Technical Note: 20081

TR-V1

TRACE GC Capillary Column

Key Words

- Cyanopropylphenyl
- EPA 624
- G43
- Volatiles

Introduction

The TR-V1 from Thermo Electron Corporation is a cyanopropylphenyl based phase ideal for the analysis of volatile compounds. The selectivity and film thickness ensures good retention and separation of volatile compounds at low oven temperatures. The column does have a high maximum operating temperature of 300°C which provides versatility in the event of samples containing less volatile compounds. The column can be heated quickly to remove contaminants thus reducing cycle times and increasing sample throughput.

Phase Type

Cyanopropylphenyl Polysiloxane

Maximum Temperatures

280°C / 300°C

USP Category

G43

Cross Reference of Competitor Phases

DB-624, BPX Volatiles, Rtx Volatiles, VOCOL 56, OV-624, AT-624, HP-VOC, CP-Select 624CB, 007-624, ZM-624

Application

The TR-V1 has been customised for the best resolution from both the front and back ends of chromatograms.

TR-V1 Product Information

ID (mm)	FILM THICKNESS (µm)	LENGTH (m)	PART NO.
0.18	1.00	20	260V495P
0.18	1.00	40	260V496P
0.25	1.40	30	260V332P
0.25	1.40	60	260V333P
0.32	1.80	30	260V339P
0.32	1.80	60	260V341P
0.53	3.00	30	260V396P
0.53	3.00	60	260V408P

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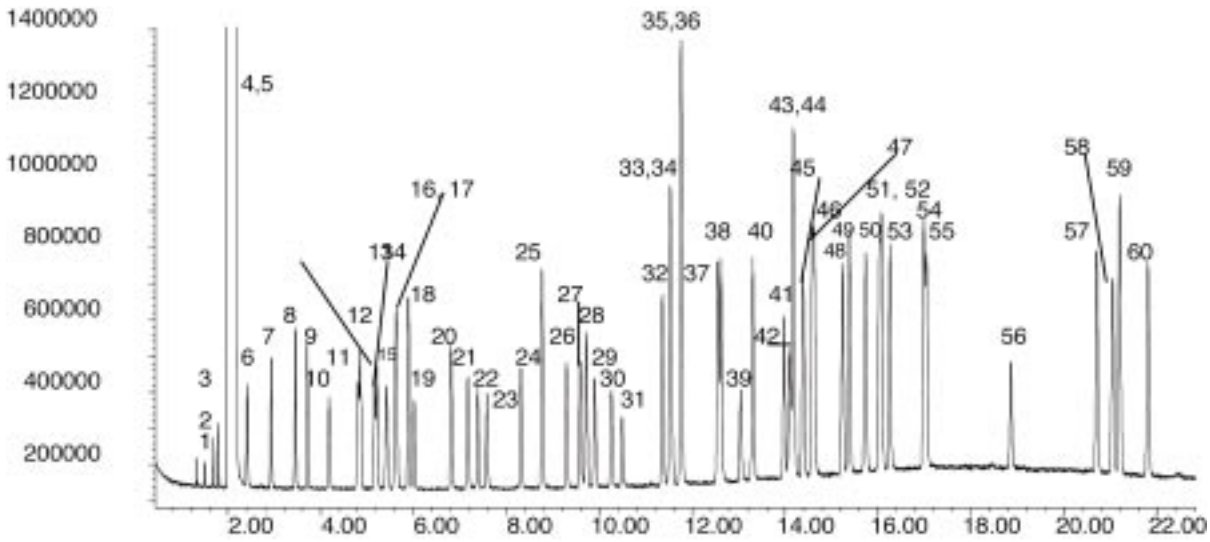
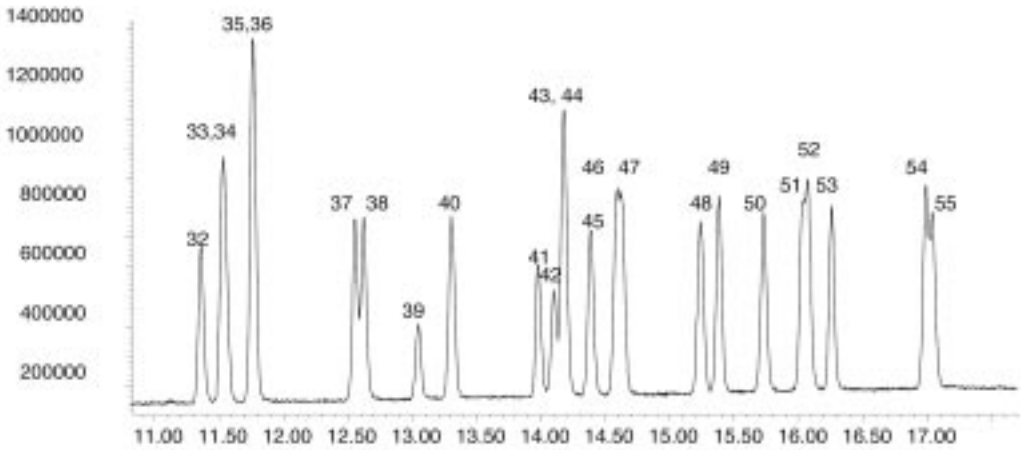
Analysis of US EPA 502.2 mix

