

ES Industries – The Leader in the Development of Unique High Performance Sub 2 Micron Columns.

ES Industries is pleased to introduce a line of Epic 1.8µm columns for use with ultra high pressure liquid chromatographs. These columns have been engineered specifically for chromatography at pressures up to 18000 psi. Ultra-high pressure sub-2 micron columns can now be used on a new generation of HPLC instruments. These instruments are capable of producing high quality results with 1- 2 mm ID columns. Narrow bore columns consume less solvent and produce less waste solvent. The sub-2 micron particles are better suited to the narrow bore columns.

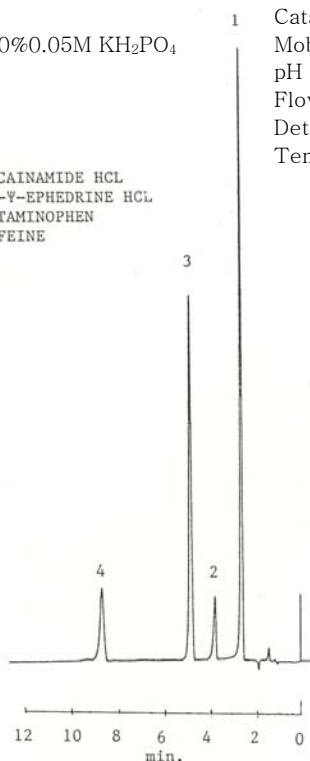
ES Industries expertise in the silica surface modification and bond stationary technology has enabled us to develop a number of stationary phases based on the 1.8µm particle technology. Novel phases can enable many separations, particular with some knowledge of the analyte – stationary phase interaction. Novel phases are more dependent on uniformity of the surface modification. A thorough knowledge of bonding chemistry is essential for the production of reproducible non-ODS phases. We have used our well established knowledge in bonding chemistry to produce non-ODS phases that are reproducible. With this breakthrough the chromatographer is not limited to ODS type phases. The Epic 1.8µm columns will provide the chromatographer with the highest resolution over a wide variety of flow rate conditions and mobile compositions.

The following is a list of ES Industries current sub-2 micron HPLC products.

Epic C18	Epic Cyano	Epic HILIC-HC
Epic C18-MS	Epic Phenyl-Hexyl	Epic Diol HILIC
Epic C8	Epic FO-LB	Epic HILIC FL
Epic Phenyl	Epic PFP-LB	Epic HILIC PL
Epic SCX	Epic Polar	Epic Silica HILIC

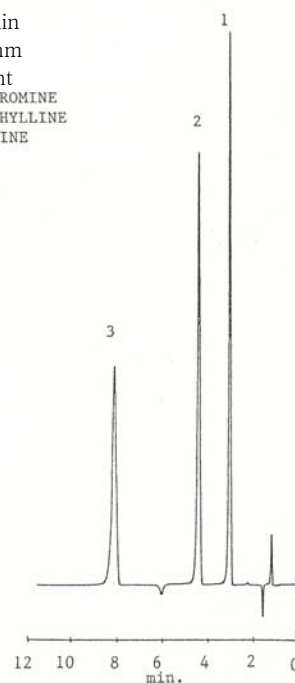
Epic Polar 1.8µm 10cm X 2.1mm  
 Catalog # 522A91-EPO  
 Mobile Phase: 10%CH<sub>3</sub>CN : 90%0.05M KH<sub>2</sub>PO<sub>4</sub>  
 pH = 3.2  
 Flow Rate = 0.4mL/min  
 Detection: uv @ 254nm  
 Temperature: Ambient

1. PROCAINAMIDE HCL
2. (+)-Ψ-EPHEDRINE HCL
3. ACETAMINOPHEN
4. CAFFEINE



Epic PFP-LB 1.8µm 10cm X 2.1mm  
 Catalog # 522A91-EPFP-LB  
 Mobile Phase: 10%CH<sub>3</sub>CN : 90%0.05M KH<sub>2</sub>PO<sub>4</sub>  
 pH = 3.2  
 Flow Rate = 0.4mL/min  
 Detection: uv @ 254nm  
 Temperature: Ambient

