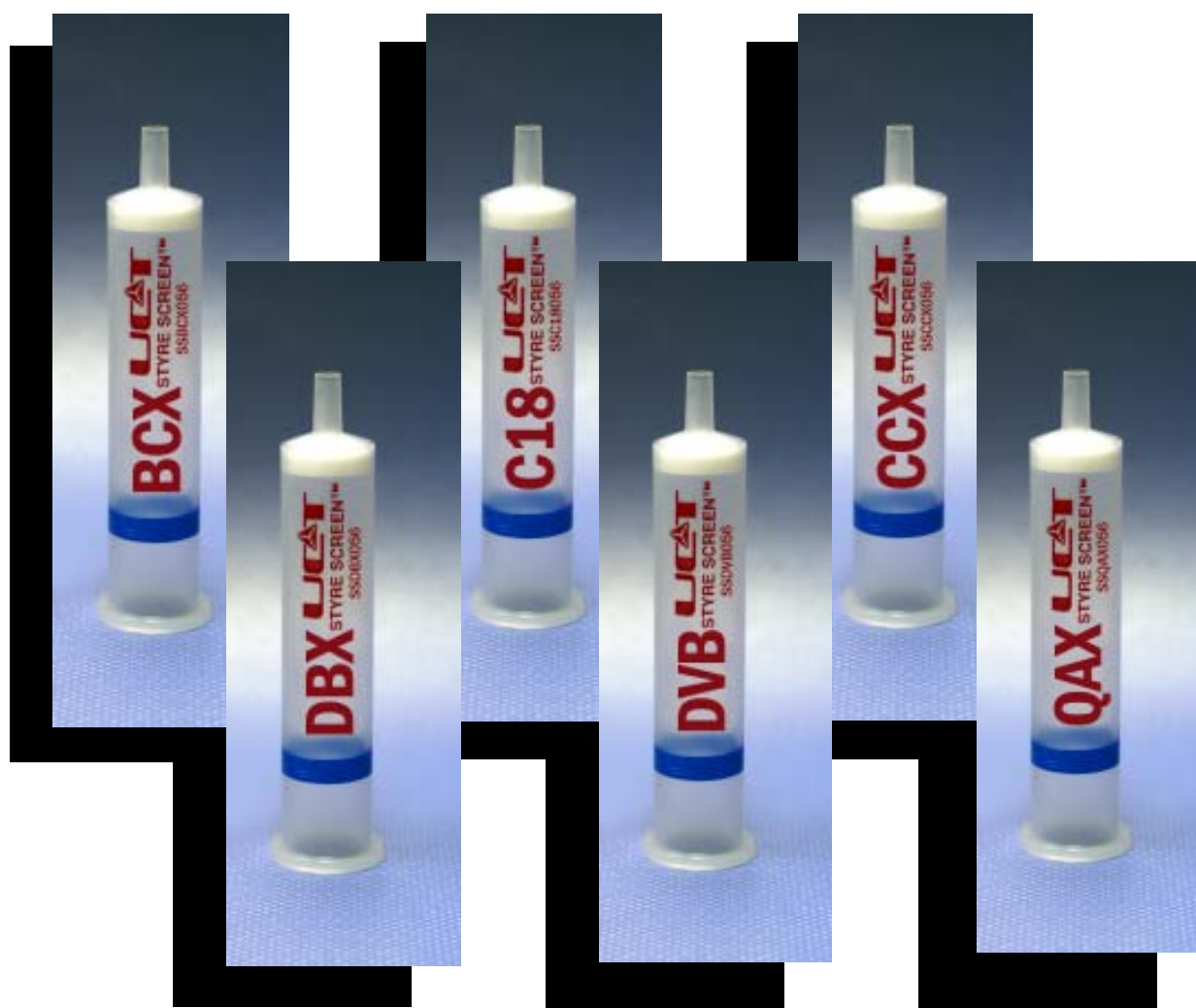




UNITED CHEMICAL TECHNOLOGIES, INC.

