

Insecticidal Activity of Spearmint Oil against *Bemisia tabaci* Adults

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These studies were carried out to investigate the fumigation and contact toxicities of spearmint oil (*Mentha spicata*) against adults of sweet-potato whitefly, *Bemisia tabaci*. And we carried out the constituent analysis of spearmint oil using gas chromatograph (GC) and gas chromatograph mass spectrometry (GC/MS). Spearmint oil showed 100%, 100%, 61.3% fumigation toxicity against *B. tabaci* adults at 10 $\mu\text{l}/954$ ml, 5 $\mu\text{l}/954$ ml, 1 $\mu\text{l}/954$ ml air concentration, respectively. However, spearmint oil showed <30% contact toxicity against adults of *B. tabaci*. Through the constituent analysis using GC and GC/MS, we confirmed main constituents of spearmint oil were limonene (16.1%), γ -terpinene (13.8%), *p*-cymene (5.8%), 3-octanol (6.9%), carvone (40.9%). Carvone, major constituent of spearmint oil, also showed 100% fumigation toxicity at 10 $\mu\text{l}/954$ ml air concentration.