
Essential oils — Nomenclature

Huiles essentielles — Nomenclature

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 54, *Essential oils*.

This fourth edition cancels and replaces the third edition, ISO 4720:2009, which has been technically revised with additions, deletions and the replacement of the botanical names of some plants.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document gives a list of the botanical names of plants used for the production of essential oils, in order to harmonize their nomenclature.

In addition to this document, ISO/TC 54, *Essential oils*, has established ISO/TR 21092^[87], in which different numbers (CAS-USA, EINECS, CAS-EINECS, Fema, EC and FDA numbers) are listed for the characterization of essential oils.

Characterization of essential oils by using a single number (e.g. CAS number) would not be complete and it could lead to ambiguity and misunderstandings.

That is the reason why, through ISO/TR 21092^[87], ISO/TC 54 intends to provide the users of essential oils with useful information for a complete characterization of essential oils included in this document.

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Essential oils — Nomenclature

1 Scope

This document gives a list of the botanical names of plants used for the production of essential oils, together with the common names of the essential oils.

An alphabetical index of common names of essential oils is included at the end of this document.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Nomenclature for essential oils

A list of the botanical names of plants used for the production of essential oils, together with the common names of the essential oils, is given in [Table 1](#).

Table 1 — Nomenclature for essential oils

No.	Botanical name of plant	Family	English common name (essential oil of ...)	Reference	Part of the plant used
1	<i>Abelmoschus moschatus</i> Medik. syn. <i>Hibiscus abelmoschus</i> L.	Malvaceae	ambrette seed		seed
2	<i>Abies alba</i> Mill.	Pinaceae	silver fir		leaf (needle), terminal branchlet
3	<i>Abies balsamea</i> (L.) Mill.	Pinaceae	fir needle fir balsam, Canadian		leaf (needle), terminal branchlet
4	<i>Abies sibirica</i> Ledeb.	Pinaceae	fir needle, Siberian	ISO 10869[21]	leaf (needle), terminal branchlet
5	<i>Achillea millefolium</i> L.	Asteraceae	yarrow milfoil		aerial parts
6	<i>Acorus calamus</i> L.	Araceae	sweet flag calamus		rhizome
7	<i>Agathosma betulina</i> (P.J. Bergius) Pillans	Rutaceae	buchu		leaves
8	<i>Allium cepa</i> L.	Alliaceae	onion		bulb

Table 1 (continued)

No.	Botanical name of plant	Family	English common name (essential oil of ...)	Reference	Part of the plant used
9	<i>Allium sativum</i> L.	Alliaceae	garlic		bulb
10	<i>Aloysia citriodora</i> Palau syn. <i>Aloysia triphylla</i> (L'Hér.) Britton syn. <i>Lippia triphylla</i> (L'Hér.) Kuntze, syn. <i>Verbena triphylla</i> L'Hér. syn. <i>Lippia citriodora</i> (Palau) Kunth	Verbenaceae	lemon verbena		flowering top, leaf
11	<i>Amyris balsamifera</i> L.	Rutaceae	amyris	ISO 3525[33]	wood
12	<i>Anethum graveolens</i> L.	Apiaceae	dill seed		fruit
			dill weed		aerial parts
13	<i>Anethum sowa</i> Roxb. ex Fleming	Apiaceae	indian dill		fruit
14	<i>Angelica archangelica</i> L.	Apiaceae	angelica		fruit, rhizome and root
15	<i>Aniba rosaeodora</i> Ducke <i>Aniba parviflora</i> (Meissn.) Mez.	Lauraceae	rosewood, Brazilian type	ISO 3761[40]	wood
16	<i>Apium graveolens</i> L.	Apiaceae	celery seed	ISO 3760[39]	fruit
			celery herb		aerial parts
17	<i>Aquilaria malaccensis</i> Lam. syn. <i>Aquilaria agallocha</i> Roxb.	Thymelaeaceae	agarwood		wood
18	<i>Artemisia absinthium</i> L.	Asteraceae	wormwood herb		leaves, flowering tops
19	<i>Artemisia afra</i> Jacq. ex Willd.	Asteraceae	african wormwood		leaves, flowering tops
20	<i>Artemisia annua</i> L. syn. <i>Artemisia chamomilla</i> C. Winkl.	Asteraceae	annual wormwood sweet sagewort sweet Annie		flowering tops
21	<i>Artemisia dracunculus</i> L.	Asteraceae	tarragon	ISO 10115[69]	aerial parts
22	<i>Artemisia herba-alba</i> Asso.	Asteraceae	armoise		leaves, aerial parts
23	<i>Artemisia pallens</i> Wall. ex DC.	Asteraceae	davana		flowering tops
24	<i>Backhousia citriodora</i> F. Muell.	Myrtaceae	lemon myrtle		leaf, terminal branchlets
25	<i>Betula lenta</i> L.	Betulaceae	sweet birch		bark
26	<i>Betula pendula</i> Roth	Betulaceae	birch tar		wood exudate
27	<i>Boswellia sacra</i> Flueck. syn. <i>Boswellia carteri</i> Birdw.	Burseraceae	olibanum frankincense		wood exudate
28	<i>Brassica juncea</i> (L.) Czern.	Brassicaceae	yellow mustard		seed

