

Concentration Analysis of Volatile Components in Wasabi Paste - Using HandyTD Portable Thermal Desorber and MonoTrap Simplified Enrichment Tools

The volatile components of commercial wasabi paste were screened and analyzed using HandyTD and a simplified enrichment tool MonoTrap RGPS TD. HandyTD is a compact, portable and easy-to-operate thermal desorption device. After sample collection, set a glass liner containing the MonoTrap and introduce the heat-desorbed components into the GC inlet. A large number of different characteristic sulfur compounds were detected.

Pretreatment procedure

Wasabi paste

Place 6.25 g in a 44-mL vial

Collection (HS)
One MonoTrap RGPS TD

37 °C for 1 hour



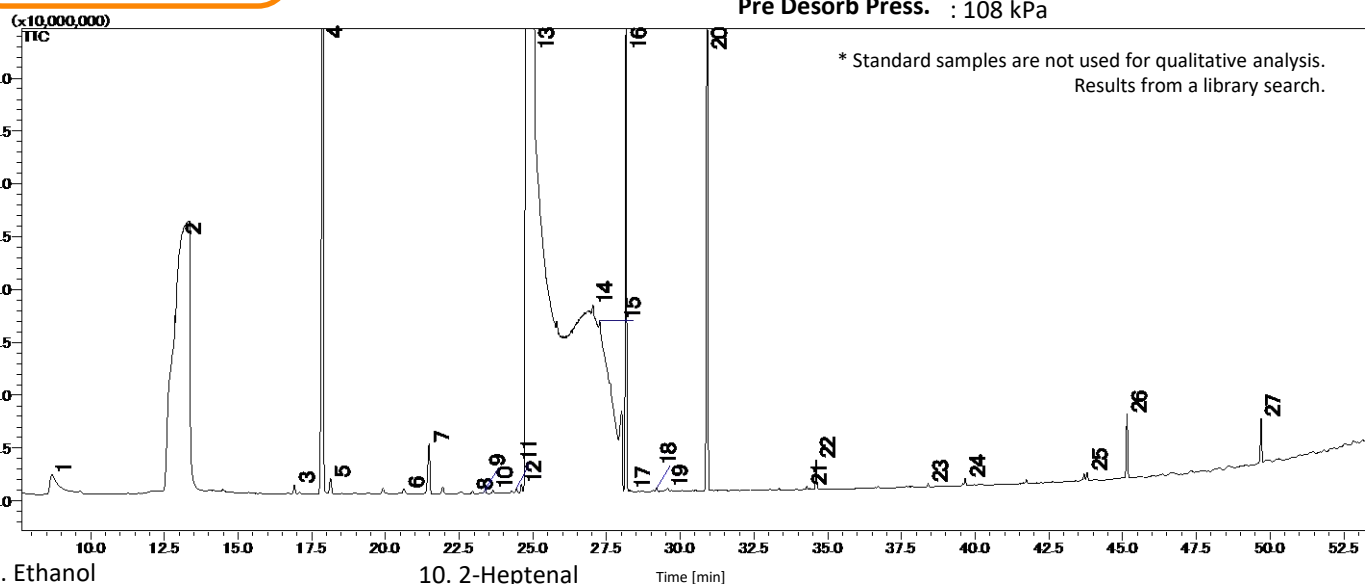
TD/GC/MS

GC Conditions

System	: GC - MS - Thermal Desorption (HandyTD TD265)
Column	: InertCap Pure-WAX 0.32 mm I.D. x 60 m, df = 0.50 μm
Col.Cat. No.	: 1010-68264
Col.Temp.	: 40 °C (5 min) - 4 °C/min - 250 °C
Carrier Gas	: He, 1.88 mL/min
GC Inlet	: 250 °C, Split 7:1
Detection	: MS Scan (<i>m/z</i> 15-450)

HandyTD Conditions

Desorb Temp.	: 40 °C - 45 °C/sec - 250 °C (1.5 min)
Pre Desorb Press.	: 108 kPa



1. Ethanol	10. 2-Heptenal	19. Tetrahydro-2-furanmethanol
2. Water	11. 5-Cyano-1-pentene	20. Unknown
3. 2-Butenenitrile	12. 1-Hexanol	21. Dihydro-2(3H)-thiophenone
4. 1-Pentyne	13. Allyl isothiocyanate	22. Unknown
5. Isopropyl isothiocyanate	14. 2-Methylbutyl isothiocyanate	23. 4-(Methylthio) butanenitrile
6. 1-Pentanol	15. 1-Isithiocyanato-3-methyl-butane	24. Hexanoic acid
7. 2-Isithiocyanatbutane	16. 4-Isithiocyanato-1-butene	25. Iberverin
8. 1-(1-Ethoxyethoxy)-3-hexene	17. Furfural	26. Benzenepropanenitrile
9. Isobutyl isothiocyanate	18. Pentyl isothiocyanate	27. Phenylethyl isothiocyanate

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