page 8, line 2 * * page 10, line 23 * * claims 1,2,18-25; example 25 * ----	1-3,5, 7-10	C11D3/39 C11D3/50 C11D17/00
X	US 4 113 645 A (SANTORA DESIMONE, ROBERT) 12 September 1978 (1978-09-12) * column 1, line 9 - line 68 * * claims 1-3; examples * ----	1,5-10	
X	EP 0 634 476 A (PROCTER & GAMBLE) 18 January 1995 (1995-01-18) * page 3, line 20 - line 41 * * page 4, line 48 - line 53 * * page 5, line 43 - line 45; claims 1,9,12; examples * ----	1-3,7,8, 10	
X	US 3 684 722 A (HYNAM BRIAN MICHAEL ET AL) 15 August 1972 (1972-08-15) * column 1, line 65 - line 71 * * column 7, line 35 - line 45 * * claims 1-3 * ----	1,2,4, 7-10	TECHNICAL FIELDS SEARCHED (Int.Cl.7) C11D
X	US 5 205 953 A (DIXIT, NAGARAJ S.) 27 April 1993 (1993-04-27) * column 11, line 60 - line 65 * * column 12, line 37 - column 13, line 31; claims 1,11; examples * ----	1-3,7-10	
X	US 5 202 046 A (DIXIT, NAGARAJ) 13 April 1993 (1993-04-13) * claims 1,5 * ----- -/--	1	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 5 July 2001	Examiner Richards, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03 82 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 01 10 3702

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	EP 0 598 693 A (PROCTER & GAMBLE) 25 May 1994 (1994-05-25) * page 2, line 54 - page 2, line 56 * * page 3, line 6 - line 8 * * page 3, line 24 - line 26 * * page 4, line 47 - line 52 * * page 5, line 26 - line 38; claims 1,6,9; examples *	1-3,7,8, 10	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	US 6 114 298 A (PETRI, MARCO) 5 September 2000 (2000-09-05) * column 2, line 48 - line 59 * * column 4, line 31 - line 50 * * column 8, line 64 - line 67 * * column 9, line 4 - line 41 * * column 14, line 50 - column 16, line 11; claims 1,2,8-10; examples *	1-3,7-10	
X	US 4 496 473 A (SANDERSON, WILLIAM) 29 January 1985 (1985-01-29) * column 5, line 20 - line 44 * * column 7, line 59 - line 65; claim 1 *	1-3,7,8, 10	
X	US 5 962 391 A (OLDENHOVE, LOUIS) 5 October 1999 (1999-10-05) * column 4, line 25 - line 29 * * column 4, line 57 - line 66 * * column 6, line 19 - line 31 * * column 8, line 8 - line 21 * * claims 1,8; examples *	1-3,7,8, 10	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 5 July 2001	Examiner Richards, M
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03.82 (PC4C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 3702

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-07-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 466235	A	15-01-1992	AT 148742 T	15-02-1997
			DE 69124550 D	20-03-1997
			DE 69124550 T	12-06-1997
			JP 5194989 A	03-08-1993
			JP 7094676 B	11-10-1995
			US 5288423 A	22-02-1994
			ZA 9105404 A	31-03-1993
US 4113645	A	12-09-1978	CA 1086006 A	23-09-1980
			DE 2832135 A	08-02-1979
			GB 2002433 A, B	21-02-1979
			NL 7807698 A	30-01-1979
EP 634476	A	18-01-1995	AU 7355394 A	13-02-1995
			DE 69326757 D	18-11-1999
			DE 69326757 T	31-05-2000
			ES 2137246 T	16-12-1999
			GR 3031529 T	31-01-2000
			JP 9500379 T	14-01-1997
			WO 9502667 A	26-01-1995
			US 5759989 A	02-06-1998
US 3684722	A	15-08-1972	AT 344124 B	10-07-1978
			AT 777670 A	15-11-1977
			BE 755338 A	26-02-1971
			CA 923780 A	03-04-1973
			CH 542922 A	30-11-1973
			DE 2042037 A	04-03-1971
			DK 146039 B	06-06-1983
			FR 2059755 A	04-06-1971
			GB 1329086 A	05-09-1973
			NL 134221 C	
			NL 7012822 A, B	02-03-1971
			NO 134221 B	24-05-1976
			SE 372296 B	16-12-1974
			ZA 7005875 A	26-04-1972
US 5205953	A	27-04-1993	US 5064553 A	12-11-1991
			AU 1616792 A	07-01-1993
			CA 2070086 A	06-01-1993
			EP 0517310 A	09-12-1992
			EP 0517311 A	09-12-1992
			EP 0517312 A	09-12-1992
			EP 0517313 A	09-12-1992
			FI 922499 A	06-01-1993
			GR 92100245 A	24-05-1993

