



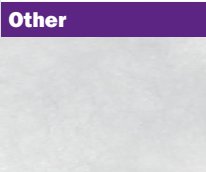


Sorbents – A quick reference guide

Sorbent	Volatility range		Suitable analytes	Max. temp (°C) [1]	Desorb temp (°C) [2]	
	Hydrocarbon range	Boiling point (°C)				
	Tenax TA	C ₆ ~C ₃₀	100 ~ 450	Aromatics, apolars, polar compounds bp >150°C, and semi-volatiles.	350	300
	Tenax GR	C ₆ ~C ₃₀	100 ~ 450	Aromatics, apolars, polar compounds >150°C, and semi-volatiles.	350	300
	HayeSep D	C ₅ ~ C ₁₂	50 ~ 200	Low molecular weight compounds, acetylene, halogens, and sulfur groups. GB/GE derivative of VX (CWA).	290	280
	PoraPak N	C ₅ ~ C ₁₀	50 ~ 200	Polar VOCs, acrylonitrile, acetonitrile, propionitrile, pyridine, volatile alcohols, ethanol, methyl ethyl ketone.	190	165
	PoraPak Q	C ₅ ~ C ₁₂	50 ~ 200	Oxygenated compounds.	250	190
	Carbograph 2TD Carbopack C Carbotrap C	C ₈ ~ C ₂₀	130 ~ 340	Alkyl benzenes and large aliphatics. Heavy organics: PCBs, PNAs.	400	360
	Carbograph 1TD Carbopack B Carbotrap B	C ₅ ~ C ₁₄	50 ~ 250	A wide range from medium to high volatility: Ketones, alcohols, and aldehydes (but not formaldehyde). Non-polars within volatility range. Perfluorocarbon tracer gases. BTX.	400	360
	Carbograph 5TD Carbopack X	C ₃ ~ C ₈	50 ~ 150	Especially good for 1,3-butadiene and light hydrocarbons.	400	360
	Carbopack Y Carbotrap Y	C ₁₂ ~ C ₂₀	50 ~ 340	Less volatile hydrocarbons. Pesticides e.g. alachlor atrazine, isoprene, and formothyon.	400	360
	SulfiCarb	C ₃ ~ C ₈	-30 ~ 150	Thiols. VVOCs (vinyl chloride, CS ₂ , methanol, ethanol, and acetone). Used for sterically large VVOCs (SF ₆).	400	360
	Carbosieve S-III	C ₂ ~ C ₅	-90 ~ 80	Permanent gases, and ethene to n-C ₅ , e.g. chloromethane. Also ethylene from small volumes.	400	360
	Carboxen 1000	C ₂ ~ C ₅	-60 ~ 80	Permanent gases, and ultra-volatile hydrocarbons, e.g. vinyl chloride.	400	360
	Carboxen 1003	C ₂ ~ C ₅	-60 ~ 80	Permanent gases, and ultra-volatile hydrocarbons, e.g. ethane.	400	360
	Molecular Sieve 5Å	C ₂ ~ C ₄	-90 ~ 80	Permanent gases, and nitrous oxide	400	300 (165 for N ₂ O)
	Silica Gel	N/A	N/A	Low-boiling polar compounds, especially useful for separating chlorinated or sulfur compounds from matrices with hydrocarbon interferences.	200	180
	Quartz wool	N/A	N/A	SVOCs.	400	360

[1] Maximum temperature should not be exceeded, to prevent irreversible damage to sorbent.

When using multi-beds of sorbents, maximum temperature is the lowest of all sorbents within the tube.

[2] Recommended desorption temperatures are a guide and may require optimisation depending on target analytes.

Lower desorption temperatures are recommended where possible to prolong sorbent lifetime. Sorbent conditioning should be carried out at 10–20°C above the desorption temperature.