Polymeric Resins for SPE Technology

# STYRE SCREEN™



# Advantages of STYRE SCREEN™:

- **No conditioning steps**
- **Copolymer allows for extraction of acids, neutrals and bases**
- **High and reproducible recoveries**
- **Clean extracts**
- **Highly cross-linked styrene/divinylbenzene polymer**
- **Reduction in sorbent mass**
- **Faster flow rates**
- **pH stable (1 to 14)**
- **Reduction in solvent use**
- **High sorbent capacity**
- **Methods for NIDA/SAMHSA 5 Drugs**

## Polymeric Resins Offered:

### DBX - Benzenesulfonic Acid + C18

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSDBX031	100
3 mL	30 mg	SSDBX033	50
6 mL	50 mg	SSDBX056	50

### DVB - Polystyrene Divinylbenzene

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSDVB031	100
3 mL	30 mg	SSDVB033	50
6 mL	50 mg	SSDVB056	50

### BCX - Benzenesulfonic Acid

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSBCX031	100
3 mL	30 mg	SSBCX033	50
6 mL	50 mg	SSBCX056	50

### C18 - Reverse Phase C18

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSC18031	100
3 mL	30 mg	SSC18033	50
6 mL	50 mg	SSC18056	50

### CCX - Carboxylic Acid

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSCCX031	100
3 mL	30 mg	SSCCX033	50
6 mL	50 mg	SSCCX056	50

### QAX - Quaternary Amine

Size	Sorbent Mass	Part Number *	Qty/Pack
1 mL	30 mg	SSDBX031	100
3 mL	30 mg	SSDBX033	50
6 mL	50 mg	SSDBX056	50

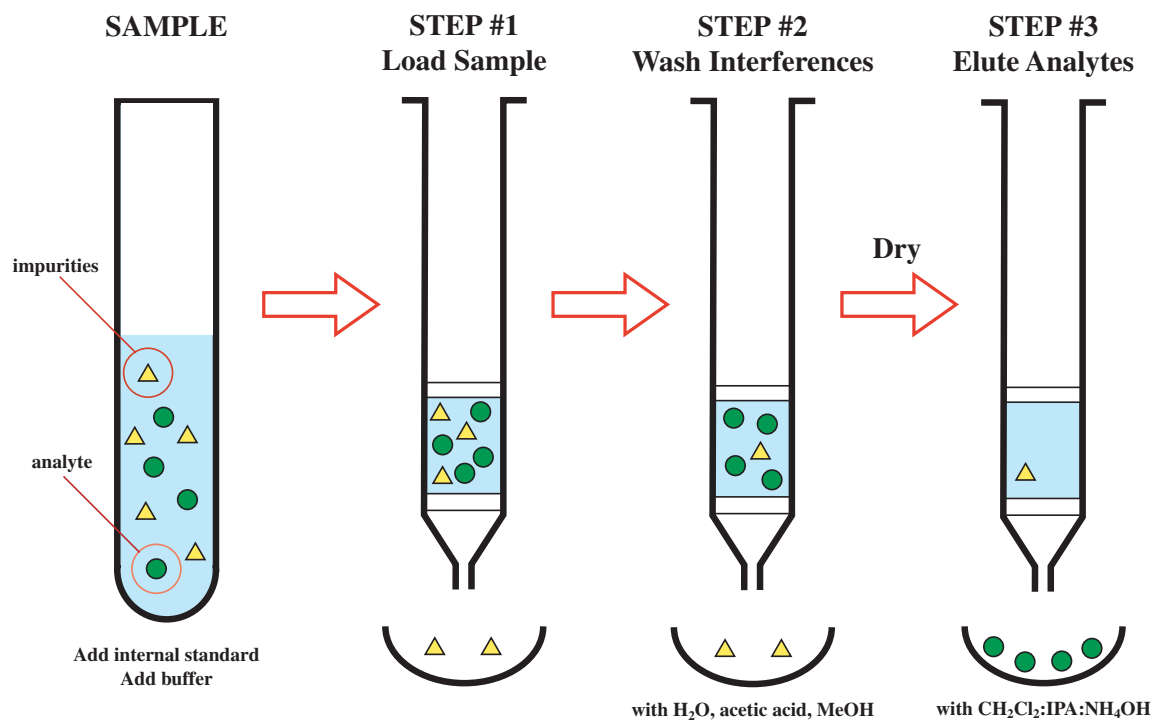
\* Columns available with CLEAN-THRU® Tips to eliminate sample carry over from the vacuum manifold lid.  
Contact customer service for part numbers and pricing.

