INTERNATIONAL FRAGRANCE ASSOCIATION

Index of IFRA Standards – 46th Amendment

The IFRA recommendations are grouped into three categories as follows:

P (prohibited)	The material should not be used as a fragrance ingredient.
R (restricted)	The use of the material should be limited quantitatively.
S (specified)	The material should only be used if it meets certain purity criteria or if it used in conjunction with other materials.

7 NEW Standards (are indicated in yellow)

	Substance	CAS	Last Amended	Standard
1.	Acetyl ethyl tetramethyl tetralin (AETT, Versalide)	88-29-9	11.77 (05.06) [1]	**P**
2.	5-Acetyl-1,1,2,3,3,6-hexamethyl indan (AHMI, Phantolid)	15323-35-0	10.87 (04.05)	**R**
3.	Acetyl isovaleryl (5-Methyl-2,3-hexanedione)	13706-86-0	02.80 (05.06)	**P**
4.	Alantroot oil (Elecampane oil)	97676-35-2	06.75 (05.06)	**P**
5.	Allyl Esters	N/A	02.77 (07.09)	**S**
6.	Allyl heptine carbonate	73157-43-4	05.07 (07.08)	**P**
7.	Allyl isothiocyanate	57-06-7	(07.08)	**P**
8.	Allyl phenoxyacetate	7493-74-5	07.09	**R-S**

[1] The dates in brackets indicate a modification of the Standard that did NOT affect the IFRA recommendations (for instance, an update of the references or a reformatting of the Standard). The dates without brackets refer to a change that affected the IFRA recommendations.

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	Substance	CAS	Last Amended	Standard
9.	Angelica root oil	8015-64-3	10.78 (04.05)	**R**
10.	alpha-Amyl cinnamic alcohol	101-85-9	05.07	**R**
11.	alpha-Amyl cinnamic aldehyde	122-40-7	05.07	**R**
12.	Amylcyclopentenone	25564-22-1	05.07 (07.08)	**P**
13.	Anisyl alcohol	105-13-5	05.07	**R**
14.	Anisylidene acetone (4-(p-methoxyphenyl)-3-butene-2-one)	943-88-4	11.74 (05.06)	**P**
15.	cis-and trans-Asarone ((E)-and(Z)-2,4,5-Trimethoxypropen-1-yl benzene)	2883-98-9 5273-86-9	12.91	**P-R**
16.	Benzaldehyde	100-52-7	07.09	**R**
17.	Benzene	71-43-2	04.04	**P**
18.	Benzyl alcohol	100-51-6	05.07	**R**
19.	Benzyl Benzoate	120-51-4	05.07	**R**
20.	Benzyl cinnamate	103-41-3	05.07	**R**
21.	Benzyl cyanide	140-29-4	04.04	**P**
22.	Benzylidene acetone (4-Phenyl-3-buten-2-one)	122-57-6	06.74 (05.06)	**P**
23.	Benzyl salicylate	118-58-1	05.07	**R**
24.	Bergamot oil expressed	8007-75-8	06.92	**R**
25.	Birch wood pyrolysate	8001-88-5 84012-15-7 85940-29-0 68917-50-0	04.04	**S-P**
26.	Bitter orange peel oil expressed	68916-04-1 72968-50-4	07.02	**R**
27.	Boldo oil	8022-81-9	07.09	**P**

