

## Discrimination of white ginseng habitat using SPME/GC/ECD, XRF and ICP/MS

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When headspace volatiles were extracted and analyzed using an automatic solid phase micro-extraction/gas chromatograph/electron capture detector (SPME/GC/ECD), three ECD-sensitive volatile peaks of a, b and c were detected from 127 samples of Korean white ginseng and 100 samples of Chinese white ginseng. However, the other four ECD-sensitive volatile peaks of d, e, f and g were detected from almost all the Chinese white ginseng samples but from only 0~7% of Korean white ginseng samples, which indicates that the occurrence of peak d, e, f and g may be available as a parameter for the discrimination of white ginseng habitat. When the inorganic elements were analyzed using an X-ray fluorescence spectrometer (XRF) and an inductively coupled plasma mass spectrometer (ICP/MS), such content ratios of some inorganic elements as K/Ca, Mn/Fe, Zn/Fe and Ba/Fe of Korean white ginseng samples were significantly different from those of Chinese white ginseng samples. These results suggest that the inorganic element content ratios may be also useful for the discrimination of white ginseng habitat.

### ▣ 연락처주소

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