GC Technical Note

GT105

GL Sciences Inc.

Simple Concentration Analysis of Lavender Flavor Components - Using MonoTrap RCC18 (solvent-extraction)

MonoTrap RCC18 was used to simply screen and analyze volatile compounds in lavender petals. MonoTrap RCC18 is used as a collector of volatile compounds. By using MonoTrap to collect volatile compounds followed by solvent extraction, we were able to simplify the process from sampling to analysis. Using MonoTrap it was possible to detect a number of flavor components, including Linalool and Linalyl acetate in lavender.

Preliminary processing procedure

Lavender

Collection (HS)
One MonoTrap RCC18

Solvent extraction

GC/MS

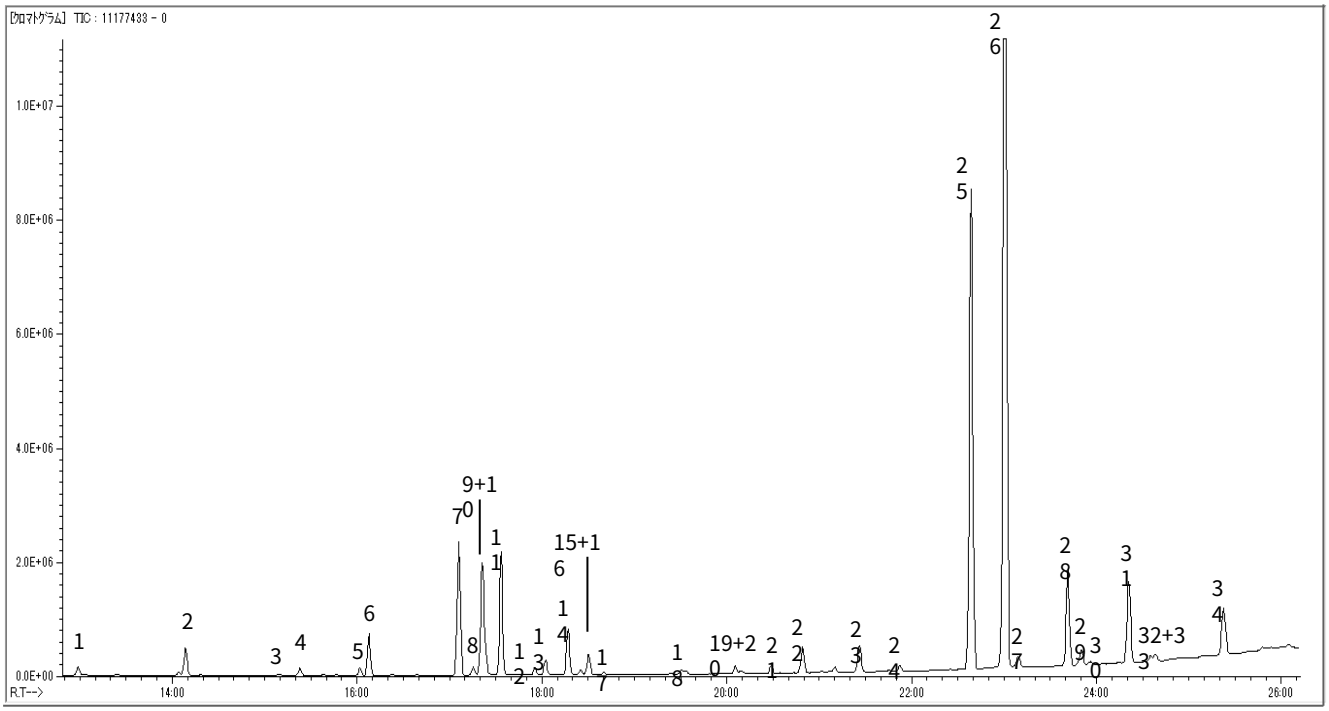
Place 2 g of lavender petals in a 40 mL vial

60 ˚C for 1 hour

200 µL of dichloromethane 5 minutes of ultrasonication

GC/MS Conditions

System	: GC/MS
Column	: InertCap Pure-WAX 0.25 mm I.D. x 60 m, df = 0.5 µm
Col. Cat. No.	: 1010 - 68164
Col.Temp.	: 40 ˚C (5 min) - 10 ˚C/min - 250 ˚C
Carrier Gas	: He, 1 mL/min (constant flow)
GC Inlet	: 250 ˚C Splitless (1min)
Detection	: MS Scan (m/z 30-350)
Sample Size	: 1µL



※Standard samples are not used for qualitative analysis.
Results from a library search.

1. Pinene
2. Camphene
3. Pinene
4. Sabinene
5. Carene
6. Myrcene
7. Limonene
8. Butyl butyrate
9. Phellandrene
10. Cineole
11. Ocimene
12. Ocimene
13. Octanone
14. Hexyl acetate
15. Cymene
16. Cymene
17. Carene
18. Hexyl isobutyrate
19. Octenyl acetate
20. Allo-Ocimene
21. Undecatriene
22. Hexyl butyrate
23. 1-Octen-3-ol
24. Linalool Oxide
25. Linalool
26. Linalyl acetate
27. Camphor
28. Neryl acetate
29. Bornyl acetate
30. Terpineneol
31. Caryophyllene
32. Farnesene
33. Lavandulol
34. Borneol

Product used

MonoTrap RCC18

Cat.No. :1050-72201

MonoTrap and Trial Kit for SE (for extracting solvents)

200 µL glass insert (Flat Bottom)

Cat.No. :1030-17211

Image of use

InertCap Pure-WAX

Size :0.25 mm I.D. × 60 m, df = 0.5 µm
Cat.No. : 1010-67164

* Used to elute from a rod-type MonoTrap.
①Set a glass insert in an autosampler vial.
②Place the extraction solvent in the glass insert.
③Place the collected MonoTrap in the glass insert.
④Add ultrapure water to a level higher than the MonoTrap in the autosampler vial
Enter the degree.
⑤Irradiate the ultrasound (5 minutes).

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