Table 1 (continued)

No.	Botanical name of plant	Family	English common name (essential oil of ...)	Reference	Part of the plant used
29	<i>Brassica nigra</i> (L.) W.D.J. Koch	Brassicaceae	black mustard		seed
30	<i>Bulnesia sarmientoi</i> Lor- entz ex Griseb	Zygophyllaceae	guaiac wood		wood
31	<i>Bunium persicum</i> (Boiss.) B. Fedtsch.	Apiaceae	black caraway		seed, tuber
32.1	<i>Bursera fagaroides</i> (Kunth) Engl.	Burseraceae	linaloe		wood
32.2	<i>Bursera glabrifolia</i> (Kunth) Engl.				
33	<i>Bursera linanoe</i> (La Llave) Rzed., Calde- rón & Medina syn. <i>Bursera delpechiana</i> Poiss. ex Engl. syn. <i>Bursera aloexylon</i> (Schiede ex Schltdl.) Engl.	Burseraceae	linaloe fruit		berries
34	<i>Callitris columellaris</i> F. Muell. syn. <i>C. glaucophylla</i> J. Thomps. & L.A.S. Johnson syn. <i>C. intratropica</i> R.T.Baker & H.G.Sm.	Cupressaceae	cypress-pine		wood
35	<i>Cananga odorata</i> (Lam.) Hook. f. & Thomson forma <i>macrophylla</i>	Annonaceae	cananga	ISO 3523[31]	flower
36	<i>Cananga odorata</i> (Lam.) Hook. f. & Thomson forma <i>genuina</i>	Annonacea	ylang-ylang	ISO 3063[14]	flower
37	<i>Canarium luzonicum</i> (Blume) A. Gray	Burseraceae	elemi	ISO 10624[70]	wood exudate (natu- ral oleoresin)
38	<i>Carum carvi</i> L.	Apiaceae	caraway seed	ISO 8896[55]	fruit
39	<i>Cedrus atlantica</i> (Endl.) G. Manetti ex Carrière	Pinaceae	cedarwood Atlas		wood
40	<i>Cedrus deodara</i> (Roxb. ex D. Don) G. Don	Pinaceae	cedarwood Hima- laya		wood
41	<i>Chamaemelum nobile</i> (L.) All. syn. <i>Anthemis nobilis</i> L. syn. <i>Ormenis nobilis</i> (L.) J. Gay ex Coss. & Germ.	Asteraceae	chamomile English chamomile Roman chamomile		flowering tops
42	<i>Chrysopogon zizanioides</i> (L.) Roberty syn. <i>Vetiveria zizanioides</i> (L.) Nash	Poaceae	vetiver	ISO 4716[44]	root

Table 1 (continued)

