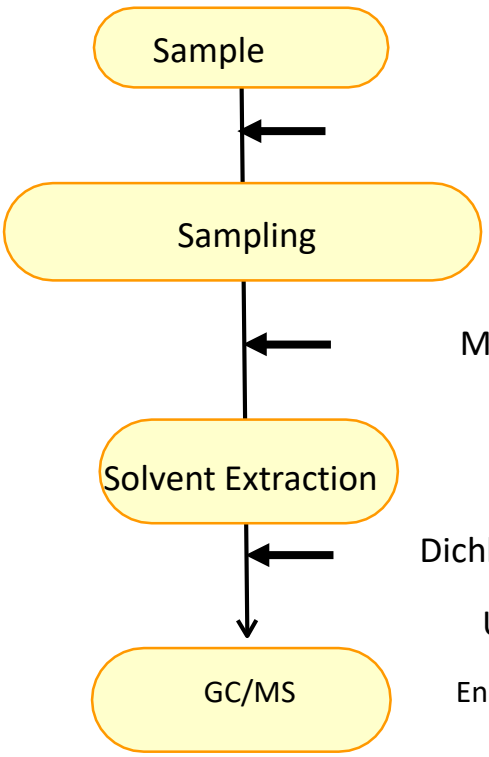
GT017
GL Sciences Inc.

Easy Enrichment of Bread with MonoTrap

MonoTrap is a hybrid novel adsorbent that combines a large surface area and the properties of silica gel, activated carbon, and ODS. Utilizing the surface of porous silica, it can be used as a tool that makes use of the large surface area and the adsorbent effect caused by the inclusion of activated carbon for high collection efficiency and for short time and sensitive analysis. In this study, we used MonoTrap DCC18 (with activated carbon) to perform simple enrichment analyses of the fragrance components of bread. With the use of several low-cost MonoTrap copies per sheet at a time, warming at the time of collection and enrichment after extracting solvents, we were able to obtain high sensitivities and a lot of information. The highly inert WAX-column InertCap Pure-WAX is the optimal column for fragrance components analyses. It is recommended to use this medicine in conjunction with MonoTrap.

Column : InertCap Pure-WAX (Cat.No. 1010-68142) 0.25 mm I.D. × 30 m df=0.25 µm

Protocol



1 slice of bread

MonoTrap ; DCC18 5 pcs
at 60 ℃, 12 hours

Dichloromethane 1000 µL,

Ultrasonication 5 mins

Enrich by N_2 purge to 100 µL

③MT Extract Cup with Vial

GC Condition

System : SHIMADZU GC-2010, GCMS-QP2010

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

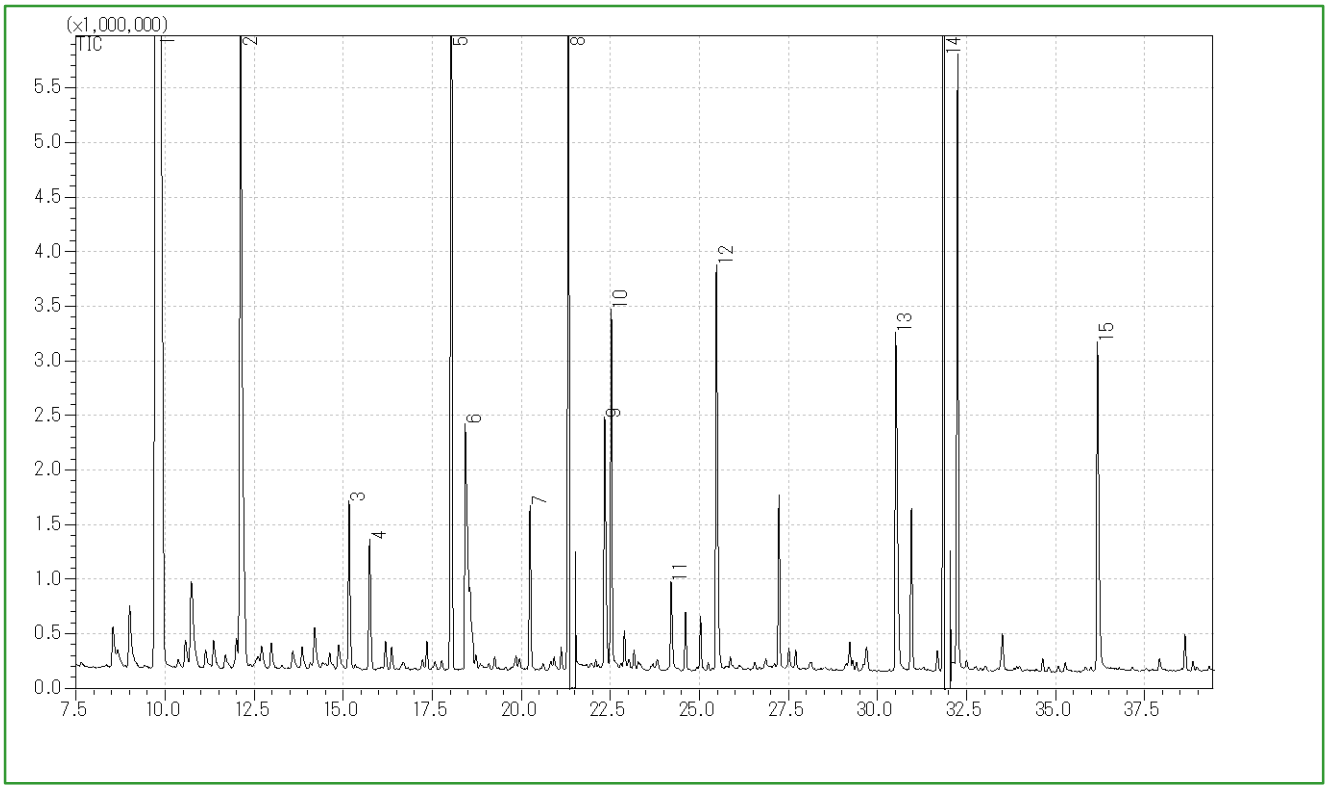
Column Temp : 40 ℃ (5 min)→4 ℃/min→250 ℃ (5 min)

GC Capillary Column : **InertCap Pure-WAX** 0.25 mm I.D. × 30 m df=0.25 µm Cat.No. 1010-68142

Carrier Gas : He 95 kPa

Injection : SplitLess, 1 µL 250 ℃

Detection : MS Scan (*m/z*;25-450)



1 Isopentyl alcohol
2 Acetyl methyl carbinol
3 1-Hexanol
4 3-Ethoxy-1-propanol
5 Ethyl caprylate
6 Acetic acid
7 Benzaldehyde
8 2,3-Butanediol
9 Isobutyric acid
10 2,3-Butanediol
11 Butanoic acid
12 Isovaleric acid
13 Hexanoic acid
14 Phenylethyl alcohol
15 Octanoic acid

Ultra inert WAX column **InertCap Pure-WAX** is highly recommended to analyze aromatic compounds together with **MonoTrap**

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