RP-HPLC for Protein/Peptide Analysis and Purification

The Jupiter HPLC column portfolio, including Jupiter 300 and Jupiter Proteo, offers optimized reversed phase solutions for protein and peptide characterization and purification. With these columns, one can identify, purify, and analyze almost any protein.

Jupiter 300 – 300 Å columns designed to analyze and purify intact proteins

- **For separation of intact proteins > 10,000 MW**
- **Available with C18, C5, and C4 bonded phases**
- **1.5 – 10 pH stability for method ruggedness and easy protein removal**
- **Direct scale up to preparative and bulk materials**

Jupiter Proteo – 90 Å columns engineered for increased peak capacity and resolution of peptide maps as well as peptide separations

- **For separation of intact proteins and peptides < 10,000 MW**
- **Available with novel C12 bonded phase for excellent selectivity**
- **Identify post-translational modifications**
- **Micro flow columns available for increased sensitivity**

Material Characteristics

Packing Material	Particle Shape/Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load %	Calculated Bonded Phase Coverage (µmole/m^2)	End Capping
C4	Spher. 5, 10, 15	300	170	5.0	6.30	Yes
C5	Spher. 5, 10	300	170	5.5	5.30	Yes
C18	Spher. 3, 5, 10, 15	300	170	13.3	5.50	Yes
Proteo	Spher. 4, 10	90	475	15.0	—	Yes

Engineered for Robustness, Reproducibility, and Quality

It is tough to compete with Jupiter standards. Each column has consistent specifications and thus consistent performance.

- **pH 1.5-10 stability gives robust, method development opportunities**
- **Over 25 individual quality control tests performed on every batch of Jupiter material**
- **Every column reproducibility aspect is specified, tested, and reported in Materials Validation Document (MVD)**

pH 1.5 – 10 Stability

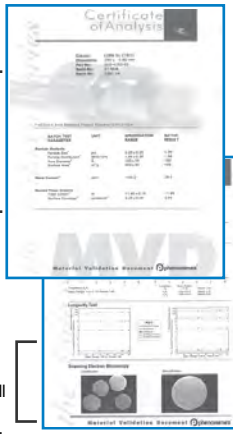
A wide pH range means opportunity for method development, in addition to longer column life. Jupiter columns are stable for over 2500 hours at pH extremes. Jupiter 300 and Jupiter Proteo provide excellent separations using various MS compatible buffers and provide good resolution down to 0.01 % TFA.

Quality Proven

A Materials Validation Document (MVD) is available online for every Jupiter column. Each certificate documents the rigorous testing procedures performed on each batch of Jupiter material to ensure column-to-column and batch-to-batch reproducibility.

Silica physical tests and specifications

Pore size, particle size and distribution, metal content, surface area, carbon load and surface coverage specifications and results are all reported.



Diagnostic chromatography tests

Monitoring chromatographic specifications for silanol activity, hydrogen bonding capacity, hydrophobicity and peptide standards.

SEM analysis

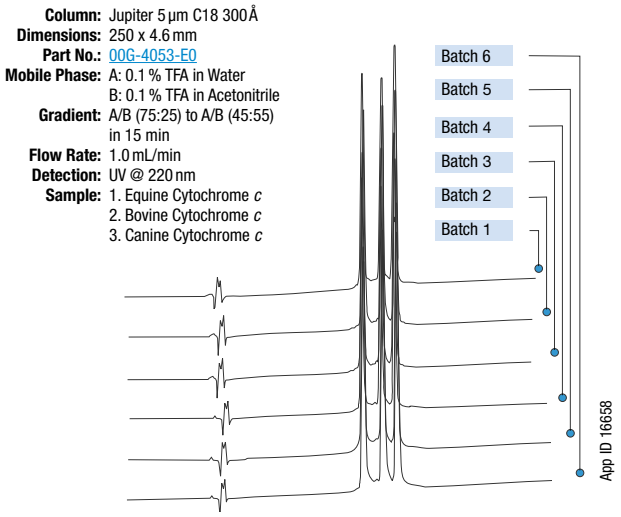
Scanning Electron Microscopy (SEM) photos show surface smoothness and particle consistency as well as a visual representation of particle size distribution.

pH stability

Every batch goes through 1.5 and 10.0 pH testing before release, the results of which are reported on each MVD.

Reproducibility Assured

Batch-to-batch and column-to-column is critical to HPLC column performance. Through great advances in silica, bonding, and material characterization technology, Jupiter columns set a benchmark in reproducibility.



Jupiter™ LC Columns for Proteins & Peptides

Ordering Information

4 µm & 5 µm Micro Columns (mm)					Trap Column	Trap Column
Phases	**50 x 0.30**	**150 x 0.30**	**50 x 0.50**	**150 x 0.50**	**20 x 0.30**	**20 x 0.50**
5 µm C4 300Å	00B-4167-AC	—	00B-4167-AF	—	05M-4167-AC	05M-4167-AF
5 µm C18 300Å	00B-4053-AC	—	00B-4053-AF	—	—	—
4 µm Proteo 90Å	00B-4396-AC	00F-4396-AC	—	00F-4396-AF	—	—