	Substance	CAS	Last Amended	Standard
28.	3-Bromo-1,7,7-trimethylbicyclo[2.2.1]heptane-2-one	76-29-9	(07.08)	**P**
29.	Bromostyrene	103-64-0	(07.08)	**P**
30.	alpha-Butylcinnamaldehyde	7492-44-6	06.11	**R**
31.	p-tert-Butyl-dihydrocinnamaldehyde (Bourgeonal)	18127-01-0	07.08	**R**
32.	p-tert-Butyl-alpha-methylhydrocinnamic aldehyde (BMHCA)	80-54-6	07.08	**R**
33.	p-tert-Butylphenol	98-54-4	06.75 (05.06)	**P**
34.	Cade oil (Juniperus oxycedrus L.)	8013-10-3 90046-02-9	04.04	**S-P**
35.	Carvone; d-Carvone; l-Carvone	99-49-0 2244-16-8 6485-40-1	07.08	**R**
36.	Carvone oxide	33204-74-9	04.04	**P**
37.	Chenopodium oil	8006-99-3	(07.08)	**P**
38.	Cinnamic alcohol	104-54-1	07.08	**R**
39.	Cinnamic aldehyde	104-55-2	07.08	**R**
40.	Cinnamic aldehyde dimethyl acetal	4364-06-1	07.09	**R**
41.	Cinnamylidene acetone	4173-44-8	(07.08)	**P**
42.	Cinnamyl nitrile	1885-38-7 4360-47-8	07.08	**R**
43.	Citral	5392-40-5 141-27-5 106-26-3	05.06	**R**
44.	Citronellol	106-22-9 1117-61-9 26489-01-0 6812-78-8 141-25-3 68916-43-8 7540-51-4	05.07	**R**

	Substance	CAS	Last Amended	Standard
45.	Citrus oils and other furocoumarins containing essential oils		12.96	**R**
46.	Colophony	8050-09-7	12.92 (05.06)	**P**
47.	Costus root oil, absolute and concrete	8023-88-9	05.98 (05.06)	**P**
48.	Coumarin	91-64-5	07.08	**R**
49.	Cumin oil	8014-13-9	06.86 (04.05)	**R**
50.	Cyclamen alcohol (3-(4-Isopropylphenyl)-2-methylpropanol)	4756-19-8	10.78 (02.80)	**P-S**
51.	2,4-Decadienal	2363-88-4	07.09	**P**
52.	Dibenzyl ether	103-50-4	07.09	**R**
53.	1,3-Dibromo-2-methoxy-4-nitro-5-(1,1-dimethylethyl)-6-methyl-benzene (Musk alpha)	63697-53-0	(07.08)	**P**
54.	1,3-Dibromo-2-methoxy-4-methyl-5-nitrobenzene (Musk KS)	62265-99-0	(07.08)	**P**
55.	2,2-Dichloro-1-methylcyclopropylbenzene	3591-42-2	(07.08)	**P**
56.	Diethyl maleate	141-05-9	06.75 (05.06)	**P**
57.	Dihydrocoumarin (Melilotine)	119-84-6	10.74 (05.06)	**P**
58.	2,4-Dihydroxy-3-methylbenzaldehyde	6248-20-0	04.89 (05.06)	**P**
59.	Dimethylcyclohex-3-ene-1-carbaldehyde (mixed isomers)	68737-61-1 68039-49-6 68039-48-5 27939-60-2 67801-65-4	06.10	**R**
60.	1-(5,5-Dimethyl-1-cyclohexen-1-yl)pent-4-en-1-one	56973-85-4	07.09	**R**
61.	4,6-Dimethyl-8-tert-butylcoumarin (Butolia)	17874-34-9	06.81 (05.06)	**P**

