

## 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.

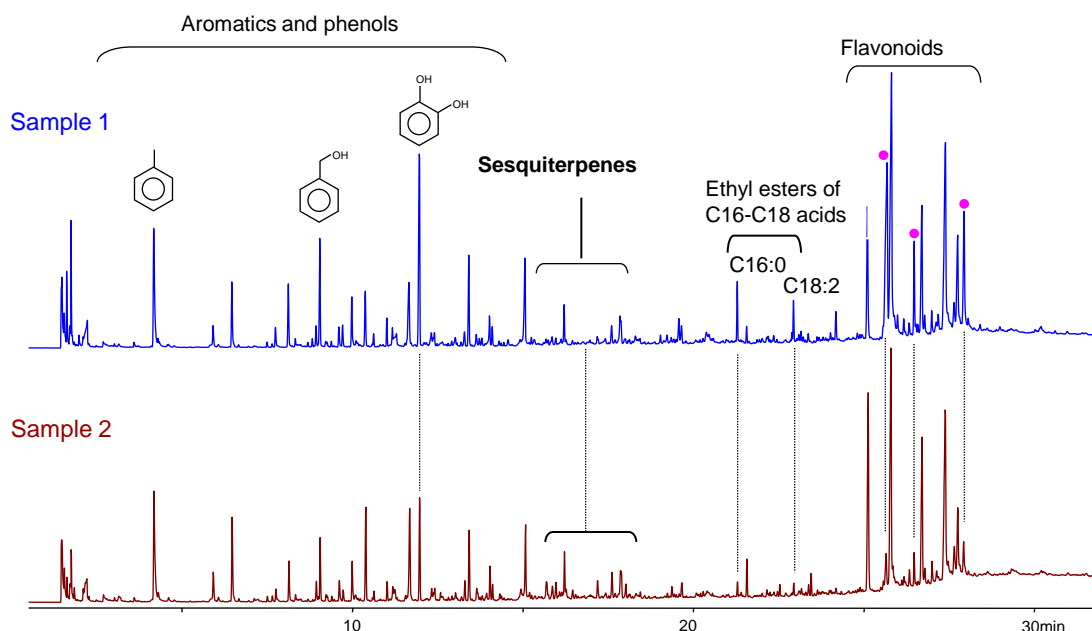


Fig 1. TIC pyrograms of two different propolis samples

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

Applications : General crude drug analysis

Related Technical Notes : PYA1-031E, PYA1-032E

Please direct your inquiries to us by Fax or via our web site at :

<http://www.frontier-lab.com/>

R&D and manufactured by :

**Frontier Laboratories Ltd.**

1-8-14 Saikon, Koriyama

Fukushima-ken 963-8862 JAPAN

Phone: (81)24-935-5100 Fax: (81)24-935-5102



Scientific Instruments Manufacturer GmbH

Im Erlengrund 21-23

D-46149 Oberhausen

Phone: +49-208-941078-0 Fax: +49-208-941078-88

<http://www.sim-gmbh.de> [info@sim-gmbh.de](mailto:info@sim-gmbh.de)