

## Chemical Screening of Volatile Oil Bearing Flora of Siberia

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Chemical composition of essential oil from freshly collected plants naturally growing in Southern Siberia, Altai region, Central Asia and Mongolia was studied by GC-MS. The plant studied are mostly used in Siberian and Tibetan traditional medicine for the treatment of gastro-intestinal problems, bronchial asthma, ophthalmology, in the formulation of skin care products, and veterinary practices, as insect and pest repellents, preparations of local beverages. Chemical composition was determined by GC-MS using a quadruple MS (Hewlett-Packard MSD 5971) coupled to a HP 5890/II GC fitted with an HP-5 fused silica column (30 m×0.25 mm, film thickness 0.25  $\mu$ m, (5%)-diphenyl-(95%)-dimethylsiloxane copolymer).

*Galatella biflora* (L.) Nees. The major components of the essential oil:  $\alpha$ -pinene (35%),  $\beta$ -pinene (10%), *trans*- $\beta$ -ocimene (15 %).

*Schizonepeta annua* (Pallas) Schischkin (syn.: *Nepeta annua* Pallas, *Nepeta multifida* L. fil., *Nepeta botrioides* Sol.). The major components of the essential oil: thymol (48%),  $\gamma$ -terpinene (18%), carvacrol (10%), and *p*-cymene (9%).

*Sium latifolium* L. The major components of the essential oil: limonene (32%), sabinene (22%),  $\alpha$ -pinene (13%), and  $\gamma$ -terpinene (10%).

*Nepeta sibirica* L. (syn.: *N. macrantha* Fisch. ex Benth). The major components of the essential oil: nepetalactone (79%), germacrene-D (9%).

*Chaerophyllum prescottii* DC. The major components of the essential oil: *trans*- $\beta$ -ocimene (36%), *cis*- $\beta$ -ocimene (19%),  $\gamma$ -terpinene (19%),  $\beta$ -myrcene (11%), and terpinolene (5%).

*Kadenia dubia* (Schkuhr) Lavrova et V.N.Tichom. The major components of the essential oil:  $\alpha$ -pinene (25%), *trans*- $\beta$ -ocimene (16%), limonene +  $\beta$ -phellandren (11 %), *cis*- $\beta$ -ocimene (7%),  $\beta$ -myrcene (5%), and  $\beta$ -selinene (5%).

*Heteropappus altaicus* Willd. (Novopokr.) (syn.: *Aster altaicus* Willd.). The major components of the essential oil:  $\alpha$ -pinene (18-23 %),  $\beta$ -myrcene (18-26%), limonene (3-6%),  $\beta$ -phellandrene (14-20%), *trans*- $\beta$ -ocimene (9-13 %) and germacrene D (4-19%).