



## Index of IFRA Standards – 48<sup>th</sup> 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.

The new Standards are indicated in **yellow**. For existing Standards that are changed, the Amendment date is highlighted in yellow.

	Substance	CAS	Last Amended	Standard
1.	Acetic acid, anhydride, reaction products with 1,5,10-trimethyl-1,5,9-cyclododecatriene (Trimofix O, Fixamber)	144020-22-4 28371-99-5	06.15	<b>R</b>
2.	Acetyl ethyl tetramethyl tetralin (AETT, Versalide)	88-29-9	11.77 (05.06) <sup>[1]</sup>	<b>P</b>
3.	5-Acetyl-1,1,2,3,3,6-hexamethyl indan (AHMI, Phantolid)	15323-35-0	10.87 (06.15)	<b>R</b>
4.	Acetyl isovaleryl (5-Methyl-2,3-hexanedione)	13706-86-0	02.80 (05.06)	<b>P</b>
5.	Acetylated Vetiver Oil	117-98-6 62563-80-8 68917-34-0 73246-97-6 84082-84-8	07.09 (06.15)	<b>R</b>
6.	Alantroot oil (Elecampane oil)	97676-35-2	06.75 (05.06)	<b>P</b>

<sup>1</sup> 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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7.	Allyl Esters	N/A	02.77 (07.09)	<b>S</b>
8.	Allyl heptine carbonate	73157-43-4	05.07 (07.08)	<b>P</b>
9.	Allyl isothiocyanate	57-06-7	(07.08)	<b>P</b>
10.	Allyl phenoxyacetate	7493-74-5	07.09	<b>R-S</b>
11.	alpha-Amyl cinnamic alcohol	101-85-9	05.07	<b>R</b>
12.	alpha-Amyl cinnamic aldehyde	122-40-7	06.13 (05.07)	<b>R</b>
13.	Amylcyclopentenone	25564-22-1	05.07 (07.08)	<b>P</b>
14.	Angelica root oil	8015-64-3	10.78 <b>(06.15)</b>	<b>R</b>
15.	Anisyl alcohol	105-13-5 <b>1331-81-3</b>	<b>06.15</b>	<b>R</b>
16.	Anisylidene acetone (4-(p-methoxyphenyl)-3-butene-2-one)	943-88-4	11.74 (05.06)	<b>P</b>
17.	cis-and trans-Asarone ((E)-and(Z)-2,4,5-Trimethoxypropen-1-yl benzene)	2883-98-9 5273-86-9	12.91	<b>P-R</b>
18.	Benzaldehyde	100-52-7	(07.09)	<b>R</b>
19.	Benzene	71-43-2	04.04	<b>P</b>
20.	Benzyl alcohol	100-51-6	05.07	<b>R</b>
21.	Benzyl benzoate	120-51-4	05.07	<b>R</b>
22.	Benzyl cinnamate	103-41-3	05.07	<b>R</b>
23.	Benzyl cyanide	140-29-4	04.04	<b>P</b>
24.	Benzylidene acetone (4-Phenyl-3-buten-2-one)	122-57-6	06.74 (05.06)	<b>P</b>
25.	Benzyl salicylate	118-58-1	05.07	<b>R</b>
26.	Bergamot oil expressed	8007-75-8	06.92 <b>(06.15)</b>	<b>R</b>
27.	Birch wood pyrolysate	8001-88-5 84012-15-7 85940-29-0 68917-50-0	04.04	<b>S-P</b>
28.	Bitter orange peel oil expressed	68916-04-1 72968-50-4	07.02 <b>(06.15)</b>	<b>R</b>
29.	Boldo oil	8022-81-9	07.09	<b>P</b>



