

Single Source

UHPLC / HPLC Columns
Guard Cartridges



Flash & Semi-Prep
Columns



Contract Services &
OEM Provider



**Over
26 Years of
Manufacturing
in USA
ISO 9001:2015**

PSP &
Vacuum Manifold



GC Column



Protein Research
Products



Orochem Sample Prep
Products



Affinity Purification
Products
Desalting Products
Filter Plates for:
Cell Lysate & Large
Molecule Synthesis

Polymeric SPE
Silica Based SPE
Protein Crash Plate
Phospholipid Depletion Plate

For more than 26 years, Orochem has been producing exceptional Sample Preparation products, Chromatography Columns, Protein Research products, and High Throughput Sample Preparation devices in the United States. These cutting-edge products and technologies have been utilized by numerous Fortune 500 Companies across the world. In addition, Orochem offers comprehensive services ranging from customer product design to method development.

Sample Preparation & Analysis

Chromatography

Simulated Moving Bed

OMIC

**High Throughput Lab Process
Automation**



Global Distribution

Contract Services

High Throughput Filtration Products



Oro-flex filter plate with 10 and 20 μm PE frits

- › Protein, Peptide and Oligo Synthesis

PVDF, PTFE, and PP filter plate

- › Excellent for dilute and shoot mass spectrometry methods and high throughput screening applications.
- › Both hydrophobic and hydrophilic membranes.
- › 0.2 and 0.45 micron filters

Apparatus for high-throughput filtration of cell lysate

- › Efficient and reproducible clarification of cell lysates
- › Good large molecule (protein, RNA and DNA) recovery:
 - › Good sample volume recovery
 - › Suitable for both high and low-volume testing

Protein Crash Plate

- › Orochem manufactured the 1st protein crash plate in the industry.
- › 0.2 and 0.45 micron filters

Matrikleen Extraction Products

- › New generation of phospholipid and protein removal plate.
- › Patents 2016, and has been adapted by a Mayo Clinic Lab for routine analysis.
- › Key application: Vitamin D metabolites in plasma and serum.

Sample Preparation Products:



OroQ QuEChERS Dispersive Products

- For AOAC and EN methods
- Orochem specialty for tea, green leaves, fruits, stevia and hemp.

Silica Based SPE Products

- Normal, Reversed and Ion-exchange Phases

Alumina Based SPE Products

- Neutral, Acid, and Basic Phases

SLLE Products

- Various sample sizes for clinical diagnostics labs.
- Key application: cortisone extractions from plasma.

Polymer Based SPE Products

Reversed Phases:

Panthera Deluxe products have been widely adopted as the primary polymeric Solid Phase Extraction (SPE) products by Contract Research Organizations (CROs) worldwide.

- Higher performance and affordable
- Applications: _____

Amphetamines	Topiramate	Dapagliflozine
Benzodiazepines	Pregabalin	Doxorubicin
Opiates	Dolutegravir	Saxagliptin
Recreational drugs	Dapagliflozine	Memantine
Dolutegravir	Ibuprofen	Amphotericin
Lamivudine	Loratidine	Nitrofurantoin
Gefitinib	Bile Acids	Reloxifene
Tenofovir	Paliperidon	Albendazole
Sofosbeuvir	Chlorozoxazone	Pramipexole
Hydroxychloroquine	Isosorbide mononitrate	BUPIVACAINE Liposomal
Amphotericine B Liposomal		

Ion-exchanged Phases:

- Agility Deluxe SCX, SAX, WAX, WCX



Chromatography Products:

Legacy Phases HPLC Columns

General Utility:

- ▶ Reliasil Column
- ▶ Phases: Silica, C1, C4, C8, C18, C30, NH₂, CN, Phenyl, SCX, SAX, Diol, Polyamine, PFP.
- ▶ pH Range: 2-8.5

Separation of Polar, Semi-Polar, and Nonpolar Compounds at Low to Medium pH

- ▶ Orosil Gold Family Columns: Orosil C18 Column is used worldwide for analyzing azacitidine and impurities, as drafted in a USP method.
- ▶ Phases: C18, C18-HC, C18-ER, Polar C18, Polar RP-M, Polar RP-D, Amide, Cyano-L
- ▶ pH Range: 1.5-9.0



