

Composition of Volatile Oil, Isolated from *Duchesnea Indica* (Andr.) Focke

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The herbage of mock strawberry, *Duchesnea indica* (Andr.) Focke, Rosaceae, on hydro distillation yields an aromatic pale yellow oil (0.1%). GC-MS analysis revealed that the herb essential oil contained carvacryl acetate (30.5%), valencene (7.6%), nona-hexacontanoic acid (7.2%), aristolone (5.3%), dehydro-aromadendrene (4.6%), eicosane (4.1%), and 2-hexa-decan-ol (4.1%), as major components.

Duchesnea indica (Andr.) Focke, commonly called as mock strawberry (Indian strawberry), is a trailing herb of Rosaceae¹. The whole plant was used as an anticancer

herb in traditional Chinese medicine². The herbage of the plant has proven antitumor activity³. There are reports from China on the isolation of triterpenoids and other biologically active compounds from *Duchesnea indica*⁴. The plant was collected from Ooty, Tamilnadu. It was authenticated and herbarized at Calicut University

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Herbarium [Umesh B.T., 860006 (CALI)].

The aerial parts of *Duchesnea indica* were shade-dried, flaked, powdered, and hydrodistilled, in a Clevenger type apparatus for 4 h. Aromatic, pale yellow volatile oil (0.1%) was collected in a small amber coloured bottle, and refrigerated. Gas Chromatography – Mass Spectrometry (GC-MS) of the essential oil was performed on a HP 6890/5973-GC-MSD-DB5 at 70eV, and at 290°. The GC column conditions used were: Ulbon HR-1, fused silica capillary, 0.25 mm X 5 m with film thickness, 0.25 nm. The carrier gas used was He. The length of column was 30 m, and the flow rate 2.5 ml/min. The temperature programme was initially 40° for 1 min, and then heated at the rate of 5° to 290°. Run time was 56 min. The components were analysed, and structures of various components were ascertained with the help of Wiley Library 275, combined with an analyser.

The major component analysed was carvacryl acetate (30.5%), a phenolic compound. Other components detected were valencene (7.6%), nonahexacontanoic acid (7.2%), aristolone (5.3%), dehydro-aromadendrene (4.6%), eicosane (4.1%), 2-hexa-decan-ol (4.1%), aromadendrene (2.8%), β -pregnal (2.4%), hexa-decanoic acid (2.0%), β -elemene (2.0%), methyl cinnamate (1.8%), trans- β -farnesene (1.7%), β -selinene (1.3%), geranyl linalool isomer (1.2%), β -caryophyllene (1.1%), pentacosane

(1.0%), α -humulene (0.8%), heptacosane (0.4%), γ -selinene (0.1%), α -copaene (0.1%) and octacosane (0.1%). 4-terpineol and 1,3-dimethyl-2-cyano-3-piperidine, were present in trace amounts. To our knowledge, the GC-MS analysis of essential oil of *Duchesnea* has been carried out for the first time in India. Many of these essential oil components have proven biological activities⁵.

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