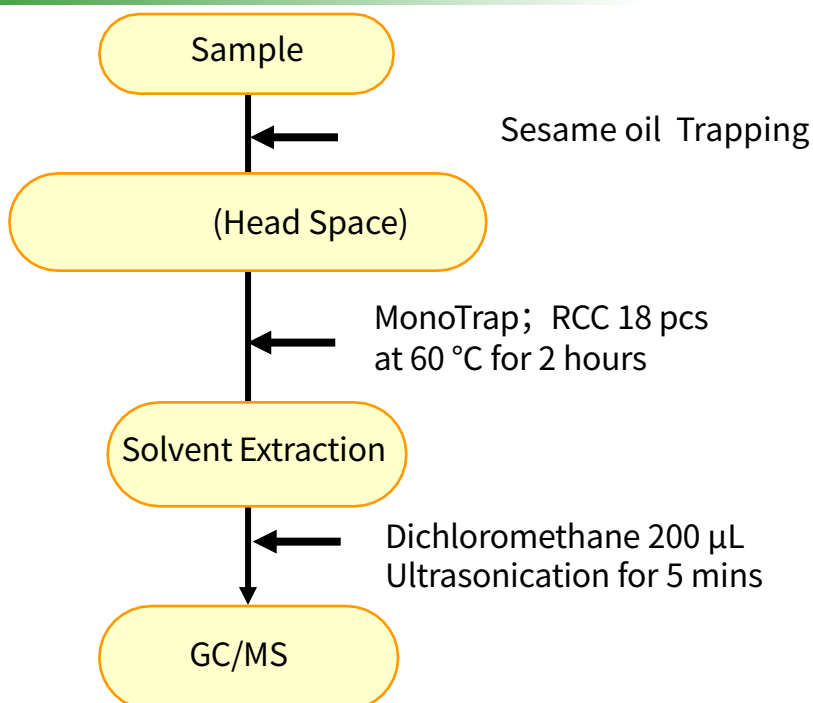


Easy Enrichment of Sesame Oil Fragrance with MonoTrap

MonoTrap is a hybrid novel adsorbent that combines large surface area and properties of silica gel, activated carbon, and ODS. Due to the large surface area of porous silica and the adsorption effect caused by the inclusion of activated carbon, a high collection efficiency is obtained. Therefore, high-sensitivity analysis can be performed in a short time. In this study, we used MonoTrap RCC18 (with activated carbon) to perform simple enrichment analyses of the flavor components of sesame oil. We were able to identify a number of thiazoles and pyrazines, which are characteristic flavor components of sesame oil. Due to the large surface area, high sensitivity of many information was obtained even in solvent extraction, where sample loading is large and dilution is a concern.

Column : InertCap Pure-WAX 0.25 mm I.D. × 30 m df=0.25 μm

Protocol



⑤200 μL Glass Insert
(Start UP-Kit)



Directly to an AutoSampler!

GC/MS Condition

System : SHIMADZU GC-2010, GCMS-QP2010
Column : InertCap Pure-WAX Cat.No. 1010-68142
 0.25 mm I.D. × 30 m df=0.25 μm
Column Temp : 40 °C (5 min) → 4 °C/min → 250 °C (5 min)
Carrier Gas : He 70 kPa
Injection : Splitless, 1 μL 250 °C
 SHIMADZU AOC-20i
Detectio : MS Scan (*m/z*; 35-450)



Auto Sampler • • • SHIMADZU AOC-20i
 Vial • • • Cat.No.1030-17105
 Insert • • • 200 μL Glass Insert (Start UP-Kit)

Make sure that the micro syringe does not touch the bottom of the vial and have 10mm of space between the needle point and vial bottom.

MonoTrap series lineup

Cat.No	Product	Shape	Size	Active Carbon	Function
1050-72101	MonoTrap DCC18	Disk	O.D.10mmx thick 1mm	Yes	C18
1050-72201	MonoTrap RCC18	Rod	O.D.2.9 mmx l.D.1mm x H i g h t 5mm	Yes	C18
1050-71101	MonoTrap DSC18	Disk	O.D.10mmx thick 1mm	No	C18
1050-71201	MonoTrap RSC18	Rod	O.D.2.9 mmx l.D.1mm x H i g h t 5mm	No	C18



