

# United Chemical Technologies, Inc.

*presents*

## 96 Well SPE Plates

*Now our sorbents are available in 96 Well Plates format!\**

**United Chemical Technologies, Inc.** is the leader in the development of SPE products since 1984. This expertise is based upon a comprehensive knowledge of silica based sorbent manufacture which results in reproducible products of the highest quality.

- Over 35 different sorbent chemistries
- Method development formats
- Full service technical support
- Custom packing and manufacturing
- Competitive pricing
- Satisfaction guaranteed



### **IDEAL FOR ALL SPE APPLICATIONS AND HIGH THROUGH PUT SCREENING**

- Up to a 2ml sample volume per well
- Robotic and Liquid Handling Compatibility:  
Advanced Chemtech, Beckman, Bodan,  
Gilson, Hamilton, Packard, Sagian, Tecan,  
Tomtec, Zinser, Zymark

**Both 96 Well Plates** are made from solvent resistant, low extractable polypropylene. Standard frits are polyethylene with 20 $\mu$  pores. Different pore size or frit material is available upon request.

\*A 96 well plate compatible with the Hydra<sup>®</sup> liquid handling system is also available.

To Order Call: **800-541-0559** • Fax: **215-785-1226** • Shop Online: **www.unitedchem.com**



## Sorbents

### Hydrophobic

#### SORBENT

C2 ethyl  
C3 propyl  
C4 n-butyl  
iC4 isobutyl  
tC4 tertiary butyl  
C5 pentyl  
C6 hexyl  
C7 heptyl  
C8 octyl  
C10 decyl  
C12 dodecyl  
C18 octadecyl  
C20 eicosyl  
C30 tricontyl  
Cyclohexyl  
Phenyl

#### STRUCTURE

SiCH<sub>2</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>2</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>  
SiCH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>  
SiC(CH<sub>3</sub>)<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>4</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>5</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>6</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>9</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>11</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>17</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>19</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>29</sub>CH<sub>3</sub>  
Si-  
Si-

### Hydrophilic

#### SORBENT

Silica  
Diol  
Cyanopropyl  
Florisil PR<sup>®</sup>  
Alumina-Acid  
Alumina-Neutral  
Alumina-Base

#### STRUCTURE

SiOH  
Si(CH<sub>2</sub>)<sub>3</sub>OCH<sub>2</sub>CHOHCH<sub>2</sub>OH  
Si(CH<sub>2</sub>)<sub>3</sub>CN

“Over 35 Different Phases”  
Particle size 40-60 μm,  
Pore size 60Å

### Ion Exchange

#### SORBENT

Anion

Aminopropyl (1° amine)  
n-2 aminoethyl (2° amine)  
Diethylamino (3° amine)  
Quaternary Amine (4° amine)

#### STRUCTURE

Si(CH<sub>2</sub>)<sub>3</sub>NH<sub>3</sub><sup>+</sup>  
Si(CH<sub>2</sub>)<sub>3</sub>NH<sub>2</sub><sup>+</sup>(CH<sub>2</sub>)<sub>2</sub>NH<sub>3</sub><sup>+</sup>  
Si(CH<sub>2</sub>)<sub>3</sub>NH<sup>+</sup>(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>  
Si(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>3</sub>

#### pKa

9.8  
10.1, 10.9  
10.6  
always charged



• Available in alternative weaker counter ion;

(CAQAX with CH<sub>3</sub>CO<sub>2</sub><sup>-</sup> counter ion or CHQAX with OH<sup>-</sup> counter ion)

\*\*\* SAX (DVB / Styrene)

Cation

Carboxylic Acid  
Propylsulfonic Acid  
Benzenesulfonic Acid  
Benzenesulfonic Acid High Load

SiCH<sub>2</sub>COOH  
Si(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H  
Si(CH<sub>2</sub>)<sub>2</sub>--SO<sub>3</sub>H  
Si(CH<sub>2</sub>)<sub>2</sub>--SO<sub>3</sub>H

4.8  
<1  
always charged  
always charged



\*\*\* SCX (DVB / Styrene)

### Copolymeric (Mixed Phase)\*\*

#### SORBENT

Aminopropyl + C8  
Quaternary Amine + C8  
Carboxylic Acid + C8  
Propylsulfonic Acid + C8  
Benzenesulfonic Acid + C8  
Cyanopropyl + C8  
Cyclohexyl + C8