30.	3-Bromo-1,7,7-trimethylbicyclo[2.2.1]heptane-2-one	76-29-9	(07.08)	<b>P</b>
31.	Bromostyrene	103-64-0	(07.08)	<b>P</b>
32.	alpha-Butylcinnamaldehyde	7492-44-6	06.11	<b>R</b>
<b>33.</b>	<b>3-(m-tert-Butylphenyl)-2-methylpropionaldehyde (m-BMHCA)</b>	<b>62518-65-4</b>	<b>06.15</b>	<b>R</b>
34.	p-tert-Butyl-dihydrocinnamaldehyde (Bourgeonal)	18127-01-0	07.08	<b>R</b>
35.	p-tert-Butyl-alpha-methylhydrocinnamic aldehyde (p-BMHCA, Lilestralis, Lilial, Lysmeral)	80-54-6	<b>06.15</b>	<b>R</b>
36.	p-tert-Butylphenol	98-54-4	06.75 (05.06)	<b>P</b>
37.	Cade oil (Juniperus oxycedrus L.)	8013-10-3 90046-02-9	04.04	<b>S-P</b>
38.	Carvone; d-Carvone; l-Carvone	99-49-0 2244-16-8 6485-40-1	07.08	<b>R</b>
39.	Carvone oxide	33204-74-9	04.04	<b>P</b>
40.	Chenopodium oil	8006-99-3	(07.08)	<b>P</b>
41.	Cinnamic alcohol	104-54-1	07.08	<b>R</b>
42.	Cinnamic aldehyde	104-55-2	07.08	<b>R</b>
43.	Cinnamic aldehyde dimethyl acetal	4364-06-1	07.09	<b>R</b>
44.	Cinnamylidene acetone	4173-44-8	(07.08)	<b>P</b>
45.	Cinnamyl nitrile	1885-38-7 4360-47-8	07.08	<b>R</b>
46.	Citral	5392-40-5 141-27-5 106-26-3	05.06	<b>R</b>
47.	Citronellol	106-22-9 1117-61-9 26489-01-0 6812-78-8 141-25-3 68916-43-8 7540-51-4	05.07	<b>R</b>
48.	Citrus oils and other furocoumarins containing essential oils	N/A	12.96 <b>(06.15)</b>	<b>R</b>
49.	Colophony	8050-09-7	12.92 (05.06)	<b>P</b>



50.	Costus root oil, absolute and concrete	8023-88-9	05.98 (05.06)	<b>P</b>
51.	Coumarin	91-64-5	07.08	<b>R</b>
52.	Cumin oil	8014-13-9	06.86 <b>(06.15)</b>	<b>R</b>
53.	Cuminaldehyde	122-03-2	06.13	<b>R</b>
54.	Cyclamen alcohol (3-(4-Isopropylphenyl)-2-methylpropanol)	4756-19-8	10.78 (02.80)	<b>P-S</b>
55.	Cyclamen aldehyde	103-95-7	06.13 <b>(06.15)</b>	<b>R</b>
56.	Cyclopentadecanolide	106-02-5	06.13	<b>R</b>
57.	Dibenzyl ether	103-50-4	07.09	<b>R</b>
58.	1,3-Dibromo-2-methoxy-4-nitro-5-(1,1-dimethylethyl)-6-methyl-benzene (Musk alpha)	63697-53-0	(07.08)	<b>P</b>
59.	1,3-Dibromo-2-methoxy-4-methyl-5-nitrobenzene (Musk KS)	62265-99-0	(07.08)	<b>P</b>
60.	2,2-Dichloro-1-methylcyclopropylbenzene	3591-42-2	(07.08)	<b>P</b>
		764-40-9		
		80466-34-8		
		5910-85-0		
		30361-28-5		
61.	2,4-Dienals (group of materials)	6750-03-4	06.13 (07.09)	<b>P</b>
		2363-88-4		
		13162-46-4		
		21662-16-8		
		...		
62.	Diethyl maleate	141-05-9	06.75 (05.06)	<b>P</b>
63.	Dihydrocoumarin (Melilotine)	119-84-6	06.13 (05.06)	<b>R</b>
<b>64.</b>	<b>6,7-Dihydro-1,1,2,3,3-pentamethyl-4(5H)-indanone (DPMI, Cashmeran)</b>	<b>33704-61-9</b>	<b>06.15</b>	<b>R</b>
65.	2,4-Dihydroxy-3-methylbenzaldehyde	6248-20-0	04.89 (05.06)	<b>P</b>
		68737-61-1		
		68039-49-6		
66.	Dimethylcyclohex-3-ene-1-carbaldehyde (mixed isomers)	68039-48-5	06.13 (06.10)	<b>R</b>
		27939-60-2		
		67801-65-4		
67.	1-(5,5-Dimethyl-1-cyclohexen-1-yl)pent-4-en-1-one	56973-85-4	07.09	<b>R</b>
68.	4,6-Dimethyl-8-tert-butylcoumarin (Butolia)	17874-34-9	06.81 (05.06)	<b>P</b>



