

Py-GC/MS Analysis of Crude Drug Propolis From Different Areas

[Background] Composition and activity of crude drug propolis vary depending on factors such as species, collecting time, production area, and individual species. Flash pyrolysis (Py)-GC/MS technique was employed here to analyze propolis from two different producing areas, and the compositions were compared.

[Experimental] Py-GC/MS technique was used to obtain pyrograms of two propolis samples obtained from different areas.

[Results] Fig. 1 shows pyrograms of two different samples of propolis. Phenols, aromatic acids, sesquiterpenes, ethyl esters of C16-C18 aliphatic acids, and various flavonoids were observed in the pyrograms. The peak distributions for aromatic acids and phenols derived from these two kinds of propolis showed a similarity, while the peak distributions for ethyl esters of C16-C18 aliphatic acids and flavonoids showed a large difference.

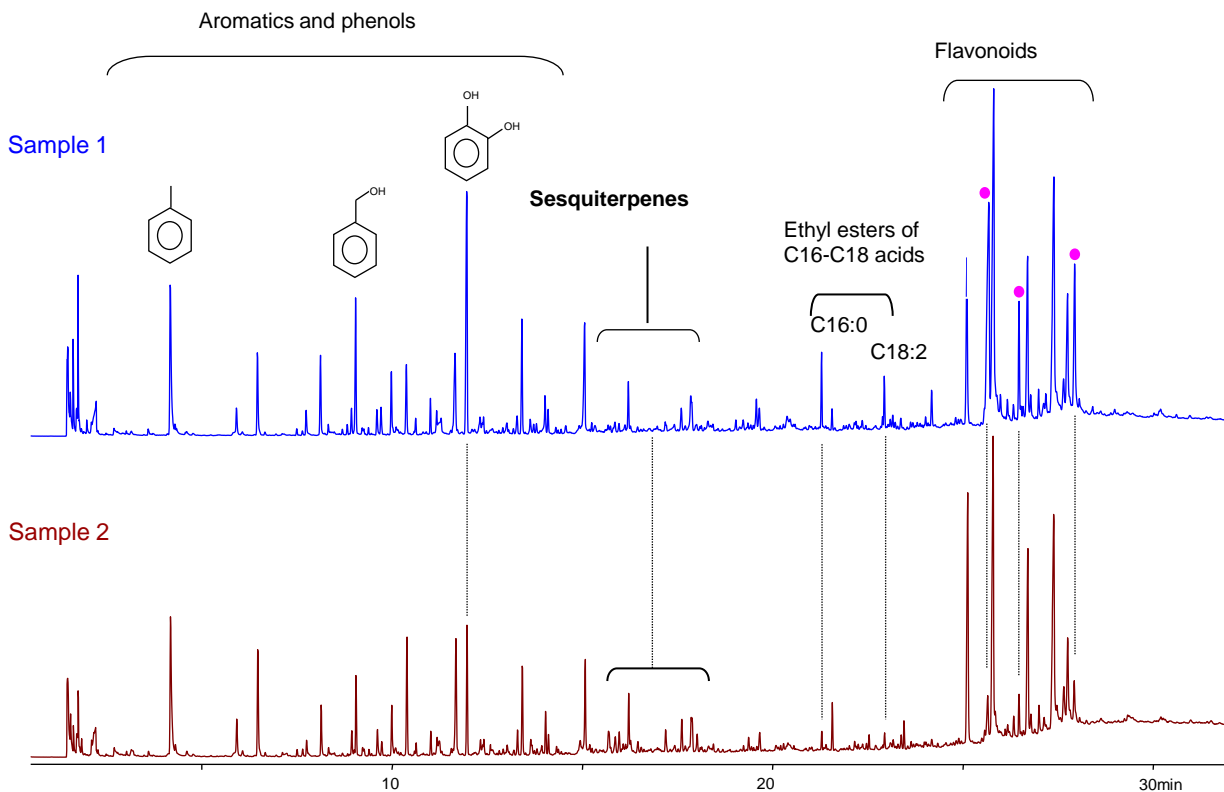


Fig. 1. TIC pyrograms of two different propolis samples

Double-Shot Pyrolyzer® : PY-2020iD, Pyrolysis temperature: 550°C, Column head pressure : 50kPa, Split ratio : 1/50
 Separation column : Ultra ALLOY+-5(5% diphenyl 95% dimethylpolysiloxane), L=30 m, id=0.25 mm, DF=0.25 μm
 GC oven temperature: 40°C~300°C (10°C/min), Sample size : 300 μg, Detector : MS (m/z:29-550, 2 scans/sec)

Keywords : Crude drug (galenical), Propolis, Py-GC/MS, Simple and quick identification analysis

Products used : Multi-functional pyrolyzer, Vent-free GC/MS adapter, Selective Sampler, MicroJet Cryo-Trap, UA-5

Applications : General Polymer Analysis

Related technical notes : PYA1-031E, PYA1-032E

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