

Concentration analysis of volatile constituents of mosquito incense coil - Using Handy TD Portable Thermal Desorber and MonoTrap Simple Enrichment Tools

Handy TD and MonoTrap RGPSTD were used to screen the volatile components from the aroma of a mosquito-coil. Handy TD is a compact, portable, and easy-to-operate thermal desorption device. After collection, place the MonoTrap in a glass liner in the Handy TD, and introduce the heat-desorbed components into the GC inlet. A number of pyridines and aromatic compounds were detected.

Preliminary processing procedure

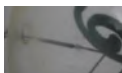
Mosquito coil

3.62 g

Collection (HS)
3 MonoTrap RGPSTD



At room temperature for 1 hour



TD/GC/MS

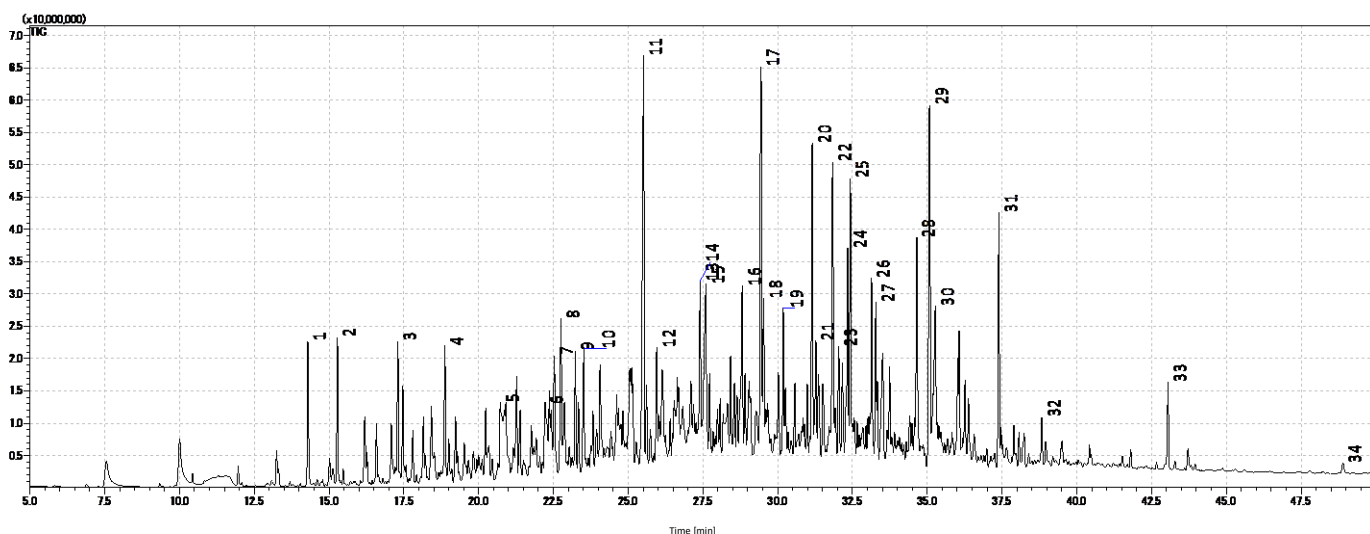
Introduced into GCMS using HandyTD

GC Conditions

System : GC - MS - Handy TD TD265
Column : InertCap Pure-WAX
 0.25 mm I.D. x 60 m, df = 0.25 μ m
Col.Temp. : 40 °C (5 min) - 6 °C/min - 250 °C (10min)
Carrier Gas : He, 1.38 mL/min (149.6 kPa at 40 °C)
GC Inlet : 250 °C, Split 9:1
Detection : MS Scan (m/z : 45-450)

HandyTD Conditions

DesorbTemp. : 40 °C - 45 °C/sec-250 °C (1.5 min)
Pressure : 180 kPa



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

- | | | |
|------------------------------|----------------------------|--------------------------|
| 1. Pyridine | 12. Methyl imidazole | 23. Dimethyl naphthalene |
| 2. Methyl pyridine | 13. Azulene | 24. Indanone |
| 3. Methyl pyridine | 14. Azulene | 25. Ethyl guaiacol |
| 4. Octanenitrile | 15. Dihydropyran | 26. Cresol |
| 5. Acetic acid | 16. Methyl cyclopentadione | 27. Cresol |
| 6. 2,3-Butanediol, dinitrate | 17. Ethyl furaldehyde | 28. Eugenol |
| 7. Trimethyl decane | 18. Methyl naphthalene | 29. Vinyl guaiacol |
| 8. Methyl cyclopentenone | 19. Methyl naphthalene | 30. Methylimidazole |
| 9. Methyl cyclopentenone | 20. Creosol | 31. Ioeugenol |
| 10. Pentadecene | 21. Maltol | 32. Indole |
| 11. Furanmethanol | 22. Pheny carbamate | 33. Carboxamide |
| | | 34. Hydroxy phenol |

Product used**Portable thermal desorber
HandyTD TD265**

Product name: HandyTD TD 265
Cat.No. :2709-80000

**Collection
MonoTrap RGC18TD**

Product name :MonoTrap RGC 18 TD
Cat.No. :1050-74201



MonoTrap RGC18TD



MonoTrap Trial Kit for TD

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