Capillary GC Columns and Guard Columns/Retention Gaps

Columns by Phase Polarity: *Non-Polar*

SPB®-5 Capillary GC Column

Application: This non-polar general purpose column provides primarily a boiling point elution order with a slight increase in selectivity, especially for aromatic compounds.
USP Code: This column meets USP G27 and G36 requirements.
Phase:

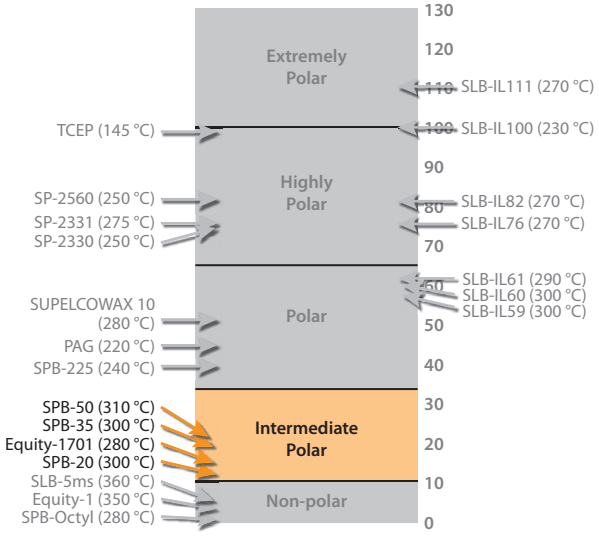
- Bonded
- Poly(5% diphenyl/95% dimethyl siloxane)

Temp. Limits:

- ≤0.32 mm I.D., <2 µm: -60 °C to 320 °C (isothermal or programmed)
- ≤0.32 mm I.D., ≥2 µm: -60 °C to 300 °C (isothermal or programmed)
- ≥0.53 mm I.D., <2 µm: -60 °C to 300 °C (isothermal) or 320 °C (programmed)
- ≥0.53 mm I.D., ≥2 µm: -60 °C to 260 °C (isothermal) or 280 °C (programmed)

I.D. (mm)	d_f (µm)	Length (m)	Beta Value	Cat. No.	Qty
0.20	0.20	15	250	24165-U	1 ea
	0.20	30	250	24166	1 ea
0.25	0.25	15	250	24032	1 ea
	0.25	30	250	24034	1 ea
	0.25	60	250	24036	1 ea
	1.00	15	63	24033	1 ea
	1.00	30	63	24035	1 ea
	1.00	60	63	24037	1 ea
0.32	0.25	15	320	24101-U	1 ea
	0.25	30	320	24048	1 ea
	0.25	60	320	24050	1 ea
	0.52	25	154	24359	1 ea
	1.00	15	80	24100-U	1 ea
	1.00	30	80	24049	1 ea
	1.00	60	80	24051	1 ea
	5.00	50	16	23307-U	1 ea
0.53	0.50	15	265	25316	1 ea
	0.50	30	265	25317	1 ea
	0.50	60	265	25383	1 ea
	1.00	30	133	25420-U	1 ea
	1.50	15	88	25304	1 ea
	1.50	30	88	25305-U	1 ea
	1.50	60	88	25389	1 ea
	3.00	15	44	25342	1 ea
	3.00	30	44	25343	1 ea
	3.00	60	44	25350	1 ea
	5.00	15	27	25346	1 ea
	5.00	30	27	25347	1 ea
	5.00	60	27	25351	1 ea

Intermediate Polarity



Intermediate polar GC columns are made with phases that incorporate both non-polar and polar elements. Thus, they are commonly used to provide alternate selectivity to non-polar and polar columns. Elution order is determined by differences in the overall effects of possible interactions.

- Interactions are strongly dispersive (van der Waals forces). The greater the phenyl content of the phase, the stronger the interactions.
- Phases with phenyl functional groups can also undergo π-π, dipole-dipole, and dipole-induced dipole interactions. The greater the phenyl content, the stronger these interactions.
- Phases with cyanopropyl functional groups can also undergo strong dipole-dipole and moderate basic interactions. The greater the cyanopropyl content, the greater these interactions.

SPB®-624 Capillary GC Column

Application: This column is specially tested for separation, efficiency, and low bleed. It is designed for purge-and-trap analyses of volatile halogenated, non-halogenated, and aromatic contaminants from environmental samples.
USP Code: This column meets USP G43 requirements.
Phase:

- Bonded
- Proprietary

Temp. Limits:

- ≤0.32 mm I.D.: Subambient to 250 °C (isothermal or programmed)
- ≥0.53 mm I.D.: Subambient to 230 °C (isothermal or programmed)

I.D. (mm)	d_f (µm)	Length (m)	Beta Value	Cat. No.	Qty
0.18	1.00	20	45	28662-U	1 ea
0.25	1.40	30	45	24255	1 ea
	1.40	60	45	24256	1 ea
0.32	1.80	30	44	23323-U	1 ea
	1.80	60	44	24251	1 ea
0.53	3.00	30	44	25430	1 ea
	3.00	60	44	28663-U	1 ea
	3.00	75	44	25432	1 ea
	3.00	105	44	28664-U	1 ea