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SUPELCO®

# Product Information

# General Purpose Intermediate Polarity Capillary GC Columns

## When to Use a General Purpose Column

Supelco's general purpose columns are ideal when the application does not demand the low bleed, selectivity, and high efficiency that our special purpose columns provide. Using a general purpose column may be a cost-effective way to perform preliminary investigations.

## When to Use an Intermediate Polarity Column

If unable to separate critical compounds after trying non-polar and polar columns, the next step is to run the analysis on an intermediate polarity column. Intermediate polarity columns offer unique polarities that may separate critical compounds.

## Column Choices

**SPB™-20:** The phenyl content, 20%, produces different elution order for polar compounds, making these columns ideal for providing confirmational identification.

**SPB-35:** The higher phenyl content, 35%, is useful for analyses of polar compounds, because these compounds are retained longer relative to non-polar compounds.

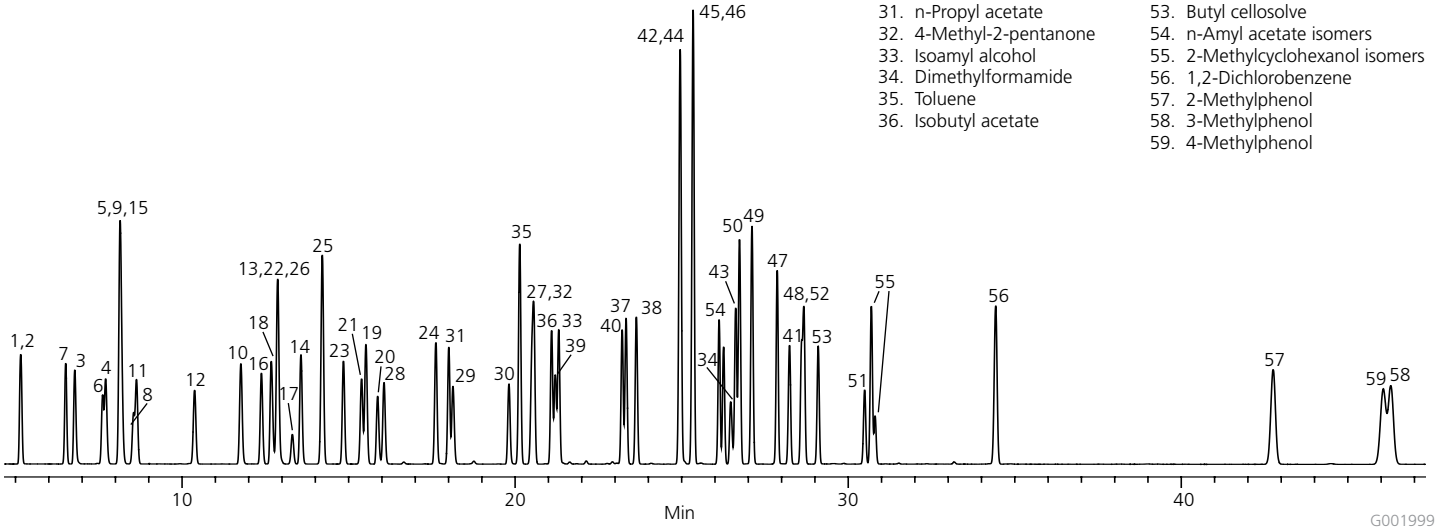
**Equity™-1701:** The mixed functionality, 14% cyanopropylphenyl, provides unique elution order characteristics relative to phenyl polymethylsiloxane phases.

**SPB-50:** These columns have the highest phenyl content, 50%, of the common phenyl-containing series of phases, making these columns useful for analyses of polar materials and providing confirmational information.

## Common Industrial Solvents Analysis on Equity-1701

column: Equity-1701, 30 m x 0.32 mm I.D., 1.0 µm (28199-U)
oven: 35 °C (8 min.), 4 °C/min. to 130 °C (2 min.)
inj.: 250 °C
det.: FID, 250 °C
carrier gas: helium, 25 cm/sec. constant @ 35 °C
injection: 0.5 µL, split 200:1
liner: split, cup design
sample: 59 component neat solvent mixture