No.	Botanical name of plant	Family	English common name (essential oil of ...)	Reference	Part of the plant used
43	<i>Cinnamomum camphora</i> (L.) J. Presl syn. <i>Laurus camphora</i> L.	Lauraceae	camphor laurel camphor tree		leaves, twig, terminal branchlet
44	<i>Cinnamomum cassia</i> (L.) J. Presl syn. <i>Cinnamomum aromaticum</i> Nees	Lauraceae	cassia, Chinese type	ISO 3216[22]	leaf, twig, terminal branchlet
45	<i>Cinnamomum micranthum</i> (Hayata) Hayata	Lauraceae	sassafras, China		wood
46	<i>Cinnamomum verum</i> J. Presl syn. <i>Cinnamomum zeylanicum</i> Blume	Lauraceae	cinnamon, Sri Lanka type	ISO 3524[32]	leaf, twig, terminal branchlet, stem bark
47	<i>Cistus ladanifer</i> L.	Cistaceae	rockrose labdanum		leaves, twig, terminal branchlet
48	<i>Citrus aurantiifolia</i> (Christm.) Swingle	Rutaceae	lime	ISO 3809[41] ISO 3519[29]	pericarp, fruit juice or crushed fruits
49	<i>Citrus aurantium</i> L. syn. <i>Citrus amara</i> Link syn. <i>Citrus bigaradia</i> Loisel syn. <i>Citrus vulgaris</i> Risso	Rutaceae	neroli	ISO 3517[27]	flower
			bitter orange	ISO 9844[67]	pericarp
			petitgrain bitter orange	ISO 8901[60]	leaf and twigs with sometimes little green fruits
50	<i>Citrus aurantium</i> L. var. <i>Paraguay</i> syn. <i>Citrus aurantium</i> var. <i>bigaradia</i> Hook f.	Rutaceae	petitgrain Paraguay	ISO 3064[15]	pericarp, leaf and twigs with sometimes little green fruits
51	<i>Citrus bergamia</i> Risso & Poit. syn. <i>Citrus aurantium</i> L. subsp. <i>bergamia</i> (Risso & Poit.) Wight & Arn. ex Engl.	Rutaceae	bergamot	ISO 3520[30]	pericarp
			bergamot petitgrain	ISO 8900[59]	leaf and twigs with sometimes little green fruits
52	<i>Citrus clementina</i> hort. ex Tanaka syn. <i>Citrus deliciosa</i> Ten. × <i>Citrus sinensis</i> (L.) Osbeck	Rutaceae	clementine mandarin		pericarp
53	<i>Citrus hystrix</i> DC. syn. <i>Citrus torosa</i> Blanco	Rutaceae	citrus hystrix		pericarp
54	<i>Citrus × latifolia</i> (Yu. Tanaka) Tanaka	Rutaceae	lime, Persian type	ISO 23954[92]	pericarp
55	<i>Citrus limon</i> (L.) Osbeck	Rutaceae	lemon	ISO 855[2]	pericarp
			lemon petitgrain	ISO 8899[58]	leaf and twigs with sometimes little green fruits
56	<i>Citrus × paradisi</i> Macfad.	Rutaceae	grapefruit	ISO 3053[11]	pericarp

Table 1 (continued)

No.	Botanical name of plant	Family	English common name (essential oil of ...)	Reference	Part of the plant used
57	<i>Citrus reticulata</i> Blanco syn. <i>Citrus nobilis</i> Andrews	Rutaceae	mandarin	ISO 3528[36]	pericarp
			mandarin petit-grain	ISO 8898[57]	leaf and twigs with sometimes little green fruits
58	<i>Citrus sinensis</i> (L.) Osbeck	Rutaceae	sweet orange	ISO 3140[16]	pericarp
59	<i>Cladanthus mixtus</i> (L.) Chevall. syn. <i>Chamaemelum mixtum</i> (L.) All.	Asteraceae	chamomile wild, Morocco		flowering herb
60	<i>Commiphora erythraea</i> (Ehrenb.) Engl.	Burseraceae	opopanax		wood exudate
61.1	<i>Commiphora myrrha</i> (Nees) Engl. syn. <i>C. molmol</i> (Engl.) Engl. ex Tschirch	Burseraceae	myrrh		wood exudate
61.2	<i>Commiphora gileadensis</i> (L.) C. Chr.				
61.3	<i>Commiphora habessinica</i> (O.Berg) Engl. syn. <i>C. abyssinica</i> (Engl.) Engl.				
62.1	<i>Copaifera guyanensis</i> Desf.	Fabaceae	copaiba balsam	ISO 4720:2018 https://standards.iteh.ai/catalog/standards/sist/22b9d4d3-a2f1-48b6-93ce-27fea5f93020/iso-4720-2018	wood exudate
62.2	<i>Copaifera martii</i> Hayne				
62.3	<i>Copaifera multijuga</i> Hayne				
62.4	<i>Copaifera reticulata</i> Ducke				
63	<i>Coriandrum sativum</i> L.	Apiaceae	coriander fruits	ISO 3516[26]	fruit
			coriander leaves		aerial parts
64	<i>Corymbia citriodora</i> (Hook.) K.D. Hill & L.A.S. Johnson syn. <i>Eucalyptus citriodora</i> Hook.	Myrtaceae	eucalyptus citriodora lemon-scented gum	ISO 3044[9]	leaf, terminal branchlets
65	<i>Croton eluteria</i> (L.) W. Wright syn. <i>Clusia eluteria</i> L.	Euphorbiaceae	cascarilla		bark
66	<i>Cryptocarya agathophylla</i> van der Werff syn. <i>Ravensara aromatica</i> Sonn.	Lauraceae	ravensara		leaves and twigs
67	<i>Cryptocarya massoy</i> (Oken) Kosterm.	Lauraceae	massoia bark		bark
68	<i>Cuminum cyminum</i> L.	Apiaceae	cumin seed	ISO 9301[62]	fruit