For Challenging Pharmaceutical and Peptide Separations:

- ▶ Monitor, Prestige and Matrix Columns are highly base-deactivated stationary phases.
- ▶ Phases: Silica, C8, C18, Matrix AQ
- ▶ pH Range: 2-8.5

Chiral Phases HPLC Columns

- ▶ Epitomize Chiral Columns
- ▶ Polysaccharide-based chiral station
- ▶ Coated and covalently-bound
- ▶ Particle Size: 1.7, 3, 5, 10 micron
- ▶ Chiral library for over 50 compounds



GC Columns:

Orochem offers wide ranges of GC columns coated with the stationary phases equivalent or similar to commercially available phases.

- ▶ General utility: 100% dimethyl polysiloxane and 95% dimethyl/5% diphenyl polysiloxane
- ▶ Columns for special applications: FAME, terpenes, residue solvents, pesticides, cannabinoids



UHPLC Columns

Gazelle UHPLC Columns

- C18, Biphenyl, Amino
- Particle Size: 1.7 micron
- Key applications: Amphetamines, Benzodiazepines, Opiates, Recreational Drugs.



Guard Cartridges for HPLC and UHPLC Columns

- Various dimensions
- Legacy phases, Chiral phases, and UHPLC phases



ACCESS Flash Columns

- Both liquid sample injection and solid sample loading
- Support work at higher flow rates
- Leak Free up to 150 psi
- Luer-Lock end connections
- Compatibility with most flash chromatography systems
- Biotage SNAP compatible



EZY Flash Columns

- Luer-lock connections compatible with most Flash Chromatography systems
- Leak free up to 150 psi
- Proprietary dry packing procedure
- Pre-packed with Orochem manufactured stationary phases
- Phases: Normal Phases (Si, Al, Al-acid, Al-basic), Reversed Phases (C18, C8), chiral and Ion-exchange Phases
- 40-60 microns irregular or spherical 50 microns

Protein Research Products:

Coral Desalting Column and Plate

- ▶ High protein recovery/high small molecule retention



Reva detergent removal products

- ▶ Low non-specific protein/peptide binding resin maximizes protein/peptide recovery

Affinity Purification Products

1. EZ Link Resin

- ▶ Efficient immobilization of antibodies, peptides, proteins and other biomolecules to create affinity supports

2. EZ Pure Protein A Resin

- ▶ High capacity (>34 mg human IgG/ml) resin, leach resistant, multiple uses without decline in yield

3. EZ Pure Protein G Resin

- ▶ High capacity (>30mg human IgG/ml) resin ideal for mouse IgG1 and human IgG3 isotypes

4. EZ Pure Streptavidin Resin

- ▶ Streptavidin is immobilized by charge free, leach resistant covalent bonds, low non-specific binding
- ▶ Ideal for purification and isolation of biotinylated bio molecules

5. EZ Pure Ni-NTA Resin

- ▶ High capacity (60mg His-tag protein/ml) resin for purifying recombinant protein carrying a His-tag

6. EZ Pure Cobalt Resin

- ▶ High performance affinity resin for obtaining high-purity his-tagged fusion proteins from cell lysates under native and denaturing conditions

7. EZ Pure Glutathione Resin

- ▶ High capacity (40 mg GST protein/ml) resin to purify GST fusion proteins from bacterial lysates

Positive Pressure Processor

- 48, 96, and 144 cartridge formats
- One and two plate formats



EZYPRESS HT 96



EZYPRESS 96 EXP



EZYPRESS 48



EZYPRESS HT 192



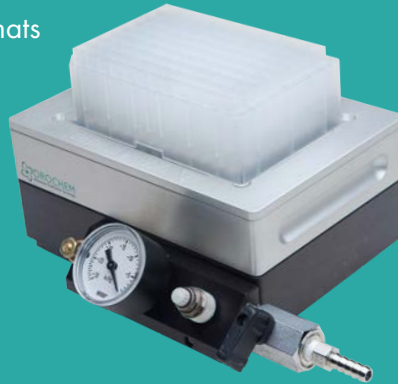
EZYPRESS 144 EXP

Positive pressure elutions guarantee more reproducible results, higher percentage recoveries and a more consistent flow rate. With the positive pressure system's optimal and reproducible functioning, extraction conditions for each sample are assured, regardless of the sample viscosity, filter variations or other variable conditions.