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 3702

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-07-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5205953 A		IE 921752 A	13-01-1993
		NO 922058 A	06-01-1993
		NZ 242833 A	26-10-1994
		PT 100550 A	30-09-1993
		US 5368766 A	29-11-1994
		US 5298180 A	29-03-1994
		AT 118245 T	15-02-1995
		AU 625182 B	02-07-1992
		AU 5460790 A	22-11-1990
		CA 2015150 A	18-11-1990
		DE 69016696 D	23-03-1995
		DE 69016696 T	05-10-1995
		DK 398021 T	10-07-1995
		EP 0398021 A	22-11-1990
		GR 90100382 A	10-10-1991
		NO 176765 B	13-02-1995
		NZ 233564 A	25-02-1992
		PL 285227 A	28-01-1991
		PT 94057 A	08-01-1991
		US 5395547 A	07-03-1995
		US 5427707 A	27-06-1995
		US 5053158 A	01-10-1991
		US 5252242 A	12-10-1993
		US 5202046 A	13-04-1993
		US 5252241 A	12-10-1993
		US 5229026 A	20-07-1993
		US 5225096 A	06-07-1993
		US 5232621 A	03-08-1993
		US 5413727 A	09-05-1995
		US 5246615 A	21-09-1993
US 5202046 A	13-04-1993	US 5064553 A	12-11-1991
		AT 118245 T	15-02-1995
		AU 625182 B	02-07-1992
		AU 5460790 A	22-11-1990
		CA 2015150 A	18-11-1990
		DE 69016696 D	23-03-1995
		DE 69016696 T	05-10-1995
		DK 398021 T	10-07-1995
		EP 0398021 A	22-11-1990
		GR 90100382 A	10-10-1991
		NO 176765 B	13-02-1995
		NZ 233564 A	25-02-1992
		PL 285227 A	28-01-1991
		PT 94057 A	08-01-1991
		US 5368766 A	29-11-1994

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 3702

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-07-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5202046 A		US 5298180 A	29-03-1994
		US 5395547 A	07-03-1995
		US 5427707 A	27-06-1995
		US 5053158 A	01-10-1991
		US 5252242 A	12-10-1993
		US 5252241 A	12-10-1993
		US 5205953 A	27-04-1993
		US 5229026 A	20-07-1993
		US 5225096 A	06-07-1993
		US 5232621 A	03-08-1993
		US 5413727 A	09-05-1995
		US 5246615 A	21-09-1993
EP 598693 A	25-05-1994	EP 0598170 A	25-05-1994
		EP 0629691 A	21-12-1994
		EP 0629690 A	21-12-1994
		SG 52309 A	28-09-1998
		SG 55157 A	21-12-1998
		AT 163037 T	15-02-1998
		AT 174955 T	15-01-1999
		AT 163038 T	15-02-1998
		AU 683858 B	27-11-1997
		AU 5455994 A	08-06-1994
		AU 5589194 A	08-06-1994
		BR 9307291 A	01-06-1999
		BR 9307462 A	24-08-1999
		CA 2148098 A	26-05-1994
		CA 2149320 A,C	26-05-1994
		DE 69224389 D	12-03-1998
		DE 69224389 T	13-08-1998
		DE 69316842 D	12-03-1998
		DE 69316842 T	10-09-1998
		DE 69322744 D	04-02-1999
		DE 69322744 T	22-07-1999
		DK 598170 T	02-03-1998
		DK 598694 T	02-03-1998
		EP 0598692 A	25-05-1994
		EP 0598694 A	25-05-1994
		ES 2113421 T	01-05-1998
		ES 2125322 T	01-03-1999
		ES 2113521 T	01-05-1998
		GR 3026437 T	30-06-1998
		GR 3026562 T	31-07-1998
		JP 8503244 T	09-04-1996
		JP 8503017 T	02-04-1996
		RU 2135558 C	27-08-1999

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 3702

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-07-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 598693 A		WO 9411474 A	26-05-1994
		WO 9411475 A	26-05-1994
		WO 9411099 A	26-05-1994
		US 5851979 A	22-12-1998
		AT 194014 T	15-07-2000
		AU 693793 B	09-07-1998
		AU 6961594 A	03-01-1995
		BR 9406802 A	19-03-1996
		CN 1127521 A	24-07-1996
		DE 69321711 D	26-11-1998
		DE 69321711 T	10-06-1999
		DE 69328900 D	27-07-2000
		DE 69328900 T	01-02-2001
		DK 629694 T	28-08-2000
		EP 0629694 A	21-12-1994
		ES 2121983 T	16-12-1998
		ES 2146606 T	16-08-2000
US 6114298 A	05-09-2000	EP 0842606 A	20-05-1998
		AT 190469 T	15-04-2000
		AU 5252298 A	03-06-1998
		BR 9712949 A	20-06-2000
		CN 1244893 A	16-02-2000
		DE 69607178 D	20-04-2000
		DE 69607178 T	14-12-2000
		DK 842606 T	05-06-2000
		ES 2143172 T	01-05-2000
		GR 3032827 T	30-06-2000
		NO 992267 A	12-07-1999
		PT 842606 T	31-08-2000
		TR 9901036 T	21-07-1999
		WO 9821307 A	22-05-1998
US 4496473 A	29-01-1985	AT 20087 T	15-06-1986
		AU 552059 B	22-05-1986
		AU 1364483 A	03-11-1983
		BR 8302119 A	27-12-1983
		CA 1205346 A	03-06-1986
		DE 3363719 D	03-07-1986
		EP 0092932 A	02-11-1983
		ES 521860 D	01-07-1984
		ES 8406087 A	16-10-1984
		JP 1762617 C	28-05-1993
		JP 4056877 B	09-09-1992
		JP 58222199 A	23-12-1983
		MX 159079 A	14-04-1989

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 10 3702

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

05-07-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4496473 A		PT 76591 A, B	01-05-1983
		ZA 8302668 A	28-12-1983
US 5962391 A	05-10-1999	US 5643861 A	01-07-1997
		US 5527485 A	18-06-1996
		AU 3591397 A	02-02-1998
		WO 9801527 A	15-01-1998
		ZA 9705826 A	30-12-1998
		AU 707810 B	22-07-1999
		AU 7676096 A	11-06-1997
		EP 0873394 A	28-10-1998
		WO 9719164 A	29-05-1997
		US 5527486 A	18-06-1996
		US 5585034 A	17-12-1996