# STYRE SCREEN™ Extraction Columns

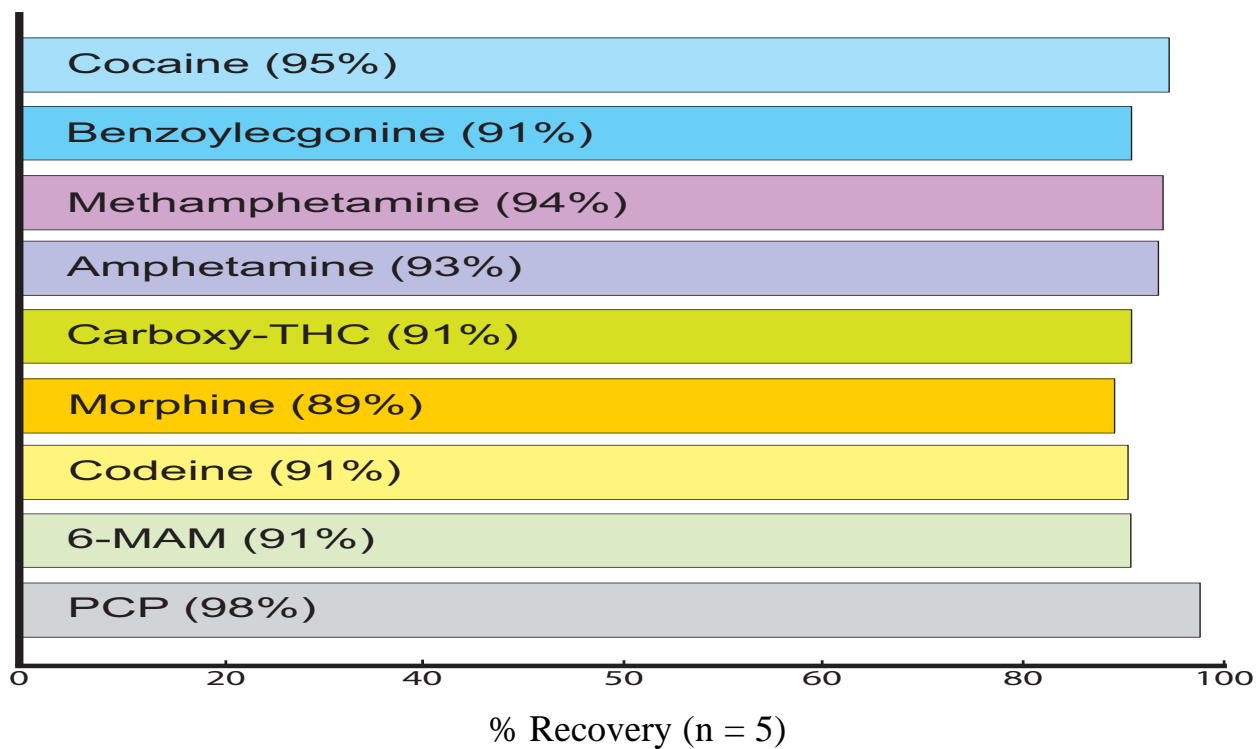
STYRE SCREEN™ extraction columns contain an ultra clean, highly cross-linked styrene and divinylbenzene copolymer sorbent that is functionalized with both a reverse phase, hydrophobic component and a strong cation exchanger. High and reproducible recoveries for acidic, neutral and basic compounds are achievable with a single column. The STYRE SCREEN™ particles have an average particle size of 30 microns and a very high analyte capacity making them ideal for standard solid phase extraction applications. The increased analyte capacity means that less sorbent bed mass is needed which results in faster flow rates and less solvent use. Higher throughput and less solvent waste disposal translate into significant savings in both time and money. In addition, no conditioning steps are required for most drugs of abuse applications.

