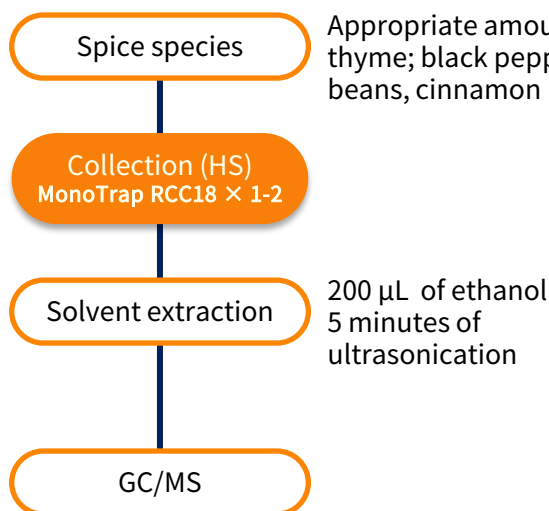


Simple Concentration and Analysis of Spice Flavor Components - Using Sorptive Media MonoTrap

In this application note, MonoTrap RCC18 (with activated carbon) was used to simply concentrate and analyze the flavor components of spices.

Preliminary processing procedure



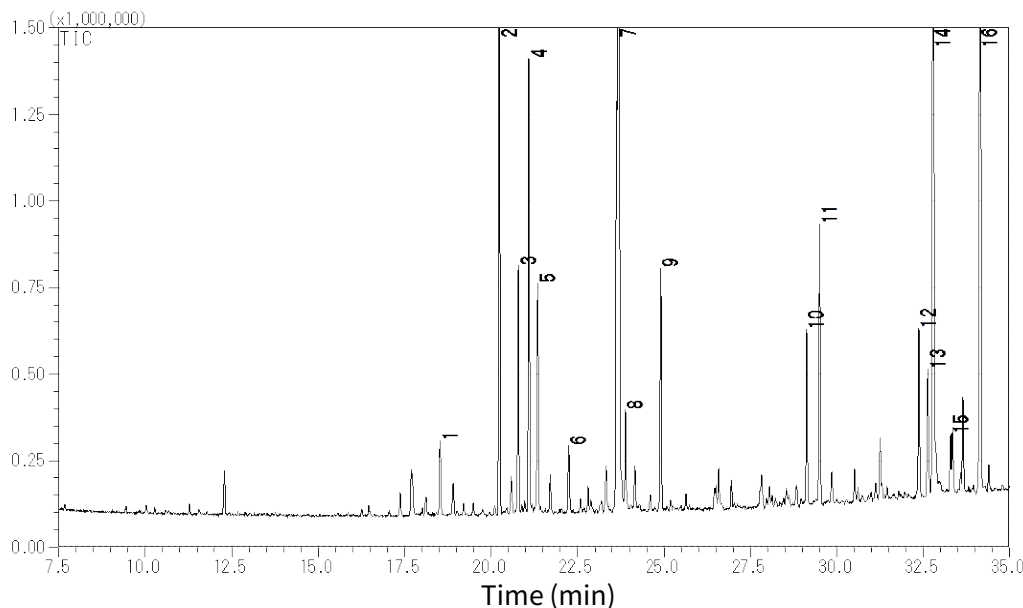
GC Conditions

System : GC - MS
Column : InertCap Pure-WAX
 0.25 mm I.D. x 30 m df = 0.25 μ m
Col. Temp. : 40 $^{\circ}$ C (5 min) - 5 $^{\circ}$ C /min - 250 $^{\circ}$ C
Carrier Gas : He 1 mL/min
Injection : Split 1:20
 250 $^{\circ}$ C
Detection : MS Scan (m/z : 35-600)
Sample Size : 1 μ L



Image of collection vials

Time

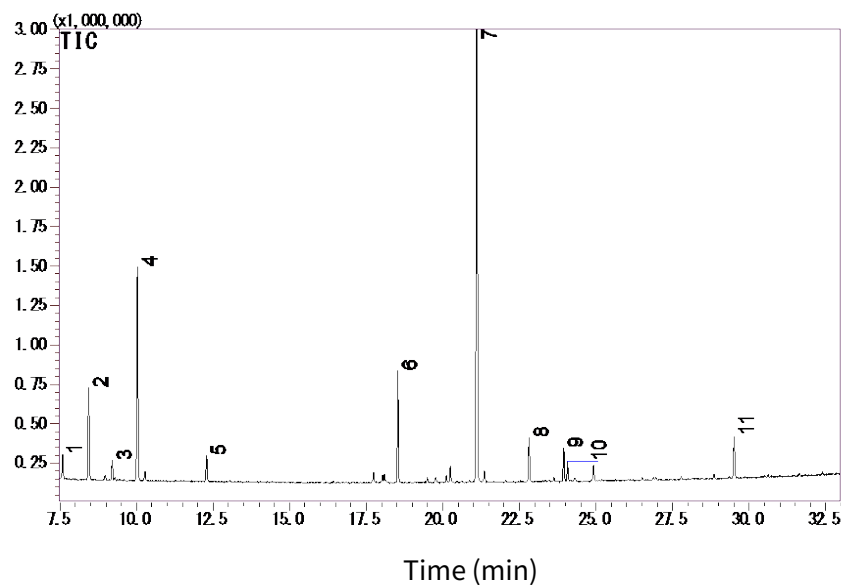


1. Copaene
2. β -Linalool
3. 1,7,7-Trimethylbicyclo[2.2.1]hept-2-yl acetate
4. 4,11,11-Trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene
5. *p*-Menth-1-en-4-ol
6. Alloaromadendrene
7. Borneol
8. 4,7,7-Trimethylbicyclo[4.1.0]heptan-3-ol

