

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

MonoTrap RGC18TD, a simple enrichment tool was used to screen and analyze the flavor components in maple syrup. MonoTrap RGC18TD is individually packaged in ampoules, with no pre-conditioning required and no risk of contamination.

Preliminary processing procedure

Maple syrup

Place 20 g in 40 mL vials

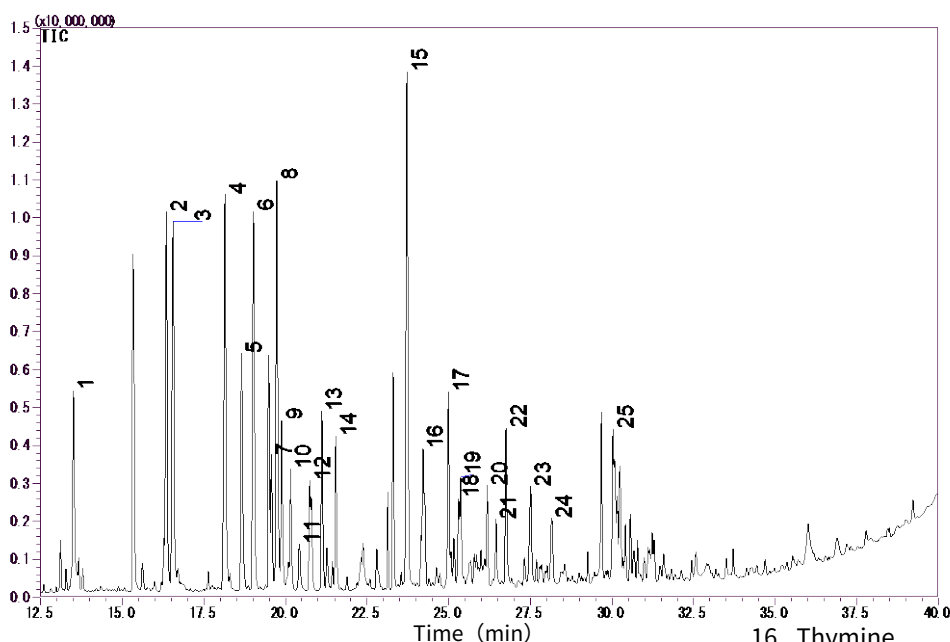
Collection (HS)
One MonoTrap RGC18TD

60 °C for 12 h

TD-GC-MS

Conditions

System	: GC-MS-Thermal Desorption
Column	: InertCap Pure-WAX 0.25 mm I.D. x 60 m df = 0.25 µm
Col.Temp.	: 40 °C (5 min) - 6 °C/min - 250 °C
Carrier Gas	: He 1 mL/min (constant flow)
Desorb Temp.	: 200 °C
Time	: 5 min
Flow	: 5 mL/min
Split	: 25 mL/min
Cryo Trapping	: -150 °C
Injection Temp.	: 250 °C
Detection	: MS Scan (<i>m/z</i> : 28.5 - 600)



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

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|---------------------------|---|---|
| 1. Isobutyl alcohol | 9. Ethylpyrazine | 16. Thymine |
| 2. D-Limonene | 10. Dimethylpyrazine | 17. 2,3-Butanediol |
| 3. Isopentyl alcohol | 11. 2-Cyclopenten-1-one | 18. Propylene Glycol |
| 4. Methylpyrazine | 12. 2-Methyl-2-cyclopentenone | 19. 3-Methylenedihydro-2(3H)-furanone |
| 5. Acetyl methyl carbinol | 13. 2-Ethyl-6-methylpyrazine | 20. M-Methoxytoluene |
| 6. Hydroxyacetone | 14. Trimethylpyrazine | 21. 2-Acetyl-4-methylpyridine |
| 7. Dimethylpyrazine | 15. 5-c-Acetyl-1,4-anhydro-2,6-dideoxy-1,4-dimethylhex-1-en-3-ulose | 22. 2-Furanmethanol |
| 8. Dimethylpyrazine | | 23. 3-Ethyl-2-hydroxy-2-cyclopenten-1-one |
| | | 24. 3-Methyl-2(5H)-furanone |
| | | 25. 2-Hydroxy-1-methylcyclopenten-3-one |

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