

Volatile constituents of *Saussurea costus* roots cultivated in Uttarakhand Himalayas, India

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ABSTRACT

Background *Saussurea costus* (Falc.) Lipschitz, syn *Saussurea lappa* C.B. Clarke, one of the best-known species within this genus, is commonly known as costus. Due to the remarkable biological activity of *S. costus* and its constituents it will have an appropriate place in various systems of medicines all over the globe. **Objective** The main aim is to study the volatile constituents of *S. costus* cultivated in Uttarakhand Himalayas. **Material and Methods** The volatile constituents were isolated from the root of *S. costus* cultivated in Chamoli district of Uttarakhand by hydro distillation and were analyzed by gas chromatography-mass spectroscopy (GC-MS). **Results** A total 35 aroma compounds representing about 92.81% of the total composition were identified. Aldehyde like (7Z, 10Z, 13Z)-7, 10, 13-hexadecaterinal (25.5%) was found as a major compound including other ketones like dehydrocostus lactone (16.7%), alcohols like elemol (5.84%), g-costol (1.80%), vulgarol B (3.14%), valerenol (4.20%), and terpinen-4-ol (1.60%), etc. Esters and acids were found to be completely absent in our samples. **Conclusion** *S. costus* volatile oil constituents are superior in terms of total identified constituents. Where relative area quantum is higher in Uttarakhand Himalayas samples, when compared with those originated to China and Korea.

KEYWORDS

C.B. Clarke . essential oil . GC-MS . *Saussurea costus*

REFERENCES

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