- Available in 1 mL, 3 mL and 6 mL reservoirs.
- Can be used with vacuum or positive pressure manifolds, as well as conventional automated extraction equipment.

## STYRE SCREEN™ General Application



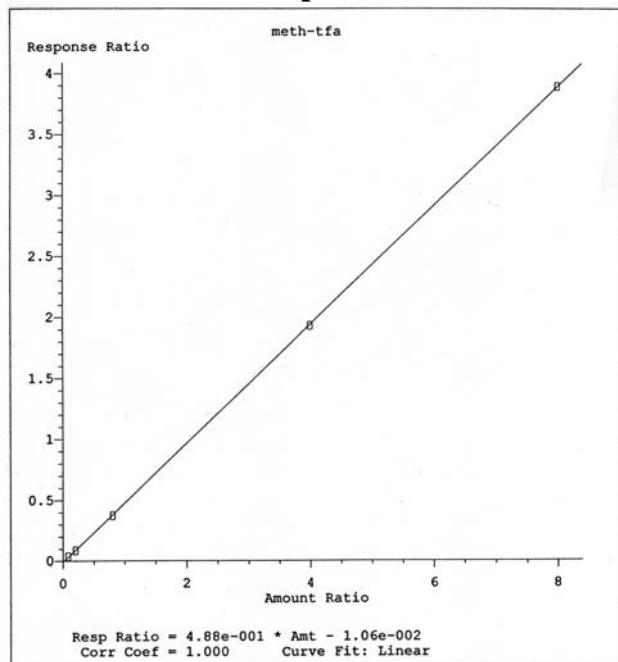
## Absolute Recovery on STYRE SCREEN™ DBX Columns



\* Analytes spiked in human urine at concentrations of 1000 ng / mL, except carboxy-THC at 200 ng / mL.

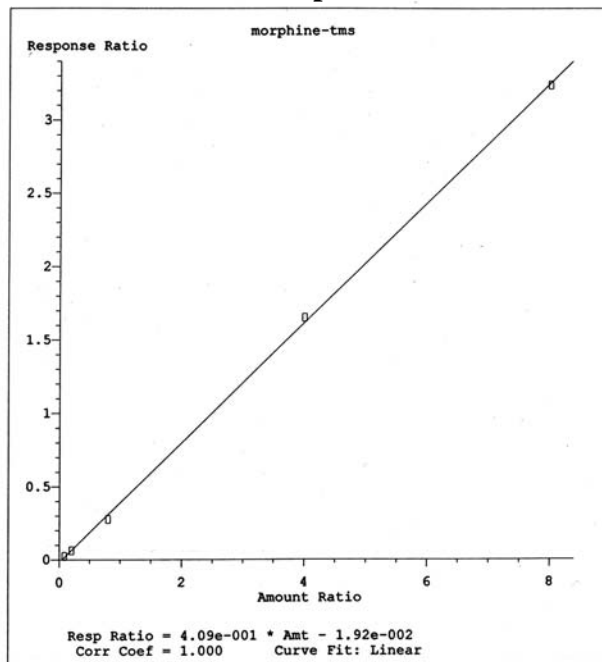
## LINEARITY on STYRE SCREEN™ DBX Columns

### Methamphetamine



Linear regression fit of extracted urine standards for methamphetamine at concentrations of 20, 50, 200, 1000 and 2000 ng/mL.

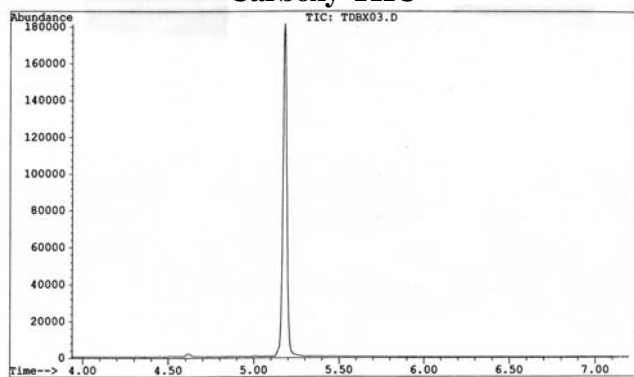
### Morphine



Linear regression fit of extracted urine standards for morphine at concentrations of 20, 50, 200, 1000 and 2000 ng/mL.