DCC18



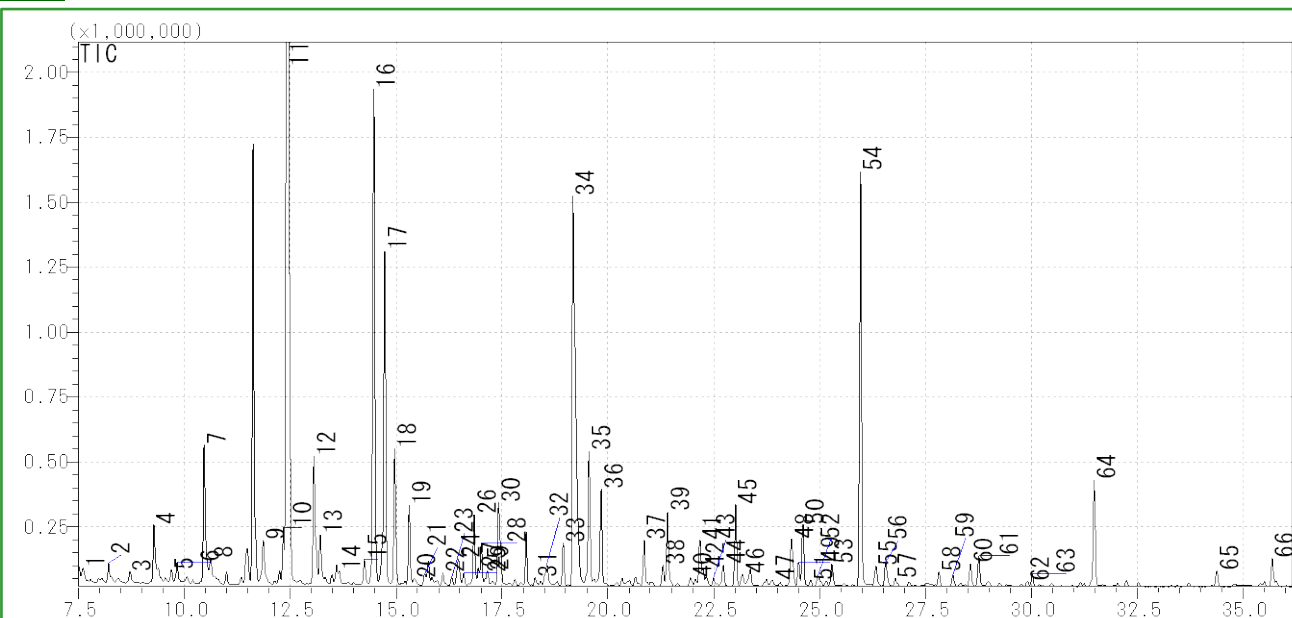
RCC18



DSC18



RSC18



1 Ethylbenzene	23 4,5-Dimethylthiazole	45 2-Formyl-5-methylfuran
2 Methyl ethyl disulfide	24 Dimethyl trisulfide	46 3,5-Octadien-2-one
3 3-Methylphenol	25 Methyl isopentyl disulphide	47 2-Acetylpyridine
4 Pyridine	26 2-Ethyl-6-methyl-pyrazine	48 Butyrolactone
5 2-Heptanone	27 2,4-Dimethyl-4,5-dihydro-1,3-thiazole	49 2-Acetyl-3,4,5,6-tetrahydropyridine
6 Heptanal	28 2-Ethyl-5-methyl-pyrazine	50 Acetylpyrazine
7 Pyrazine	29 Acetdimethylamide	51 tetrahydrothiophene-2-one
8 2-Methylpyridine	30 Trimethylpyrazine	52 Isopropenylpyrazine
9 Thiazole	31 2-Methyl-2-thiazoline	53 Acetophenone
10 1-Pentanol	32 Vinylpyrazine	54 Furfuryl alcohol
11 Methylpyrazine	33 2,5-Dimethyl-3-ethylpyrazine	55 Ethyl n-propyl disulfide
12 4-Methylthiazole	34 Acetic acid	56 2-Acetyl-3-methylpyrazine
13 2,4-Dimethylthiazole	35 Furfural	57 2-Isopropyl-4-methylthiazole
14 Octanal	36 Acetol acetate	58 (5-Methyl-2-furyl)methanol
15 2,5-Dimethylthiazole	37 2-Acetylfuran	59 2(5H)-Furanone
16 2,5-Dimethylpyrazine	38 Benzaldehyde	60 Acetamide
17 2,6-Dimethylpyrazine	39 Pyrrole	61 Acetamidoethane
18 Ethylpyrazine	40 Ethyl isopropyl ketone	62 Propanamide
19 2,3-Dimethylpyrazine	41 Propanoic acid	63 Furfuryl methyl disulfide
20 2-Cyclopenten-1-one	42 Furfuryl acetate	64 Guaiacol
21 5-Ethyl-2-methyl-1,3-thiazole	43 Tetrahydrothiophen-3-one	65 2-Acetylpyrrole
22 1-Hexanol	44 Hydracrylic acid, methyl ester	66 Pyrrole-2-carboxaldehyde

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