1. THEOBROMINE
2. THEOPHYLLINE
3. CAFFEINE



	<u>3cm X 3.0mm</u>	<u>3cm X 2.1mm</u>	<u>3cm X 1.0mm</u>
Epic C18 1.8μ	583A91-EC18	582A91-EC18	581A91-EC18
Epic C18-MS 1.8μ	583A91-EC18-MS	582A91-EC18-MS	581A91-EC18-MS
Epic C8 1.8μ	583A91-EC8	582A91-EC8	581A91-EC8
Epic Phenyl 1.8μ	583A91-EPH	582A91-EPH	581A91-EPH
Epic SCX 1.8μ	583A91-ESCX	582A91-ESCX	581A91-ESCX
Epic Cyano 1.8μ	583A91-ECN	582A91-ECN	581A91-ECN
Epic Phenyl Hexyl 1.8μ	583A91-EPHX	582A91-EPHX	581A91-EPHX
Epic FO-LB 1.8μ	583A91-EFO-LB	582A91-EFO-LB	581A91-EFO-LB
Epic PFP-LB 1.8μ	583A91-EPFP-LB	582A91-EPFP-LB	581A91-EPFP-LB
Epic Polar 1.8μ	583A91-EPO	582A91-EPO	581A91-EPO
Epic Diol HILIC 1.8μ	583A91-ED	582A91-ED	581A91-ED
Epic HILIC FL 1.8μ	583A91-EHIC-FL	582A91-EHIC-FL	581A91-EHIC-FL
Epic HILIC PL 1.8μ	583A91-EHIC-PL	582A91-EHIC-PL	581A91-EHIC-PL
Epic Silica HILIC 1.8μ	583A91-ESI	582A91-ESI	581A91-ESI
	<u>5cm X 3.0mm</u>	<u>5cm X 2.1mm</u>	<u>5cm X 1.0mm</u>
Epic C18 1.8μ	513A91-EC18	512A91-EC18	511A91-EC18
Epic C18-MS 1.8μ	513A91-EC18-MS	512A91-EC18-MS	511A91-EC18-MS
Epic C8 1.8μ	513A91-EC8	512A91-EC8	511A91-EC8
Epic Phenyl 1.8μ	513A91-EPH	512A91-EPH	511A91-EPH
Epic SCX 1.8μ	513A91-ESCX	512A91-ESCX	511A91-ESCX
Epic Cyano 1.8μ	513A91-ECN	512A91-ECN	511A91-ECN
Epic Phenyl Hexyl 1.8μ	513A91-EPHX	512A91-EPHX	511A91-EPHX
Epic FO-LB 1.8μ	513A91-EFO-LB	512A91-EFO-LB	511A91-EFO-LB
Epic PFP-LB 1.8μ	513A91-EPFP-LB	512A91-EPFP-LB	511A91-EPFP-LB
Epic Polar 1.8μ	513A91-EPO	512A91-EPO	511A91-EPO
Epic Diol HILIC 1.8μ	513A91-ED	512A91-ED	511A91-ED
Epic HILIC FL 1.8μ	513A91-EHIC-FL	512A91-EHIC-FL	511A91-EHIC-FL
Epic HILIC PL 1.8μ	513A91-EHIC-PL	512A91-EHIC-PL	511A91-EHIC-PL
Epic Silica HILIC 1.8μ	513A91-ESI	512A91-ESI	511A91-ESI
	<u>10cm X 3.0mm</u>	<u>10cm X 2.1mm</u>	<u>10cm X 1.0mm</u>
Epic C18 1.8μ	523A91-EC18	522A91-EC18	521A91-EC18
Epic C18-MS 1.8μ	523A91-EC18-MS	522A91-EC18-MS	521A91-EC18-MS
Epic C8 1.8μ	523A91-EC8	522A91-EC8	521A91-EC8
Epic Phenyl 1.8μ	523A91-EPH	522A91-EPH	521A91-EPH
Epic SCX 1.8μ	523A91-ESCX	522A91-ESCX	521A91-ESCX
Epic Cyano 1.8μ	523A91-ECN	522A91-ECN	521A91-ECN
Epic Phenyl Hexyl 1.8μ	523A91-EPHX	522A91-EPHX	521A91-EPHX
Epic FO-LB 1.8μ	523A91-EFO-LB	522A91-EFO-LB	521A91-EFO-LB
Epic PFP-LB 1.8μ	523A91-EPFP-LB	522A91-EPFP-LB	521A91-EPFP-LB
Epic Polar 1.8μ	523A91-EPO	522A91-EPO	521A91-EPO
Epic Diol HILIC 1.8μ	523A91-ED	522A91-ED	521A91-ED
Epic HILIC FL 1.8μ	523A91-EHIC-FL	522A91-EHIC-FL	521A91-EHIC-FL
Epic HILIC PL 1.8μ	523A91-EHIC-PL	522A91-EHIC-PL	521A91-EHIC-PL
Epic Silica HILIC 1.8μ	523A91-ESI	522A91-ESI	521A91-ESI

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