9. μ -Murolene
10. 3,7-Octadiene-2,6-diol, 2,6-dimethyl-
11. Caryophyllene oxide
12. Spathulenol
13. 2,6-Dimethyl-1,7-octadiene-3,6-diol
14. Unknown
15. Tau.-Cadinol
16. Carvacrol

*According to the library search results

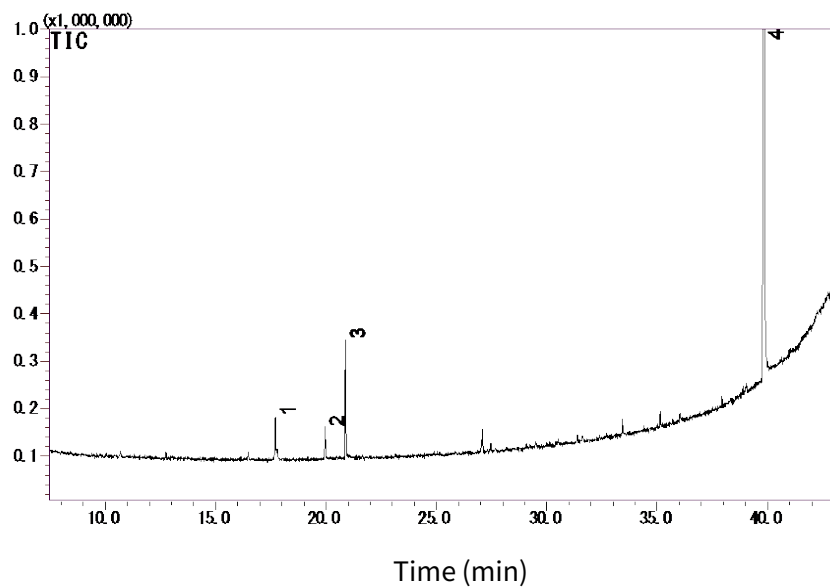
Black pepper



1. 4(10)-Thujene
2. 3-Carene
3. β -Myrcene
4. D-Limonene
5. α -Cymene
6. Copaene
7. Caryophyllene
8. α -Caryophyllene
9. Eudesma-4(14),11-diene
10. α -Selinene
11. Caryophyllene oxide

*According to library search results

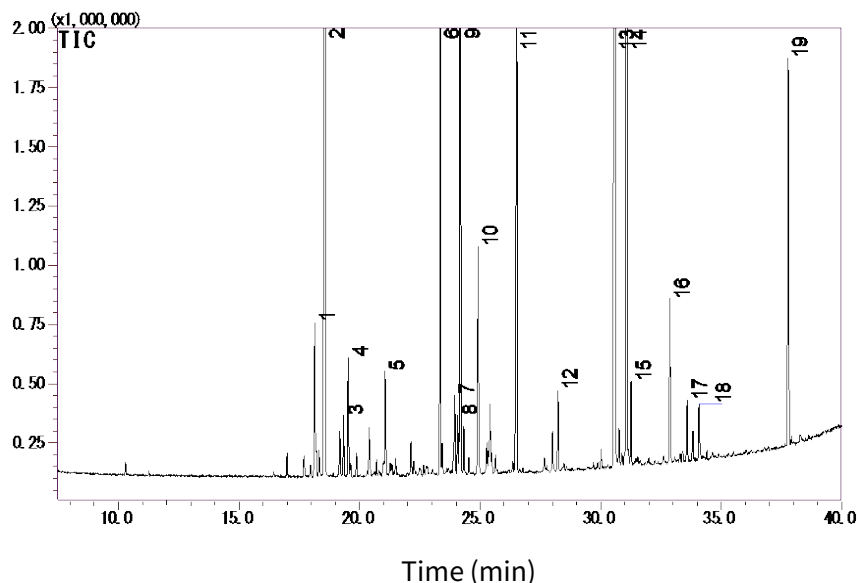
Vanilla beans



1. Acetic acid
2. Butanediol
3. Butanediol
4. Vanillin

*According to library search results

Cinnamon



1. Cycloisosativene
2. α -Cubebene
3. Sativen
4. Sativen
5. β -Elemene
6. γ -Muurolene
7. Eudesma-4(14),11-diene
8. β -Chamigrene
9. α -Muurolene
10. δ -Cadinene
11. Calamenene
12. α -Calacorene
13. Cinnamaldehyde
14. 3-Methyl-7,8-dihydroquinolin-5(6H)-one
15. Cedr-8-ene
16. Murolan-3,9(11)-diene-10-peroxy
17. α -Cadinol
18. Cadalene
19. Coumarin

*According to library search results

Initial use of MonoTrap...

Introduction to the convenient MonoTrap Start UP-KIT

	Description	Qty.
①	MT Holder	5
②	MT Stand	1
③	MT Extract Cup with Vial (20 mL)	5
④	Clean Pin Hole Septum with vial (40mL)	5
⑤	200 μ L glass insert (flat bottom)	40
⑥	MonoTrap DCC18	20
⑦	MonoTrap RCC18	20
⑧	MonoTrap DSC18	20
⑨	MonoTrap RSC18	20



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