	Substance	CAS	Last Amended	Standard
62.	3,7-Dimethyl-2-octen-1-ol	40607-48-5	04.04	**P**
63.	2,2-Dimethyl-3-(3-tolyl)propan-1-ol (Majantol)	103694-68-4	06.10	**R-S**
64.	Dimethyl citraconate	617-54-9	10.76 (05.06)	**P**
65.	Diphenylamine	122-39-4	04.04	**P**
66.	Esters of 2-octynoic acid (Except Methyl heptine carbonate which is IFRA Restricted)	10484-32-9 10519-20-7	(07.08)	**P**
67.	Esters of 2-nonynoic acid, (Except Methyl octine carbonate)	10031-92-2	(07.08)	**P**
68.	Estragole (Methyl chavicol)	140-67-0	07.09	**R**
69.	2-Ethoxy-4-methylphenol	2563-07-7	07.08	**R**
70.	Ethyl acrylate	140-88-5	11.74 (05.06)	**P**
71.	Ethylene glycol monoethyl ether and its Acetate	110-80-5 111-15-9 (acetate)	04.04	**P**
72.	Ethylene glycol monomethyl Ether and its Acetate	109-86-4 110-49-6 (acetate)	04.04	**P**
73.	Eugenol	97-53-0	07.08	**R**
74.	Farnesol	4602-84-0	05.06	**R-S**
75.	Fig leaf absolute	68916-52-9	05.83 (05.06)	**P**
76.	Furfuryl alcohol	98-00-0	07.09	**P**
77.	Furfurylidene acetone	623-15-4	(07.08)	**P**
78.	Geraniol	106-24-1	05.07	**R**
79.	Geranyl nitrile	5146-66-7 5585-39-7 31983-27-4	11.06 (07.08)	**P**
80.	Grapefruit oil expressed	8016-20-4	06.92	**R**

	Substance	CAS	Last Amended	Standard
81.	2,4-Heptadienal	5910-85-0	07.09	**P**
82.	trans-2-Heptenal	18829-55-5	04.89 (05.06)	**P**
83.	2-Heptylidene cyclopentan-1-one	39189-74-7	06.11	**R**
84.	2,4-Hexadienal	80466-34-8	07.09	**P**
85.	Hexahydrocoumarin	700-82-3	02.80 (05.06)	**P**
86.	trans-2-Hexenal	6728-26-3	07.08	**R**
87.	trans-2-Hexenal diethyl acetal	67746-30-9	04.89 (05.06)	**P**
88.	trans-2-Hexenal dimethyl acetal	18318-83-7	04.89 (05.06)	**P**
89.	alpha-Hexyl cinnamic aldehyde	101-86-0	05.07	**R**
90.	alpha-Hexylidene cyclopentanone	17373-89-6	07.08	**R**
91.	Hexyl salicylate	6259-76-3	05.07	**R**
92.	Hydroabietyl alcohol, dihydroabietyl alcohol	13393-93-6 26266-77-3 1333-89-7	04.04	**P**
93.	Hydroquinone monoethyl ether (4-ethoxy-Phenol)	622-62-8	10.83 (05.06)	**P**
94.	Hydroquinone monomethyl ether (4-methoxy-Phenol)	150-76-5	10.83 (05.06)	**P**
95.	Hydroxycitronellal	107-75-5	07.08	**R**
96.	3 and 4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde (HMPCC)	31906-04-4 51414-25-6	07.09	**R**
97.	p-Isobutyl-α-methyl-hydrocinnamaldehyde	6658-48-6	07.09	**R**
98.	Isobutyl N-methylanthranilate	65505-24-0	07.09	**R**
99.	Isocyclocitral	1335-66-6 1423-46-7 67634-07-5	05.07	**R**

	Substance	CAS	Last Amended	Standard
100.	Isocyclogeraniol (2,4,6-Trimethyl-3-cyclohexene-1-methanol)	68527-77-5	07.08	**R**
101.	Isoeugenol	97-54-1	07.08	**R**
102.	Isophorone	78-59-1	(07.08)	**P**
103.	6-Isopropyl-2-decalol (Decatol)	34131-99-2	06.79 (05.06)	**P**
104.	Jasmine absolute (grandiflorum)	8022-96-6 8024-43-9 90045-94-6 84776-64-7	07.08	**R**
105.	Jasmine absolute (sambac)	91770-14-8	07.08	**R**
106.	Lemon oil cold pressed	8008-56-8	06.92	**R**
107.	Lime oil expressed	8008-26-2	06.92	**R**
108.	Limonene	138-86-3	12.95	**S**
109.	Linalool; d-Linalool; l-Linalool	78-70-6 126-90-9 126-91-0	04.04	**S**
110.	Massoia bark oil	85085-26-3	(07.08)	**P**
111.	Massoia lactone	54814-64-1	(07.08)	**P**
112.	Melissa oil (genuine Melissa officinalis L.)	8014-71-9 84082-61-1	07.09	**R**
113.	p-Mentha-1,8-dien-7-al (Perilla aldehyde)	2111-75-3	07.08	**R**
114.	Menthadiene-7-methyl formate (Isobergamate)	68683-20-5	07.08	**R**
115.	o-Methoxycinnamaldehyde	1504-74-1	06.11	**R**
116.	7-Methoxycoumarin	531-59-9	02.79 (07.08)	**P**
117.	Methoxy dicylopentadiene carboxaldehyde (Scentenal)	86803-90-9	07.08	**R**