See p. 240 for more Micro LC Part Numbers

3 µm, 4 µm & 5 µm Microbore and Minibore Columns (mm)						SecurityGuard™ Cartridges (mm)	
Phases	**50 x 1.0**	**150 x 1.0**	**250 x 1.0**	**50 x 2.0**	**150 x 2.0**	**250 x 2.0**	**4 x 2.0***
							/10pk
5 µm C4 300Å	00B-4167-A0	00F-4167-A0	00G-4167-A0	00B-4167-B0	00F-4167-B0	00G-4167-B0	AJ0-4329
5 µm C5 300Å	—	—	—	—	00F-4052-B0	—	AJ0-4326
5 µm C18 300Å	—	—	—	00B-4053-B0	00F-4053-B0	00G-4053-B0	AJ0-4320
4 µm Proteo 90Å	00B-4396-A0	00F-4396-A0	—	00B-4396-B0	00F-4396-B0	00G-4396-B0	AJ0-6073
							/10pk
3 µm C18 300Å	—	—	—	00B-4263-B0	00F-4263-B0	—	AJ0-4320
							for ID: 2.0-3.0 mm

3 µm, 4 µm & 5 µm Analytical, Semi-Prep, and Preparative Columns (mm)						SecurityGuard™ Cartridges (mm)		
Phases	**50 x 4.6**	**150 x 4.6**	**250 x 4.6**	**250 x 10**	**250 x 21.2**	**4 x 3.0***	**10 x 10‡**	**15 x 21.2****
						/10pk	/3pk	/ea
5 µm C4 300Å	00B-4167-E0	00F-4167-E0	00G-4167-E0	00G-4167-N0	00G-4167-P0	AJ0-4330	AJ0-7225	AJ0-7231
5 µm C5 300Å	00B-4052-E0	00F-4052-E0	00G-4052-E0	00G-4052-N0	00G-4052-P0	AJ0-4327	AJ0-7371	—
5 µm C18 300Å	00B-4053-E0	00F-4053-E0	00G-4053-E0	00G-4053-N0	00G-4053-P0	AJ0-4321	AJ0-7224	AJ0-7230
4 µm Proteo 90Å	00B-4396-E0	00F-4396-E0	00G-4396-E0	00G-4396-N0	—	AJ0-6074	AJ0-7275	—
						/10pk	—	—
3 µm C18 300Å	—	00F-4263-E0	00G-4263-E0	—	—	AJ0-4321	—	—
						for ID: 3.2-8.0 mm	9-16 mm	18-29 mm

10 µm Analytical, Semi-Prep, and Preparative Columns (mm)				SecurityGuard™ Cartridges (mm)		
Phases	**250 x 4.6**	**250 x 10**	**250 x 21.2**	**4 x 3.0***	**10 x 10 ‡**	**15 x 21.2****
				/10pk	/3pk	/ea
C4 300Å	00G-4168-E0	00G-4168-N0	00G-4168-P0	AJ0-4330	AJ0-7225	AJ0-7231
C18 300Å	00G-4055-E0	00G-4055-N0	00G-4055-P0	AJ0-4321	AJ0-7224	AJ0-7230
Proteo 90Å	00G-4397-E0	00G-4397-N0	—	AJ0-6074	AJ0-7275	—
				for ID: 3.2-8.0 mm	9-16 mm	18-29 mm

15 µm Analytical, Semi-Prep, and Preparative Columns (mm)						SecurityGuard™ Cartridges (mm)			
Phases	**250 x 4.6**	**250 x 10**	**250 x 21.2**	**250 x 30**	**250 x 50**	**4 x 3.0***	**10 x 10‡**	**15 x 21.2****	**15 x 30.0♦**
						/10pk	/3pk	/ea	/ea
C4 300Å	00G-4169-E0	00G-4169-N0	00G-4169-P0	—	00G-4169-V0	AJ0-4330	AJ0-7225	AJ0-7231	—
C18 300Å	00G-4057-E0	—	00G-4057-P0	00G-4057-U0	00G-4057-V0	AJ0-4321	AJ0-7224	AJ0-7230	AJ0-8313
						for ID: 3.2-8.0 mm	9-16 mm	18-29 mm	30-49 mm

For Jupiter Proteo Axia™ Packed Preparative columns, see p. 393

*SecurityGuard™ Analytical Cartridges require holder, Part No.: KJ0-4282
‡SemiPrep SecurityGuard™ Cartridges require holder, Part No.: AJ0-9281
**PREP SecurityGuard™ Cartridges require holder, Part No.: AJ0-8223
♦ PREP SecurityGuard™ Cartridges require holder, Part No.: AJ0-8277

Ordering Information

Bulk Material

10 µm Bulk Packings			
Phases	**100 g**	**1 kg**	**10 kg**
C4 300Å	04G-4168	04K-4168	04M-4168
C5 300Å	—	04K-4054	—
C18 300Å	04G-4055	04K-4055	04M-4055
Proteo 90Å	04G-4397	04K-4397	—

15 µm Bulk Packings				
Phases	**100 g**	**1 kg**	**5 kg**	**10 kg**
C4 300Å	04G-4169	04K-4169	04L-4169	04M-4169
C18 300Å	04G-4057	04K-4057	—	04M-4057

Effectively desalt acidic, basic, and neutral peptides with Strata™-X. See p. 61 for more information.

For SecurityGuard Cartridge Holders and Cartridges, see pp. 330-334

For Column Heater (25-90 °C), see p. 416