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Essential Oils, Part III: Chemical Composition

[Anton C de Groot](#)¹, [Erich Schmidt](#)

Affiliations

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Abstract

Data on the chemistry of essential oils which have caused contact allergy are provided. The largest group of chemicals found in essential oils consists of terpenes. The number of identified components usually ranges from 100 to 250, but in some oils (lavender, geranium, rosemary) 450 to 500 chemicals have been found. Many chemicals are present in a large number of oils, up to 98% for β -caryophyllene and 97% for limonene. Chemicals that are important constituents of >20 oils are limonene, linalool, and α -pinene. In many essential oils, there are 2 to 5 components which together constitute over 50% to 60% of the oil. In some oils, however, there is one dominant ingredient, making up more than 50% of the oil, including (E)-anethole in aniseed and star anise oil, carvone in spearmint oil, 1,8-cineole (eucalyptol) in *Eucalyptus globulus* oil, and (E)-cinnamaldehyde in cassia oil. The most important chemicals in 93 individual oils are specified.

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