#### STRUCTURE

Si(CH<sub>2</sub>)<sub>3</sub>NH<sub>3</sub><sup>+</sup> + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>3</sub>N<sup>+</sup>(CH<sub>3</sub>)<sub>3</sub> + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
SiCH<sub>2</sub>COOH + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>2</sub>--SO<sub>3</sub> H + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si(CH<sub>2</sub>)<sub>3</sub>CN + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>  
Si- + Si(CH<sub>2</sub>)<sub>7</sub>CH<sub>3</sub>

\*\* UCT manufactures true copolymeric sorbents by dually reacting their high purity silicas. The product is not a mixed bed sorbent.

\*\*\*Hydrated DVB / Styrene cross linked sorbent

To Order Call: 800-541-0559 • Fax: 215-785-1226 • Shop Online: [www.unitedchem.com](http://www.unitedchem.com)

## 96 Well Plates

Sorbent	Part Numbers	Amount Sorbent per Well, mg
*ENDCAPPED C18	WORCEC18105	50
	WORCEC1811	100
	WORCEC1812	200
	WORCEC1813	300
*ENDCAPPED C8	WORCEC08105	50
	WORCEC0811	100
	WORCEC0812	200
	WORCEC0813	300
*ENDCAPPED C4	WORCEC04105	50
	WORCEC0411	100
	WORCEC0412	200
	WORCEC0413	300
*ENDCAPPED C2	WORCEC02105	50
	WORCEC0211	100
	WORCEC0212	200
	WORCEC0213	300
CYCLOHEXYL	WORCYH105	50
	WORCYH11	100
	WORCYH12	200
	WORCYH13	300
PHENYL	WORPHY105	50
	WORPHY11	100
	WORPHY12	200
	WORPHY13	300
SILICA	WORSIL105	50
	WORSIL11	100
	WORSIL12	200
	WORSIL13	300
DIOL	WORDIOL105	50
	WORDIOL11	100
	WORDIOL12	200
	WORDIOL13	300
CYANOPROPYL	WORCYN105	50
	WORCYN11	100
	WORCYN12	200
	WORCYN13	300
Florisil PR, 60-100 MESH	WORFLSPR05	50
	WORFLSPR1	100
	WORFLSPR2	200
	WORFLSPR3	300
Florisil 100-200 MESH, GRADE A	WORFLSA05	50
	WORFLSA1	100
	WORFLSA2	200
	WORFLSA3	300
ALUMINA-ACID	WORALA05	50
	WORALA1	100
	WORALA2	200
	WORALA3	300

\* Also available: C3; C5; C6; C7; C10; C12; C20; C30 All hydrophobic phases are offered in endcapped and unendcapped phases

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## 96 Well Plates

<u>Sorbent</u>	<u>Part Numbers</u>	<u>Amount Sorbent per Well, mg</u>
ALUMINA-NEUTRAL	WORALN05	50
	WORALN1	100
	WORALN2	200
	WORALN3	300
ALUMINA-BASE	WORALB05	50
	WORALB1	100
	WORALB2	200
	WORALB3	300
AMINOPROPYL	WORNAX105	50
	WORNAX11	100
	WORNAX12	200
	WORNAX13	300
N-2 AMINOETHYL	WORPSA105	50
	WORPSA11	100
	WORPSA12	200
	WORPSA13	300
DIETHYLAMINO	WORDAX105	50
	WORDAX11	100
	WORDAX12	200
	WORDAX13	300
**QUATERNARY AMINE	WORQAX105	50
	WORQAX11	100
	WORQAX12	200
	WORQAX13	300
CARBOXYLIC ACID	WORCCX105	50
	WORCCX11	100
	WORCCX12	200
	WORCCX13	300
PROPYLSULFONIC ACID	WORPCX105	50
	WORPCX11	100
	WORPCX12	200
	WORPCX13	300
BENZENESULFONIC ACID	WORBCX105	50
	WORBCX11	100
	WORBCX12	200
	WORBCX13	300
BENZENESULFONIC ACID HIGH LOAD	WORBCXHL105	50
	WORBCXHL11	100
	WORBCXHL12	200
	WORBCXHL13	300
AMINOPROPYL + C8	WORNAX205	50
	WORNAX21	100
	WORNAX22	200
	WORNAX23	300
QUATERNARY AMINE + C8	WORQAX205	50
	WORQAX21	100
	WORQAX22	200
	WORQAX23	300
CARBOXYLIC ACID + C8	WORCCX205	50
	WORCCX21	100
	WORQAX22	200
	WORQAX23	300

\*\*Available with chloride, acetate or hydroxide counter ion.