69.	3,7-Dimethyl-2-octen-1-ol	40607-48-5	04.04	<b>P</b>
70.	2,2-Dimethyl-3-(3-tolyl)propan-1-ol (Majantol)	103694-68-4	06.10	<b>R-S</b>
71.	Dimethyl citraconate	617-54-9	10.76 (05.06)	<b>P</b>
72.	Diphenylamine	122-39-4	04.04	<b>P</b>
<b>73.</b>	<b>2,4-Dodecadien-1-ol, (2E, 4E)</b>	<b>18485-38-6</b>	<b>06.15</b>	<b>P</b>
74.	Esters of 2-nonynoic acid, (Except Methyl octine carbonate)	10031-92-2	(07.08)	<b>P</b>
75.	Esters of 2-octynoic acid (Except for Methyl heptane carbonate)	10484-32-9 10519-20-7	(07.08)	<b>P</b>
76.	Estragole	140-67-0	10.09 <b>(07.15)</b>	<b>R</b>
77.	2-Ethoxy-4-methylphenol	2563-07-7	07.08	<b>R</b>
78.	Ethyl acrylate	140-88-5	11.74 (05.06)	<b>P</b>
79.	p-Ethylbenzaldehyde	4748-78-1	06.13	<b>R</b>
80.	Ethylene glycol monoethyl ether and its Acetate	110-80-5 111-15-9 (acetate)	04.04	<b>P</b>
81.	Ethylene glycol monomethyl Ether and its Acetate	109-86-4 110-49-6 (acetate)	04.04	<b>P</b>
82.	Eugenol	97-53-0	07.08	<b>R</b>
83.	Farnesol	4602-84-0	05.06	<b>R-S</b>
84.	Fig leaf absolute	68916-52-9	05.83 (05.06)	<b>P</b>
85.	Furfural	98-01-1	06.13	<b>R</b>
86.	Furfuryl alcohol	98-00-0	07.09 <b>(06.15)</b>	<b>P</b>
87.	Furfurylidene acetone	623-15-4	(07.08)	<b>P</b>
88.	Geraniol	106-24-1	05.07	<b>R</b>
89.	Geranyl nitrile	5146-66-7 5585-39-7 31983-27-4	11.06 (07.08)	<b>P</b>
90.	Grapefruit oil expressed	8016-20-4	06.92 <b>(06.15)</b>	<b>R</b>
91.	trans-2-Heptenal	18829-55-5	04.89 (05.06)	<b>P</b>



92.	2-Heptylidene cyclopentan-1-one	39189-74-7	06.11	<b>R</b>
93.	2,4-Hexadien-1-ol	111-28-4 17102-64-6	06.15	<b>P</b>
94.	Hexahydrocoumarin	700-82-3	02.80 (05.06)	<b>P</b>
95.	trans-2-Hexenal	6728-26-3	07.08	<b>R</b>
96.	trans-2-Hexenal diethyl acetal	67746-30-9	04.89 (05.06)	<b>P</b>
97.	trans-2-Hexenal dimethyl acetal	18318-83-7	04.89 (05.06)	<b>P</b>
98.	alpha-Hexyl cinnamic aldehyde	101-86-0	06.13 (05.07)	<b>R</b>
99.	alpha-Hexylidene cyclopentanone	17373-89-6	07.08	<b>R</b>
100.	Hexyl salicylate	6259-76-3	05.07	<b>R</b>
101.	Hydroabietyl alcohol, dihydroabietyl alcohol	13393-93-6 26266-77-3 1333-89-7	04.04	<b>P</b>
102.	Hydroquinone monoethyl ether (4-ethoxy-Phenol)	622-62-8	10.83 (05.06)	<b>P</b>
103.	Hydroquinone monomethyl ether (4-methoxy-Phenol)	150-76-5	10.83 (05.06)	<b>P</b>
104.	Hydroxycitronellal	107-75-5	06.13 (07.08)	<b>R</b>
105.	3 and 4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde (HMPCC)	31906-04-4 51414-25-6	06.13 (07.09)	<b>R</b>
106.	p-Isobutyl-α-methyl-hydrocinnamaldehyde	6658-48-6	07.09	<b>R</b>
107.	Isobutyl N-methylantranilate	65505-24-0	07.09	<b>R</b>
108.	Isocyclocitral	1335-66-6 1423-46-7 67634-07-5	05.07	<b>R</b>
109.	Isocyclogeraniol (2,4,6-Trimethyl-3-cyclohexene-1-methanol)	68527-77-5	07.08	<b>R</b>
110.	Isoeugenol	97-54-1	07.08	<b>R</b>
111.	Isophorone	78-59-1	(07.08)	<b>P</b>
112.	6-Isopropyl-2-decalol (Decatol)	34131-99-2	06.79 (05.06)	<b>P</b>