Part No.: 260V332P
Column: 30m x 0.25 mm ID
Phase: TR-V1, 1.4µm film
Injection Mode: Split
USEPA 502.2 mix: 200 ppm in Methanol
Split Ratio: 50:1
Injection Volume: 1 µL
Initial Temp: 40°C, 1 min.
Injection Temp: 250°C
Rate 1: 6°C/min to 210°C
Autosampler: No
Rate 2: 15°/min to 240°C
Liner Type: 4 mm ID Single Taper Liner
Final Temp: 240°C, 5 min.
Detector Type: Mass Spectrometer
Carrier Gas: He, 22.8psi
Carrier Gas Flow: 1.3 mL/min.
Constant Flow: On Full scan 45-450
Average Linear Velocity: 35 cm/sec at 40°C

Components

1. Dichlorodifluoromethane
2. Chloromethane
3. Vinyl chloride
4. Bromomethane
5. Chloroethane
6. Trichlorofluoromethane
7. 1,1-Dichloroethene
8. Dichloromethane
9. trans-1,2-Dichloroethene
10. 1,1-Dichloroethane
11. 2,2-Dichloropropane
12. cis-1,2-Dichloroethene
13. Bromochloromethane
14. Chloroform
15. 1,1,1-Trichloroethane
16. 1,1-Dichloropropene
17. Carbon tetrachloride
18. Benzene
19. 1,2-Dichloroethane
20. Trichloroethene
21. 1,2-Dichloropropane
22. Dibromomethane
23. Bromodichloromethane
24. cis-1,3-Dichloropropene
25. Toluene
26. trans-1,3-Dichloropropene
27. 1,1,2-Trichloroethane
28. Tetrachloroethene
29. 1,3-Dichloropropane
30. Dibromochloromethane
31. 1,2-Dibromoethane
32. Chlorobenzene
33. Ethylbenzene
34. 1,1,1,2-Tetrachloroethane
35. m-Xylene
36. p-Xylene
37. o-Xylene
38. Styrene
39. Bromoform
40. Isopropylbenzene
41. Bromobenzene
42. 1,1,2,2-Tetrachloroethane
43. 1,2,3-Trichloropropane
44. n-Propyl benzene
45. 2-Chlorotoluene
46. 1,3,5-Trimethylbenzene
47. 4-Chlorotoluene
48. tert-Butylbenzene
49. 1,2,4-Trimethylbenzene
50. sec-Butylbenzene
51. 1,3-Dichlorobenzene
52. p-Isopropyltoluene
53. 1,2-Dichlorobenzene
54. n-Butylbenzene
55. 1,4-Dichlorobenzene
56. 1,2-Dibromo-3-chloropropan
57. 1,2,4-Trichlorobenzene
58. Hexachlorobutadiene
59. Naphthalene
60. 1,2,3-Trichlorobenzene





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