	Substance	CAS	Last Amended	Standard
118.	4-Methoxy-α-methylbenzenepropanal	5462-06-6	07.09	**R**
119.	2-Methoxy-4-methylphenol (p-Creosol)	93-51-6	07.08	**R**
120.	alpha-Methyl anisylidene acetone (1-(4-Methoxyphenyl)-1-penten-3-one)	104-27-8	05.80 (05.06)	**P**
121.	alpha-Methyl-1,3-benzodioxole-5-propionaldehyde (MMDHCA)	1205-17-0	06.10	**R**
122.	alpha-Methyl cinnamic aldehyde	101-39-3	05.07	**R**
123.	6-Methylcoumarin (Toncarine)	92-48-8	05.80 (05.06)	**P**
124.	7-Methylcoumarin	2445-83-2	05.83 (05.06)	**P**
125.	Methyl crotonate	623-43-8	05.80 (05.06)	**P**
126.	4-Methyl-7-ethoxycoumarin (Maraniol)	87-05-8	06.79 (05.06)	**P**
127.	Methyl Eugenol	93-15-2	07.02	**R**
128.	6-Methyl-3,5-heptadiene-2-one (Methyl heptadienone)	1604-28-0	07.09	**R**
129.	Methyl heptine carbonate (MHC, Folione)	111-12-6	07.08	**R**
130.	p-Methylhydrocinnamic aldehyde	5406-12-2	(07.08)	**P**
131.	Methyl ionone, mixed isomers	1335-46-2 127-42-4 127-43-5 127-51-5 7779-30-8	07.08	**R**
132.	Methyl methacrylate	80-62-6	(07.08)	**P**
133.	Methyl N-methylanthranilate (Dimethyl anthranilate)	85-91-6	07.09	**R**
134.	Methyl beta-naphtyl ketone	93-08-3	04.05	**R**
135.	3-Methyl-2(3)-nonenenitrile (Citgrenile)	53153-66-5	05.07 (07.08)	**P**

	Substance	CAS	Last Amended	Standard
136.	Methyl octine carbonate (MOC)	111-80-8	07.08	**R**
137.	3-Methyl-2-(pentyloxy)cyclopent-2-en-1-one	68922-13-4	06.11	**R**
138.	p-Methyltetrahydroquinoline	91-61-2	07.09	**R**
139.	Moskene (1,1,3,3,5-Pentamethyl-4,6-dinitroindane)	116-66-5	04.05 (07.08)	**P**
140.	Musk ambrette	83-66-9	12.95 (05.06)	**P**
141.	Musk ketone	81-14-1	06.10	**S**
142.	Musk tibetene (1-tert-Butyl-2,6-dinitro-3,4,5-trimethylbenzene)	145-39-1	04.05 (07.08)	**P**
143.	Musk Xylene	81-15-2	07.09	**P**
144.	Nitrobenzene	98-95-3	06.74 (05.06)	**P**
145.	2,4-Nonadienal	6750-03-4	07.09	**P**
146.	2-Nonyl-1-al dimethyl acetal	13257-44-8	06.11	**R**
147.	Nootkatone	4674-50-4	05.06	**S**
148.	Oak moss extracts	90028-68-5 9000-50-4 68917-10-2	07.08	**R-S**
149.	2,4-Octadienal	30361-28-5	06.11	**P**
150.	1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (OTNE)	54464-57-2	07.08	**R**
151.	1-Octen-3-yl acetate (Amyl vinyl carbinyl acetate)	2442-10-6	07.08	**R**
152.	Opoponax		07.94 (04.99)	**R**
153.	1-(2,4,4,5,5-Pentamethyl-1-cyclopenten-1-yl)ethan-1-one	13144-88-2	06.11	**R**