		8022-96-6		
113.	Jasmine absolute (grandiflorum)	8024-43-9 90045-94-6 84776-64-7	07.08	<b>R</b>
114.	Jasmine absolute (sambac)	91770-14-8	07.08	<b>R</b>
115.	Lemon oil cold pressed	8008-56-8	06.92 <b>(06.15)</b>	<b>R</b>
116.	Lime oil expressed	8008-26-2	06.92 <b>(06.15)</b>	<b>R</b>
117.	Limonene	138-86-3	12.95	<b>S</b>
118.	Linalool; d-Linalool; l-Linalool	78-70-6 126-90-9 126-91-0	04.04	<b>S</b>
119.	Massoia bark oil	85085-26-3	(07.08)	<b>P</b>
120.	Massoia lactone	54814-64-1 <b>51154-96-2</b>	<b>06.15</b>	<b>P</b>
121.	Melissa oil (genuine Melissa officinalis L.)	8014-71-9 84082-61-1	07.09	<b>R</b>
122.	p-Mentha-1,8-dien-7-al (Perilla aldehyde)	2111-75-3	07.08	<b>R</b>
123.	Menthadiene-7-methyl formate (Isobergamate)	68683-20-5	07.08	<b>R</b>
124.	p-Methoxybenzaldehyde	123-11-5	06.13	<b>R</b>
125.	o-Methoxycinnamaldehyde	1504-74-1	06.11	<b>R</b>
126.	7-Methoxycoumarin	531-59-9	02.79 (07.08)	<b>P</b>
127.	Methoxy dicylopentadiene carboxaldehyde (Scentenal)	86803-90-9	07.08	<b>R</b>
128.	4-Methoxy- $\alpha$ -methylbenzenepropanal	5462-06-6	06.13 (07.09)	<b>R</b>
129.	2-Methoxy-4-methylphenol (p-Creosol)	93-51-6	07.08	<b>R</b>
130.	alpha-Methyl anisylidene acetone (1-(4-Methoxyphenyl)-1-penten-3-one)	104-27-8	05.80 (05.06)	<b>P</b>
131.	alpha-Methyl-1,3-benzodioxole-5- propionaldehyde (MMDHCA)	1205-17-0	06.13 (06.10)	<b>R</b>
132.	alpha-Methyl cinnamic aldehyde	101-39-3	05.07	<b>R</b>
133.	6-Methylcoumarin (Toncarine)	92-48-8	05.80 (05.06)	<b>P</b>
134.	7-Methylcoumarin	2445-83-2	05.83 (05.06)	<b>P</b>



135.	Methyl crotonate	623-43-8	05.80 (05.06)	<b>P</b>
136.	4-Methyl-7-ethoxycoumarin (Maraniol)	87-05-8	06.79 (05.06)	<b>P</b>
137.	Methyl eugenol	93-15-2	<b>07.15</b>	<b>R</b>
138.	6-Methyl-3,5-heptadiene-2-one (Methyl heptadienone)	1604-28-0	07.09	<b>R</b>
139.	Methyl heptine carbonate (MHC, Folione)	111-12-6	07.08	<b>R</b>
140.	p-Methylhydrocinnamic aldehyde	5406-12-2	(07.08)	<b>P</b>
141.	Methyl ionone, mixed isomers	1335-46-2 127-42-4 127-43-5 127-51-5 7779-30-8 <b>79-89-0</b>	<b>06.15</b>	<b>R</b>
142.	Methyl methacrylate	80-62-6	(07.08)	<b>P</b>
143.	Methyl N-methylantranilate	85-91-6	07.09 <b>(06.15)</b>	<b>R</b>
144.	Methyl β-naphtyl ketone	93-08-3	04.05 <b>(06.15)</b>	<b>R</b>
145.	3-Methyl-2(3)-nonenenitrile (Citgrenile)	53153-66-5	05.07 (07.08)	<b>P</b>
146.	Methyl octine carbonate (MOC)	111-80-8	07.08	<b>R</b>
147.	3-Methyl-2-(pentyloxy)cyclopent-2-en-1-one	68922-13-4	06.11	<b>R</b>
148.	p-Methyltetrahydroquinoline	91-61-2	07.09	<b>R</b>
149.	Moskene (1,1,3,3,5-Pentamethyl-4,6-dinitroindane)	116-66-5	04.05 (07.08)	<b>P</b>
150.	Musk ambrette	83-66-9	12.95 (05.06)	<b>P</b>
151.	Musk ketone	81-14-1	06.10	<b>S</b>
152.	Musk tibetene (1-tert-Butyl-2,6-dinitro-3,4,5-trimethylbenzene)	145-39-1	04.05 (07.08)	<b>P</b>
153.	Musk xylene	81-15-2	07.09	<b>P</b>
154.	Nitrobenzene	98-95-3	06.74 (05.06)	<b>P</b>
155.	2-Nonyl-1-al dimethyl acetal	13257-44-8	06.11	<b>R</b>
156.	Nootkatone	4674-50-4	05.06	<b>S</b>
157.	Oak moss extracts	90028-68-5 9000-50-4 68917-10-2	07.08	<b>R-S</b>