High throughput Lab Process Automation:

Vacuum Manifold

- ▶ 12- and 24-position cartridge formats
- ▶ Plate format



Contract Services

Orochem is globally recognized in the areas of large scale contract purification, OEM manufacturing and private labeling.

Bonded Silica Manufacturing

C18, C8, C4, amino, ion-exchange sorbents, from 1.7 to 50 μm , spherical or irregular.

Polymer Synthesis

Polymer DVB resins, agarose based affinity resins.

Chiral Stationary Phases

Polysaccharide-based chiral stationary phases, from 1.7 μm to 50 μm , either coated or covalently bounded.

OEM Device Manufacturing

Custom packed spin columns, 1 cc-150 cc columns, 24/48/96 and 384-well filter and collection plates.

OEM Column Packing

Any of our stationary phases or resins, or customer's sorbent, any size of UHPLC and HPLC columns, semi/prep columns, high pressure and low pressure flash columns.

Contract Purification Services

Capable to purify specialty sugars, proteins, lipids, phospholipids, fatty acids, chiral APIs, API/pharmaceuticals, nutraceuticals, from lab scale to commercial scale.





QUIKVAP 96 and 192 Evaporators

- Single and double plates formats
- Available in 110 or 220 VAC
- Operating temperature ranges from 50-100°F
- Heated both top and bottom
- Flow control of both top and bottom

Accessories

HPLC Vials

- Regular and high recovery vials
- 2 mL and 300 uL vial (with insert)
- Compatible with most HPLC and GC instruments

Syringe Filters

- For filtering small volume of organic or aqueous samples
- Different types of materials (nylon, PTFE, PVDF, MCE)
- Different diameters, 25 mm and 13 mm
- Different pore size, 0.25 and 0.45 micron

Membrane Filters

- For filtering large volume of organic or aqueous sample or solvents
- Different types of materials (nylon, PES, MCE, PTFE, PVDF)
- 50 mm diameter, 0.25 and 0.45 micron pore sizes

96-Well Collection Plates

- 1 mL and 2 mL per well
- Round and V bottom





Contract services:

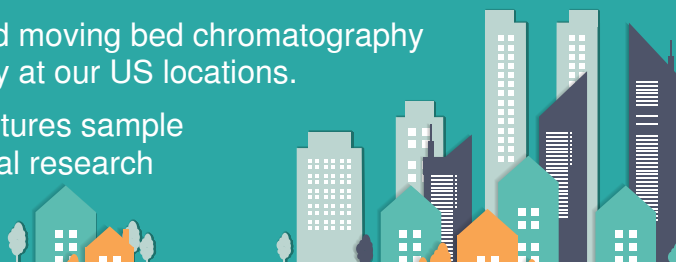
- Oligo synthesis
- Bonded silica manufacturing
- Polymer synthesis
- Affinity resin synthesis and other proteomic products
- Custom packing of cartridges, plates, (U)HPLC columns, flash prep columns
- Contract purification services

Facilities

Naperville, Illinois, USA. 84,000 square feet

US facilities are the main manufacture sites. Simulated moving bed chromatography systems are designed, built and assembled completely at our US locations.

Orochem India, Mumbai. 25,000 square feet. Manufactures sample preparation products for the pharmaceutical and clinical research organizations in Asia.



Our Distributors

USA

Analytical Sales & Services, NJ
Chrom Tech Inc, MN
Nurnberg, OR

Canada

Chromatographic Specialties, Ontario
Fisher Canada, Ontario
Rose Scientific, Alberta

Germany

Analytics-shop (Altmann-analytik)

France

Interchim

China

Shimadzu (Shanghai) Global Laboratory-
Consumables Co.,Ltd.

Korea

Bene Tech

Japan

Kanto Chemical Co., Inc

Sweden & Denmark

Nordic Biolabs



Tunisia

Solution Labo

Global

Antylia

Legend

-  Orochem Offices
-  Distributors

Customers can order Orochem's products through Fisher Scientific and VWR



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