	Substance	CAS	Last Amended	Standard
154.	2-Pentylidene cyclohexanone	25677-40-1	05.83 (05.06)	**P**
155.	Peru balsam crude	8007-00-9	12.91 (05.07)	**P**
156.	Peru balsam extracts and distillates	8007-00-9	07.08	**R**
157.	Phenylacetaldehyde (Hyacinthin)	122-78-1	05.06	**R**
158.	Phenyl acetone (Methyl benzyl ketone)	103-79-7	(07.08)	**P**
159.	Phenyl benzoate	93-99-2	(07.08)	**P**
160.	3-Phenylbutanal	16251-77-7	06.10	**R**
161.	2-Phenylpropionaldehyde	93-53-8	07.09	**R**
162.	Pinacea derivatives		07.94	**S**
163.	3-Propylidene phthalide	17369-59-4	07.08	**R**
164.	Pseudoionone (2,6-Dimethylundeca-2,6,8-trien-10-one)	141-10-6	04.89 (05.06)	**P-S**
165.	Pseudo Methylionones	26651-96-7 72968-25-3 1117-41-5	07.09	**P**
166.	Quinoline	91-22-5	06.10	**P**
167.	Rose Ketones	23696-85-7 23726-93-4 43052-87-5 24720-09-0 23726-94-5 23726-92-3 23726-91-2 57378-68-4 71048-82-3 39872-57-6 70266-48-7 33673-71-1 35087-49-1 35044-68-9	07.09	**R**

	Substance	CAS	Last Amended	Standard
168.	Rue oil	8014-29-7	04.01 (07.02)	**R**
169.	Safrole, Isosafrole, Dihydrosafrole	94-59-7 120-58-1 94-58-6	07.87 (04.99)	**P** **R**
170.	Santolina oil	84961-58-0	(07.08)	**P**
171.	Savin oil	8024-00-8	06.82	**P-S**
172.	Sclareol	515-03-7	04.05	**S**
173.	Styrax		07.94	**P-R**
174.	Tagetes oil and absolute	91722-29-1 8016-84-0	04.01 (04.05)	**R**
175.	Tea leaf absolute (camellia sinensis leaf extract)	84650-60-2	05.06	**R**
176.	1,2,3,4-Tetrahydro-4-methylquinoline	19343-78-3	07.09	**R**
177.	Toluene	108-88-3	04.04	**P**
178.	Treemoss extracts	90028-67-4 68648-41-9 68917-40-8	07.08	**R-S**
179.	2,6,6-Trimethylcyclohexa-1,3-dienyl methanal (Safranal)	116-26-7	12.98	**R**
180.	2,4-Undecadienal	13162-46-4	07.09	**P**
181.	Verbena absolute (Lippia citriodora)	8024-12-2	06.10	**R**
182.	Verbena oil	8024-12-2	12.81 (05.06)	**P**
183.	Vetiveryl Acetate (the former specification Standard on Acetylated vetiver oil is replaced by this one)	117-98-6 62563-80-8 68917-34-0 73246-97-6 84082-84-8	07.09	**R-S**
184.	Ylang Ylang Extracts	8006-81-3 68606-83-7 83863-30-3	07.08	**R**