

# Recommended GC Columns Pressures and Flows \*

## Helium



L \ I.D.	0.05 mm	0.10 mm	0.15 mm	0.18 mm	0.25 mm	0.32 mm	0.53 mm
5 m	500 - 760 kPa 72 - 110 psi 5.0 - 7.6 bar 0.15 - 0.3 mL/min	115 - 170 kPa 16.7 - 24.5 psi 1.2 - 1.7 bar 0.25 - 0.4 mL/min					
10 m		260 - 340 kPa 37.5 - 49 psi 2.6 - 3.4 bar 0.35 - 0.6 mL/min	92 - 130 kPa 13.5 - 19 psi 0.9 - 1.3 bar 0.45 - 0.7 mL/min	52 - 85 kPa 7.5 - 12.3 psi 0.5 - 0.9 bar 0.5 - 0.9 mL/min	27 - 43 kPa 3.9 - 6.2 psi 0.3 - 0.4 bar 0.8 - 1.4 mL/min	16 - 26 kPa 2.4 - 3.8 psi 0.15 - 0.25 bar 1.2 - 2.0 mL/min	6 - 9.5 kPa 0.9 - 1.4 psi 0.06 - 0.10 bar 3.1 - 5.1 mL/min
15 m			140 - 200 kPa 20.3 - 29 psi 1.4 - 2.0 bar 0.5 - 0.9 mL/min	80 - 130 kPa 11.5 - 19 psi 0.8 - 1.3 bar 0.5 - 1.0 mL/min	40 - 65 kPa 5.8 - 9.4 psi 0.4 - 0.6 bar 0.8 - 1.5 mL/min	24 - 40 kPa 3.6 - 5.8 psi 0.25 - 0.4 bar 1.3 - 2.1 mL/min	9 - 14.5 kPa 1.3 - 2.1 psi 0.09 - 0.14 bar 3.2 - 5.2 mL/min
25 m			245 - 350 kPa 35.7 - 51 psi 2.4 - 3.5 bar 0.7 - 1.3 mL/min	135 - 225 kPa 19.5 - 32.5 psi 1.4 - 2.2 bar 0.6 - 1.3 mL/min	68 - 110 kPa 9.8 - 16 psi 0.7 - 1.1 bar 0.9 - 1.8 mL/min	42 - 65 kPa 5.9 - 9.4 psi 0.4 - 0.6 bar 1.3 - 2.4 mL/min	15 - 24 kPa 2.1 - 3.5 psi 0.15 - 0.24 bar 3.3 - 5.5 mL/min
30 m			300 - 430 kPa 43.5 - 62.5 psi 3.0 - 4.3 bar 0.8 - 1.5 mL/min	165 - 275 kPa 24 - 39.8 psi 1.6 - 2.7 bar 0.7 - 1.5 mL/min	82 - 135 kPa 12 - 19.5 psi 0.8 - 1.3 bar 1.0 - 1.9 mL/min	50 - 80 kPa 7.2 - 11.5 psi 0.5 - 0.8 bar 1.4 - 2.6 mL/min	18 - 28 kPa 2.6 - 4.1 psi 0.18 - 0.28 bar 3.3 - 5.6 mL/min
50 m					140 - 234 kPa 20.3 - 34 psi 1.4 - 2.3 bar 1.2 - 2.6 mL/min	85 - 135 kPa 12.3 - 19.5 psi 0.8 - 1.3 bar 1.6 - 3.2 mL/min	30 - 48 kPa 4.3 - 7 psi 0.3 - 0.48 bar 3.5 - 6 mL/min
60 m					170 - 285 kPa 24.5 - 41.5 psi 1.7 - 2.8 bar 1.3 - 2.9 mL/min	101 - 167 kPa 14.7 - 24.3 psi 1.0 - 1.7 bar 1.7 - 3.5 mL/min	35 - 58 kPa 5 - 8.5 psi 0.35 - 0.58 bar 3.7 - 6.5 mL/min
	FAST-GC			CONVENTIONAL-GC			WIDE BORE GC

Optimal linear velocity Helium carrier gas:  
25 - 40 cm/s  
32 - 45 cm/s for FAST-GC

\* Conditions on which the data were calculated: T = 50°C, P<sub>out</sub> = 1 atm. The conditions here reported are indicative and must be considered a starting point to optimize the parameters for your GC analysis.



