GT011
GL Sciences Inc.

Analysis of Lavender Flavor Components with Simple Concentration - Using sorptive Media MonoTrap

MonoTrap is a novel hybrid adsorbent that combines a large surface area with the properties of silica gel, activated carbon and ODS. High collection efficiency is achieved due to the large surface area of the porous silica and the adsorption effect of activated carbon, this makes it possible to perform high-sensitivity analysis in a short time.

In this application, a simple concentration and analysis was made for the aroma components in lavender using MonoTrap carbon-containing (DCC18). By simply placing samples in the vials it was easy to concentrate, analyze and identify the characteristic flavor components, β-Linalool, etc. Due to the large surface area, considerable information was obtained with high sensitivity even with solvent extraction, even when sample loading was large and dilution was a concern.

Preliminary processing procedure

Sample

← Lavender 2 g

Collection

← **With MonoTrap DCC181**
Collect after standing at 60 ˚C for 30 minutes.

Solvent extraction

← Dichloromethane 200 µL,
5 minutes of ultrasonication

GC/MS

④Clean vial with pin hole septum

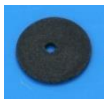
(Start up-kit)

③MT Extract cup with vial

(Start UP-Kit)

MonoTrap Series

Cat.No	Description	Configur	Size	Activated Carbon	Functional Group
1050-72101	MonoTrap DCC18	Disk	O.D.10mmx thick 1mm	Yes	C18
1050-72201	MonoTrap RCC18	Rod	O.D.2.9 mmxI.D.1mm xHight 5mm	Yes	C18
1050-71101	MonoTrap DSC18	Disk	O.D.10mmx thick 1mm	No	C18
1050-71201	MonoTrap RSC18	Rod	O.D.2.9 mmxI.D.1mm xHight 5mm	No	C18



DCC18

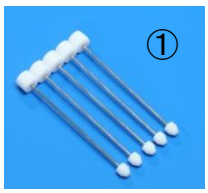
RCC18

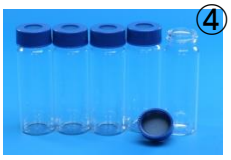
DSC18

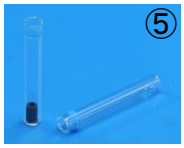
RSC18

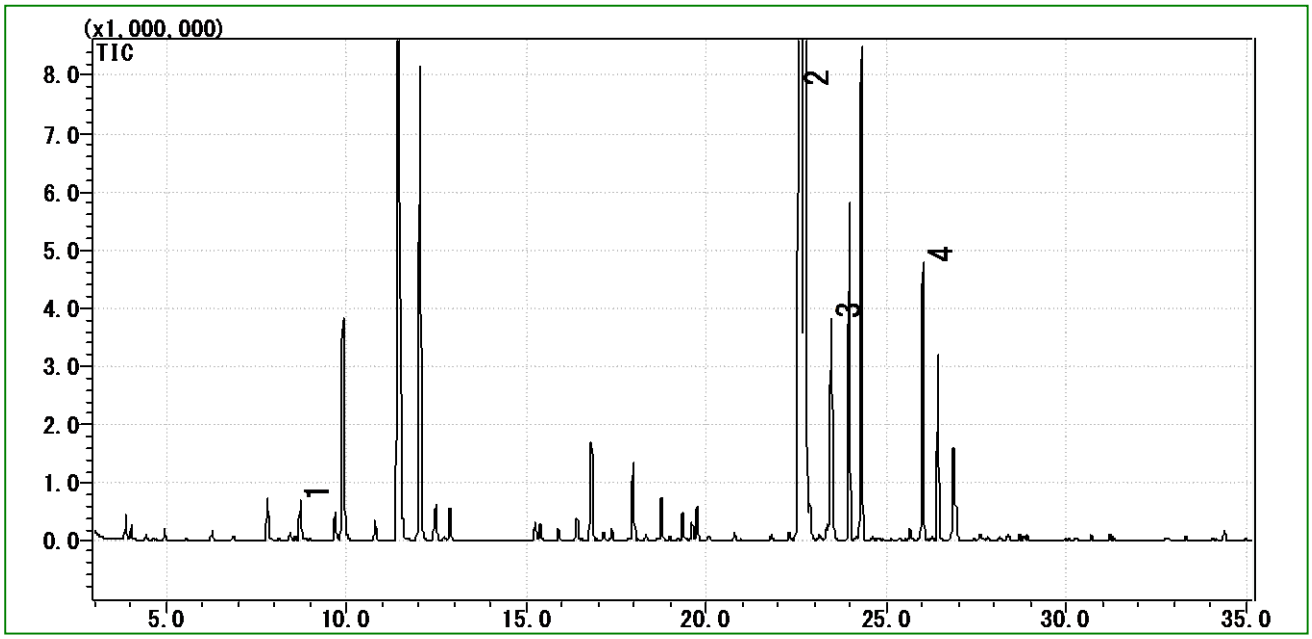
Introduction of the convenient MonoTrap start up-kit -

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(40 ml)	5
⑤ 200 µL glass insert (flat bottom)	40
⑥ MonoTrap DCC18	20
⑦ MonoTrap RCC18	20
⑧ MonoTrap DSC18	20
⑨ MonoTrap RSC18	20









1 β-Myrcene
2 β-Linalool
3 Caryophyllene
4 β-Farnesene

*Results of identification with standard samples

GC Conditions

System :SHIMADZU GC-2010, GCMS-QP2010

Column :InertCap Pure-WAX(Cat.1010-68142)
0.25 mm I.D. x 30 m df=0.25 µm

Column Temp :40 ˚C (5 min)→4 ˚C/min→180 ˚C→20 ˚C/min→250 ˚C (5 min)

Carrier Gas :He 120 kPa

Injection :Split 1: 10, 1 µL

Detection :MS Scan (*m/z*; 40-350)

InertCap Pure-WAX is the best highly inert wax column for flavor analysis.
It is recommended that it is used in conjunction with MonoTrap.

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