

Chemical Composition and Antimicrobial Activity of the Essential Oils from *Chloranthus japonicus* Sieb. and *Chloranthus multistachys* Pei

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Z. Naturforsch. **65c**, 660–666 (2010); received March 23/July 14, 2010

We examined the composition and antimicrobial activity of two essential oils from *Chloranthus japonicus* Sieb. and *Chloranthus multistachys* Pei. GC-FID and GC-MS analyses identified 48 and 39 compounds, which represented 95.56% and 94.58%, respectively, of all components in these oils. Of these, 28 compounds were common to both, with a relatively high amount of oxygenated monoterpenes (50.95% and 39.97%). Antimicrobial properties were evaluated *in vitro* via disc diffusion and microbroth dilution assays. Activities were strong against most tested microorganisms, with inhibition zones ranging from 8.1 to 22.2 mm. For both species, minimum values for inhibitory and bactericidal concentrations were 0.39 to 12.50 mg/mL and 0.78 to 50.00 mg/mL, respectively. These results suggest that these essential oils are potent natural sources of antimicrobial agents for the medicinal and pharmaceutical industries.

Key words: *Chloranthus japonicus* Sieb., *Chloranthus multistachys* Pei, Essential Oil