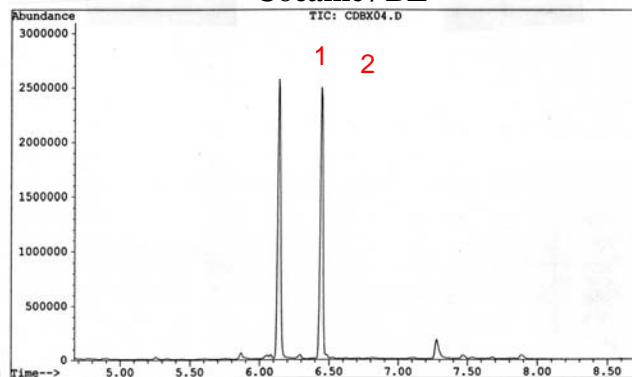
## EXTRACTED STANDARDS on STYRE SCREEN™ DBX Columns

### Carboxy-THC



Total ion GC-MS chromatogram of an extracted urine standard containing 50 ng/mL of THCCOOH.

### Cocaine / BE



Total ion GC-MS chromatogram of an extracted urine standard containing 500 ng/mL of cocaine (1) and benzoylecgonine (2).

# SOLUTION PREPARATION

**Acetic Acid, 1.0 M:** To 400 mL DI H<sub>2</sub>O, add 28.6 mL glacial acetic acid. Dilute to 500 mL with DI H<sub>2</sub>O. Mix.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

**Acetic Acid, 100 mM:** Dilute 40 mL 1.0 M acetic acid to 400 mL with DI H<sub>2</sub>O. Mix.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

**Acetate Buffer, 100 mM (pH 4.5):** Dissolve 2.93 g sodium acetate trihydrate in 400 mL DI H<sub>2</sub>O; add 1.62 mL glacial acetic acid. Dilute to 500 mL with DI H<sub>2</sub>O. Mix. Adjust pH to 4.5 ± 0.1 with 100 mM sodium acetate or 100 mM acetic acid.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months; inspect daily for contamination

**Acetate Buffer, 1.0 M (pH 5.0):** Dissolve 42.9 g sodium acetate trihydrate in 400 mL DI H<sub>2</sub>O: Add 10.4 mL glacial acetic acid. Dilute to 500 mL with DI H<sub>2</sub>O. Mix. Adjust pH to 5.0 ± 0.1 with 1.0 M sodium acetate or 1.0 M acetic acid.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months; inspect daily for contamination

**Acetate Buffer 100 mM (pH 5.0):** Dilute 40 mL 1.0 M acetate buffer to 400 mL with DI H<sub>2</sub>O. Mix.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

**β-Glucuronidase, 5,000 Fishman units/mL:** Dissolve 100,000 fishman units lyophilized powder with 20 mL of 100 mM acetate buffer (pH 5.0).

**Storage:** -5° C in glass

**Stability:** Several days; prepare daily for best results

**Hydrochloric Acid, 100 mM:** To 400 mL DI H<sub>2</sub>O, add 4.2 mL concentrated HCl. Dilute to 500 mL with DI H<sub>2</sub>O. Mix.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

**Methylene Chloride/Isopropanol/Ammonium Hydroxide (78/20/2):** To 20 mL IPA, add 2 mL concentrated NH<sub>4</sub>OH. Mix. Add 78 mL CH<sub>2</sub>Cl<sub>2</sub>. Mix.

