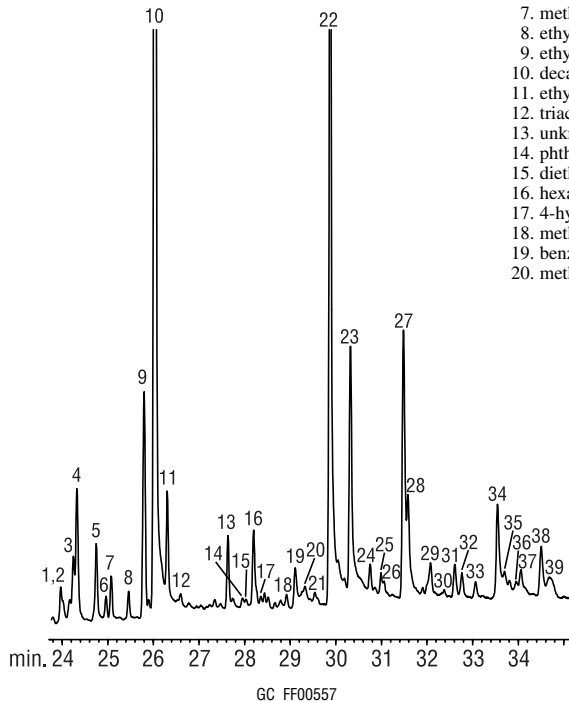


Flavor Compounds in Malt Whiskey

Stabilwax®-DA



- | | |
|-----------------------------------------------|----------------------------------------------|
| 1. nonanoic acid | 21. ethyl stearate |
| 2. diethyl 2-hydroxyglutarate | 22. dodecanoic acid |
| 3. unknown | 23. hydroxymethylfurfural |
| 4. tetradecanol | 24. ethyl linoleate |
| 5. 4-vinylguaiaacol | 25. 4-allyl-2,6-dimethoxyphenol |
| 6. diethyl nonanedioate | 26. diisobutyl phthalate |
| 7. methyl hexadecanoate | 27. vanillin |
| 8. ethyl γ -lactone 2-hydroxyglutarate | 28. sinapic acid (decomp.) |
| 9. ethyl hexadecanoate | 29. 2-phenylethyl decanoate + 2 unknowns |
| 10. decanoic acid | 30. 2-propenyl-2,6-dimethoxyphenol |
| 11. ethyl 9-hexadecanoate | 31. ethyl vanillate |
| 12. triacosan | 32. acetovanillone |
| 13. unknown | 33. vanillin methyl ketone |
| 14. phthalide | 34. tetradecanoic acid |
| 15. diethylphthalate | 35. ethyl homovanillate |
| 16. hexadecanol | 36. propiovanillone |
| 17. 4-hydroxycinnamic acid (decomp.) | 37. fatty acid ester |
| 18. methyl stearate | 38. (similar to 4-allyl-2,6-dimethoxyphenol) |
| 19. benzoic acid | 39. unknown |
| 20. methyl 8-octadecenoate | |

Stabilwax®-DA 30m, 0.18mm ID, 0.18 μ m (cat.# 550752)

Inj.: 10 μ L large volume injection (splitless), at 10 μ L/min.

Std. conc.: neat

Gerstel CIS Injector: 35°C (hold 2 min.), to 300°C @ 10°C/sec. (hold 5 min.)

Helium vent flow: 600mL/min with 1.8 min. vent end time

Carrier gas: helium

Linear velocity: 45cm/sec.

Oven temp.: 60°C (hold 2 min.) to 100°C @ 20°C/min., to 240°C @ 5°C/min. (hold 10 min.)

Det.: MSD

Transfer line temp.: 240°C

Quadrupole temp.: 150°C

MS source temp.: 230°C

Scan range: 30–400amu

Ionization: 70eV

Mode: EI

*Chromatogram courtesy of Kevin MacNamara, Ph.D.,
Irish Distilleries, Ltd.*