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# Recommended GC Columns Pressures and Flows \*

## Hydrogen



L \ I.D.	0.05 mm	0.10 mm	0.15 mm	0.18 mm	0.25 mm	0.32 mm	0.53 mm
5 m	300 - 630 kPa 43.5 - 90 psi 3.0 - 6.3 bar 0.15 - 0.4 mL/min	68 - 140 kPa 9.8 - 20.3 psi 0.7 - 1.4 bar 0.25 - 0.6 mL/min					
10 m		140 - 295 kPa 20.3 - 43 psi 1.4 - 2.9 bar 0.3 - 0.9 mL/min	55 - 112 kPa 7.9 - 16.3 psi 0.5 - 1.1 bar 0.5 - 1.3 mL/min	42 - 85 kPa 5.9 - 12.3 psi 0.4 - 0.85 bar 0.7 - 1.6 mL/min	21 - 45 kPa 3.1 - 6.5 psi 0.2 - 0.4 bar 1.2 - 2.6 mL/min	13 - 26 kPa 1.9 - 3.8 psi 0.13 - 0.25 bar 1.9 - 4.0 mL/min	5 - 9.6 kPa 0.7 - 1.4 psi 0.05 - 0.10 bar 5 - 10.5 mL/min
15 m			85 - 172 kPa 12.3 - 25 psi 0.8 - 1.7 bar 0.6 - 1.6 mL/min	62.5 - 130 kPa 9 - 19 psi 0.6 - 1.3 bar 0.8 - 1.9 mL/min	32 - 65 kPa 4.6 - 9.4 psi 0.3 - 0.65 bar 1.3 - 2.9 mL/min	19 - 40 kPa 2.8 - 5.8 psi 0.2 - 0.4 bar 2.0 - 4.3 mL/min	7 - 14 kPa 1 - 2 psi 0.07 - 0.14 bar 5.1 - 10.5 mL/min
25 m			141 - 300 kPa 20.5 - 43.5 psi 1.4 - 3.0 bar 0.7 - 2.2 mL/min	106 - 225 kPa 15.3 - 32.5 psi 1.05 - 2.2 bar 0.9 - 2.6 mL/min	54 - 110 kPa 7.8 - 16 psi 0.5 - 1.1 bar 1.4 - 3.5 mL/min	32 - 65 kPa 4.6 - 9.4 psi 0.3 - 0.6 bar 2.1 - 4.8 mL/min	12 - 23.5 kPa 1.7 - 3.4 psi 0.1 - 0.24 bar 5.2 - 11 mL/min
30 m			172 - 360 kPa 25 - 53 psi 1.7 - 3.6 bar 0.8 - 2.5 mL/min	115 - 245 kPa 16.7 - 35.7 psi 1.1 - 2.4 bar 0.9 - 2.8 mL/min	65 - 135 kPa 9.4 - 19.5 psi 0.65 - 1.3 bar 1.5 - 4.0 mL/min	40 - 80 kPa 5.8 - 11.5 psi 0.4 - 0.8 bar 2.1 - 5.0 mL/min	14 - 28 kPa 2 - 4.1 psi 0.14 - 0.28 bar 3.4 - 11.2 mL/min
50 m					100 - 210 kPa 14.5 - 30.5 psi 1.0 - 2.1 bar 1.7 - 4.8 mL/min	65 - 135 kPa 9.4 - 19.5 psi 0.65 - 1.3 bar 2.4 - 6.2 mL/min	24 - 48 kPa 3.5 - 7 psi 0.25 - 0.48 bar 5.5 - 12.3 mL/min
60 m					120 - 255 kPa 17.5 - 37.2 psi 1.2 - 2.5 bar 1.8 - 5.5 mL/min	72 - 150 kPa 10.5 - 21.8 psi 0.7 - 1.5 bar 2.5 - 6.7 mL/min	28 - 58 kPa 4.1 - 8.5 psi 0.28 - 0.58 bar 5.6 - 12.5 mL/min
	FAST-GC			CONVENTIONAL-GC			WIDE BORE GC

Optimal linear velocity Hydrogen carrier gas:  
40 - 80 cm/s

\* Conditions on which the data were calculated: T = 50°C, P<sub>out</sub> = 1 atm. The conditions here reported are indicative and must be considered a starting point to optimize the parameters for your GC analysis.



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