**Storage:** 25° C in glass or fluoropolymer plastic

**Stability:** 1 day

**Phosphate Buffer, 100 mM, pH 6.0:** Dissolve 1.70 g Na<sub>2</sub>HPO<sub>4</sub> and 12.14 g NaH<sub>2</sub>PO<sub>4</sub>·H<sub>2</sub>O in 800 mL DI H<sub>2</sub>O. Dilute to 1000 mL using DI H<sub>2</sub>O. Mix. Adjust pH to 6.0 ± 0.1 with 100 mM monobasic sodium phosphate (lowers pH) or 100 mM dibasic sodium phosphate (raises pH).

**Storage:** 5° C in glass

**Stability:** 1 month; inspect daily for contamination

**Sodium Hydroxide, 10N:** Dissolve 40.0 g NaOH in 75 mL DI H<sub>2</sub>O. Dilute to 100 mL using DI H<sub>2</sub>O.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

**Sodium Hydroxide, 1.0N:** Dilute 10 mL 10N NaOH to 100 mL with DI H<sub>2</sub>O. Mix.

**Storage:** 25° C in glass or plastic

**Stability:** 6 months

## ORDER PROCESSING INFORMATION

### CUSTOMER SUPPORT

Our customer service staff will process all orders from 8:00 a.m. to 5:00 p.m. Eastern Standard Time, Monday through Friday. After 5:00 p.m. EST, voice mail will be available for messages and orders. We will gladly return your calls as soon as possible.

### PLACING AN ORDER

#### amchro GmbH

**PHONE ORDERS:** + (49)-(0)6190-978 117  
**FAX ORDERS:** + (49)-(0)6190-978 107  
**E-MAIL ORDERS:** amchrogmbh@aol.com  
**MAIL ORDERS:** amchro GmbH  
Schulstr. 48  
65795 Hattersheim

### TECHNICAL SUPPORT

#### United Chemical Technologies - Bristol

**PHONE:** (215) 781-9255 or (800) 385-3153  
**FAX :** (215) 785-1226  
**WEB:** www.unitedchem.com

**ADDRESS:**

United Chemical Technologies, Inc.  
2731 Bartram Road, Bristol, PA 19007

### ORDERING INFORMATION

#### PRICES AND TERMS

Our prices are subject to change without notice. The price in effect when we receive your order will apply. All prices are in US Dollars and are F.O.B. Lewistown, PA 19007. Terms of payment are net 30 days.

#### MINIMUM ORDERS

We welcome all orders; therefore, we do not have a minimum order requirement.

When ordering, please include your purchase order number, complete "Ship To" and "Bill to" address, catalog number, quantity, and description of product(s). Also include your name and phone number where we can contact you if we have any questions concerning your order.

#### SHIPMENTS

Normal processing is within 24 hours after receipt of an order. Unless special shipping requests have been made, our trained staff will send all orders Regular UPS. The appropriate shipping charges (freight & insurance costs) will be added to the invoice, unless otherwise instructed by the customer.

#### SPECIAL PRICING

We offer special pricing for volume purchases and standing orders. These discounts apply to bonded phase extraction column purchases only. Please call a sales representative for more information on special pricing qualifications.

#### RETURN POLICY

Our Quality Manager will handle all returns. Before returning merchandise, please call to obtain a return authorization number from the quality manager. We will need to know the reason for the return, date of purchase, purchase order number and invoice number in order to issue a return authorization number. Return merchandise must be received before a credit can be issued. Returns will not be accepted after 90 days. A restocking fee of 25% of products list price or a minimum of \$25.00 (which ever is greater) will be charged on all returns.

#### WARRANTY

All products manufactured by United Chemical Technologies, Inc. are guaranteed against defects in materials and workmanship for a period of 90 days after shipment. United Chemical Technologies, Inc. will replace any items that prove to be defective during this time period.

The exclusive remedy requires the end user to first advise United Chemical Technologies, Inc. of the defective product by phone or in writing. Secondly, the defective product must be returned within 30 days after proper approval from our Quality Manager. All returns must indicate the purchase order number, the lot number and the shipping date. United Chemical Technologies, Inc. total liability is limited to the replacement cost of UCT products.

This warranty does not apply to damage resulting from misuse.