1. Methanol
2. Methyl formate
3. Ethanol
4. Acetone
5. 2-Propanol
6. Ethyl formate
7. 1,1-Dichloroethylene
8. Methylene chloride
9. Methyl acetate
10. 1-Propanol
11. trans-1,2-Dichloroethylene
12. 1,1-Dichloroethane
13. 2-Butanone
14. sec-Butanol
15. Hexane
16. Ethyl acetate
17. Chloroform
18. Tetrahydrofuran
19. Isobutanol
20. 2-Methoxyethanol
21. 1,2-Dichloroethane
22. 1,1,1-Trichloroethane
23. Isopropyl acetate
24. n-Butanol
25. Benzene
26. Carbon tetrachloride
27. 2-Nitropropane
28. Trichloroethylene
29. 1,4-Dioxane
30. 2-Ethoxyethanol (Cellosolve®)
31. n-Propyl acetate
32. 4-Methyl-2-pentanone
33. Isoamyl alcohol
34. Dimethylformamide
35. Toluene
36. Isobutyl acetate
37. 2-Hexanone
38. Mesityl oxide
39. Tetrachloroethene
40. n-Butyl acetate
41. Diacetone alcohol
42. Chlorobenzene
43. 5-Methyl-2-hexanone
44. Ethyl benzene
45. m-Xylene
46. p-Xylene
47. Isoamyl acetate
48. Cyclohexanol
49. Styrene
50. o-Xylene
51. 1,1,2,2-Tetrachloroethane
52. 2-Ethoxyethyl acetate
53. Butyl cellosolve
54. n-Amyl acetate isomers
55. 2-Methylcyclohexanol isomers
56. 1,2-Dichlorobenzene
57. 2-Methylphenol
58. 3-Methylphenol
59. 4-Methylphenol



## General Purpose Capillary Columns Offer…

- individual testing for efficiency, inertness, and retention
- a report showing the column performance before it left Supelco
- compact foam lined packaging that takes up less shelf space and protects the column during shipping and storage
- a compact, specially designed cage that minimizes column wear and fits better in newer, smaller ovens

## SPB-20

Phase: bonded; poly(20% diphenyl/80% dimethylsiloxane)
Temp. Limits: -25 °C to 300 °C

| Length (m) | $D_F$ (µm) | Beta | Cat. No. |
|---|---|---|---|
| **0.25 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 250 | **24086** |
| 60 | 0.25 | 250 | **24087-U** |
| 30 | 1.0 | 63 | **24196-U** |
| **0.32 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 320 | **24088** |
| 60 | 1.0 | 80 | **24194-U** |
| **0.53 mm I.D. Fused Silica** | | | |
| 30 | 0.50 | 265 | **25329-U** |
| 15 | 1.0 | 133 | **28569-U** |
| 30 | 1.0 | 133 | **25333** |

## SPB-35

Phase: bonded; poly(35% diphenyl/65% dimethylsiloxane)
Temp. Limits: 0 °C to 300 °C

| Length (m) | $D_F$ (µm) | Beta | Cat. No. |
|---|---|---|---|
| **0.25 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 250 | **24092** |
| 60 | 0.25 | 250 | **28568-U** |
| **0.32 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 320 | **24094** |
| **0.53 mm I.D. Fused Silica** | | | |
| 30 | 0.50 | 265 | **25331** |
| 30 | 1.0 | 133 | **25335** |

## SPB-50

Phase: bonded; poly(50% diphenyl/50% dimethylsiloxane)
Temp. Limits: 30 °C to 310 °C

| Length (m) | $D_F$ (µm) | Beta | Cat. No. |
|---|---|---|---|
| **0.25 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 250 | **24181** |
| **0.32 mm I.D. Fused Silica** | | | |
| 30 | 0.25 | 320 | **24187** |
| **0.53 mm I.D. Fused Silica** | | | |
| 30 | 0.50 | 265 | **25363** |

## Equity-1701

Phase: bonded; poly(14% cyanopropylphenyl/86% dimethylsiloxane)
Temp. Limits: 0.25 and 0.32 mm I.D.: subambient to 280 °C
0.53 mm I.D.: subambient to 260 °C

| Length (m) | $D_F$ (µm) | Beta | Cat. No. |
|---|---|---|---|
| **0.10 mm I.D. Fused Silica** | | | |
| 15 | 0.10 | 250 | **28343-U** |
| **0.25 mm I.D. Fused Silica** | | | |
| 15 | 0.25 | 250 | **28371-U** |
| 30 | 0.25 | 250 | **28372-U** |
| 60 | 0.25 | 250 | **28373-U** |
| 15 | 1.0 | 63 | **28374-U** |
| 30 | 1.0 | 63 | **28378-U** |
| 60 | 1.0 | 63 | **28379-U** |
| **0.32 mm I.D. Fused Silica** | | | |
| 15 | 0.25 | 320 | **28381-U** |
| 30 | 0.25 | 320 | **28382-U** |
| 60 | 0.25 | 320 | **28384-U** |
| 15 | 1.0 | 80 | **28386-U** |
| 30 | 1.0 | 80 | **28387-U** |
| 60 | 1.0 | 80 | **28388-U** |
| **0.53 mm I.D. Fused Silica** | | | |
| 15 | 0.5 | 265 | **28389-U** |
| 30 | 0.5 | 265 | **28391-U** |
| 15 | 1.0 | 132 | **28393-U** |
| 30 | 1.0 | 132 | **28394-U** |
| 15 | 1.5 | 88 | **28395-U** |
| 30 | 1.5 | 88 | **28396-U** |



For expert answers to your questions contact our Technical Service Department:
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