

TSK-GEL® Amide-80 Products

Part Numbers:	20009, 1mm ID x 5cm, 5µm	13071, 4.6mm ID x 25cm, 5µm
	20010, 1mm ID x 10cm, 5µm	14459, 7.8mm ID x 30cm, 10µm
	21486, 1.1mm ID x 15cm, 5µm	14460, 21.5mm ID x 30cm, 10µm
	21487, 1.1mm ID x 25cm, 5µm	42140, Guard Cartridge, 2mm ID x 1cm, for PN 42138, 42131, 42132, 42133, 5µm
	19694, 2mm ID x 5cm, 5µm	19308, Guard Cartridge Holder for 2mm ID cartridges, PN 42140
	19695, 2mm ID x 10cm, 5µm	19021, Guardcolumn 4.6mm ID x 1cm, 5µm
	19696, 2mm ID x 15cm, 5µm	14461, Guardcolumn, 21.5mm ID x 7.5cm, 10µm
	19697, 2mm ID x 25cm, 5µm	14594 Pre-Injector Membrane filter holder, SS
	19532, 4.6mm ID x 5cm, 5µm	03409, 13 mm Nylon Membrane filter, 0.45 µm for PN 14594
	19533, 4.6mm ID x 10cm, 5µm	

This sheet contains the recommended operating conditions and the specifications for TSK-GEL Amide-80 columns. Installation instructions and column care information are described in a separate Instruction Manual.

A. OPERATING CONDITIONS

- Shipping Solvent: 75% Acetonitrile - 25% Water
- Max. Flow Rate: 0.06 mL/min (1mm ID)
0.25 mL/min (2mm ID)
1.2 mL/min. (4.6mm ID)
3.0 mL/min. (7.8mm ID)
8 mL/min (21.5mm ID)

When a viscous solvent is used, the maximum flow rate may have to be reduced so as not to exceed the maximum pressure drop.
- Standard Flow Rate: 0.03 – 0.05 mL/min (1mm ID)
0.15 – 0.20 mL/min (2mm ID)
0.8 - 1.0 mL/min (4.6mm ID)
1.0 - 2.0 mL/min (7.8mm ID)
4.0 - 6.0 mL/min (21.5mm ID)
- Max. Pressure: 3MPa = 30 kg/cm² = 427 psi (1mm ID x 5cm), 6MPa = 60 kg/cm² = 853 psi (1mm ID x 10cm),
9MPa = 90 kg/cm² = 1280 psi (1mm ID x 15cm), 12MPa = 120 kg/cm² = 1705 psi (1mm ID x 25cm)
4MPa = 40 kg/cm² = 569 psi (2mm ID x 5cm), 8MPa = 80 kg/cm² = 1138 (2mm ID x 10cm)
10MPa = 100 kg/cm² = 1422 (2mm ID x 15cm), 15Mpa = 150 kg/cm² = 2134 (2mm ID x 25cm)
15MPa = 150 kg/cm² = 2250 psi (4.6mm ID)
7MPa = 70 kg/cm² = 1050 psi (7.8mm ID)
3MPa = 30 kg/cm² = 450 psi (21.5mm ID)
- pH Range: 2.0 - 7.5
- Organic Conc.: *0 - 100% polar and nonpolar
* switch to 100% acetonitrile before switching to 100% nonpolar solvents.
- Temperature: 10 - 80°C
- Cleaning Solvents: (1) 45% Acetonitrile
(2) 50 mM phosphate buffer pH 6.0/acetonitrile 50/50
- Storage: Store the column in the shipping solvent when it will not be used the next day. For overnight storage flush the column with the mobile phase at 50% of the recommended flow rate for the column.
- Column Protection: The use of guard columns is recommended to prolong the life of the analytical column. Guard column life depends greatly on sample cleanliness. As a general rule, guard columns should be replaced after every 30-40 sample injections, when the peaks become excessively wide, or when the peaks show splitting.

B. SPECIFICATIONS

The performance of TSK-GEL Amide-80 columns is tested under the conditions described in the Data Sheet. All columns have passed the following quality control specifications:

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| Min. Number of Theoretical Plates (N): | 300 (1mm ID x 5cm), 600 (1mm ID x 10cm), 4,000 (1mm ID x 15cm), 6000 (1mm ID x 25cm)
1,000 (2mm ID x 5cm), 2,000 (2mm ID x 10cm), 4,000 (2mm ID x 15cm), 6,000 (2mm ID x 25cm)
2,500 (4.6mm ID x 5cm), 4,000 (4.6mm ID x 10cm), 8,000 (4.6mm ID x 25cm)
5,000 (7.8mm ID x 30cm)
8,000 (21.5mm ID x 30cm) |
| 2. Asymmetry Factor (AF): | 1.0 - 2.0 (5cm and 10cm x 1mm ID)
0.7 - 1.8 (15cm and 25cm x 1mm ID, and 2mm ID)
0.7 - 1.6 (4.6mm ID x 25cm)
0.7 - 1.5 (4.6mm ID x 10cm)
0.75 - 1.4 (4.6mm ID x 5cm)
*There are no asymmetry specifications for 7.8mm ID, & 21.5mm ID columns |

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Tosoh Bioscience LLC
156 Keystone Drive
Montgomeryville, PA 18936
Phone: (215) 283-5000
Orders & Technical Service: (800) 366-4875
FAX: (215) 283-5035

Tosoh Bioscience GmbH
Zettachring 6
D-70567 Stuttgart
Germany
Phone: 0711/13257 0
FAX: 0711/13257 89