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## 96 Well Plates

<u>Sorbent</u>	<u>Part Numbers</u>	<u>Amount Sorbent per Well, mg</u>
PROPYLSULFONIC ACID + C8	WORPCX205	50
	WORPCX21	100
	WORPCX22	200
	WORPCX23	300
BENZENESULFONIC ACID + C8	WORBCX205	50
	WORBCX21	100
	WORBCX22	200
	WORBCX23	300
CYANOPROPYL + C8	WORCNP205	50
	WORCNP21	100
	WORCNP22	200
	WORCNP23	300
CYCLOHEXYL + C8	WORCYH205	50
	WORCYH21	100
	WORCYH22	200
	WORCYH23	300
DIOL + C18	WORDIOL305	50
	WORDIOL31	100
	WORDIOL32	200
	WORDIOL33	300
***SAX (DVB/STYRENE CROSSLINKED)	WORPSAX05	50
	WORPSAX1	100
	WORPSAX2	200
	WORPSAX3	300
***SCX (DVB/STYRENE CROSSLINKED)	WORPSCX05	50
	WORPSCX1	100
	WORPSCX2	200
	WORPSCX3	300

<u>METHOD DEVELOPMENT PLATES</u>	<u>Amount Sorbent per Well, mg</u>
HYDROPHOBIC	20 TO 600
HYDROPHILIC	20 TO 600
ANION EXCHANGE	20 TO 600
CATION EXCHANGE	20 TO 600
COPOLYMERIC	20 TO 600
CUSTOM	20 TO 600

\*\*\*Hydrated DVB/STYRENE are all silica phases are standard particle size 40-60µm, 60Å pore size, limited stock of smaller and larger silica phases, please call for availability

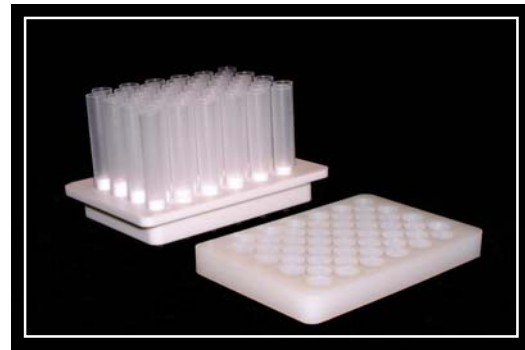
## New from UCT Leader in SPE Technology

# 48 Well SPE Plates

Compatible with the  
Packard Bioscience MultiPROBE®  
Liquid Handling Systems



**48 well plates come with a collection plate with  
removable vials**



### 4.5 ml Capacity per Well

- No need to modify methods for automation
- Automate methods that require large sample sizes

### Designed to Eliminate Cross Contamination and Carryover

- Separate wells and greater capacity eliminates the problems of well-to-well carryover.

### Economical

- The economical removable 48 well version allows for less cost per plate because you typically only purchases the tubes.

If you do not see the format you need, please ask your sales representative for part number and pricing.

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**United Chemical Technologies, Inc.**  
now offers a choice...

## **POLYMERIC SORBENTS**

**Hydrated SAX, SCX and plain DVB/Styrene polymeric sorbents**  
**Ideal for sample clean-up**

### **SAX: Hydrated DVB/Styrene**

Functionality: Tetramethyl Ammonium

Capacity: 1.5 meq/g

Retention Mechanism: Strong anion exchanger in acetate form.

### **SCX: Hydrated DVB/Styrene**

Functionality: Benzenesulfonic Acid

Capacity: 2.4 meq/g

Retention Mechanism: Strong cation exchanger in hydrogen form.

### **Hydrophobic Plain Bead DVB/Styrene**

**To better serve our customer needs, polymeric sorbents are available in the same column sizes and bed sizes as the silica sorbents. We also can provide smaller or larger bed sizes.**

**Please ask for sales representative for pricing and part number.**

**IN DEVELOPMENT:** (Available in late spring)

Polymeric beads with SAX, SCX and hydrophobic functionality for analytical SPE applications. These resins will offer an alternative to standard silica based sorbents.