158.	1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (OTNE)	54464-57-2	07.08	<b>R</b>
159.	1-Octen-3-yl acetate (Amyl vinyl carbonyl acetate)	2442-10-2	07.08	<b>R</b>
160.	Opoponax (all forms)	8021-36-1 9000-78-6 93384-32-8	06.13 (04.99)	<b>R</b>
161.	1-(2,4,4,5,5-Pentamethyl-1-cyclopenten-1-yl)ethan-1-one	13144-88-2	06.11	<b>R</b>
162.	2-Pentylidene cyclohexanone	25677-40-1	05.83 (05.06)	<b>P</b>
163.	Peru balsam crude	8007-00-9	12.91 (05.07)	<b>P</b>
164.	Peru balsam extracts and distillates	8007-00-9	07.08	<b>R</b>
165.	Phenylacetaldehyde (Hyacinthin)	122-78-1	05.06	<b>R</b>
166.	Phenyl acetone (Methyl benzyl ketone)	103-79-7	(07.08)	<b>P</b>
167.	Phenyl benzoate	93-99-2	(07.08)	<b>P</b>
168.	3-Phenylbutanal	16251-77-7	06.10	<b>R</b>
169.	2-Phenylpropionaldehyde	93-53-8	07.09	<b>R</b>
170.	Pinacea derivatives		07.94	<b>S</b>
171.	3-Propylidene phthalide	17369-59-4	07.08	<b>R</b>
172.	Pseudoionone (2,6-Dimethylundeca-2,6,8-trien-10-one)	141-10-6	04.89 (05.06)	<b>P-S</b>
173.	Pseudo Methylionones	26651-96-7 72968-25-3 1117-41-5	07.09	<b>P</b>
174.	Quinoline	91-22-5	06.10	<b>P</b>
		23696-85-7		
		23726-93-4		
		43052-87-5		
		24720-09-0		
		23726-94-5		
		23726-92-3		
175.	Rose Ketones	23726-91-2	07.09	<b>R</b>
		57378-68-4		
		71048-82-3		
		39872-57-6		
		70266-48-7		
		33673-71-1		
		35087-49-1		
		35044-68-9		



176.	Rue oil	8014-29-7	04.01 (06.15)	<b>R</b>
177.	Safrole, Isosafrole, Dihydrosafrole	94-59-7 120-58-1 94-58-6	07.87 (04.99)	<b>R</b>
178.	Santolina oil	84961-58-0	(07.08)	<b>P</b>
179.	Savin oil	8024-00-8	06.82	<b>P-S</b>
180.	Sclareol	515-03-7	04.05	<b>S</b>
181.	Styrax	8046-19-3 8024-01-9 94891-27-7 94891-28-8	06.13 (07.94)	<b>P-R</b>
182.	Tagetes oil and absolute	91722-29-1 8016-84-0	04.01 (06.15)	<b>R</b>
183.	Tea leaf absolute (camellia sinensis leaf extract)	84650-60-2	05.06	<b>R</b>
184.	1,2,3,4-Tetrahydro-4-methylquinoline	19343-78-3	07.09	<b>R</b>
185.	o,m,p-Tolualdehydes and their mixtures	529-20-4 620-23-5 104-87-0 1334-78-7	06.13	<b>R</b>
186.	Toluene	108-88-3	04.04	<b>P</b>
187.	Treemoss extracts	90028-67-4 68648-41-9 68917-40-8	07.08	<b>R-S</b>
188.	2,6,6-Trimethylcyclohexa-1,3-dienyl methanal (Safranal)	116-26-7	06.13 (12.98)	<b>R</b>
189.	Verbena absolute (Lippia citriodora)	8024-12-2	06.10	<b>R</b>
190.	Verbena oil	8024-12-2	12.81 (05.06)	<b>P</b>
191.	Ylang Ylang Extracts	8006-81-3 68606-83-7 83863-30-3	07.08	<b>R</b>