



**J.T.Baker® Brand**  
**SOLID PHASE  
EXTRACTION PRODUCTS**



## FUNCTION-TESTED PERFORMANCE:

For faster, more precise, cost-effective separations,  
superior reproducibility and accurate results in analytical  
chromatography

In the world of analytical chemistry, chromatography has become the most widely used analytical technique due to the convenience, speed of separations, reproducibility, and quantitative accuracy of results that are inherent to the techniques. As instrument sensitivity continues to improve, suitable high purity solvents for the mobile phase and an effective sorbent stationary phase are becoming even more vital to success in the laboratory.

At Avantor™ Performance Materials, we manufacture innovative chromatography media products that support diverse separation techniques and applications, as well as high purity solvents to maximize separation performance and reliability in chromatography applications. Our highly efficient chromatography products are designed to deliver optimum performance, reproducibility and easy scale-up, without changing the quality of established method.



## Sample Preparation

For as long as scientists have been analyzing compounds, there has been a need for sample preparation to extract and purify sample components. Today's technology for sample preparation, Solid Phase Extraction (SPE), is grounded in the principles of chromatography and offers increased speed, reduced hazardous solvent use and exposure, and improved reproducibility of the separation when compared to other wet chemistry methods, such as liquid/liquid extraction. Our scientists have been using and perfecting this method in our research and development labs since the 1970's.

### The purpose of sample preparation

**Sample clean up** — necessary to eliminate impurities and/or isolate the component of interest from the matrix. This helps to increase lifetime of the analytical column, prevents contamination of equipment, thereby protecting expensive instrumentation.

**Sample concentration**—in order to reach the detection limits of the analytical equipment. Sample preparation selectively concentrates the components of interest prior to analysis.

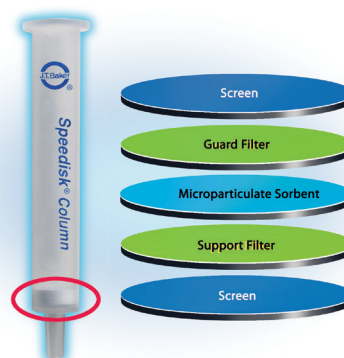


## J.T.Baker® brand Sample Preparation Products

Following market needs for improved purity, detection, and quantification limits in analytical techniques, Avantor offers a variety of J.T.Baker® brand silica- and polymer-based BAKERBOND™ spe columns, high performance J.T.Baker® BAKERBOND Speedisk™ columns and disks, and J.T.Baker® standard vacuum processors to improve and simplify sample clean-up and concentration. We recommend J.T.Baker® BAKERBOND™ spe columns when standard performance with good economy is needed. J.T.Baker® BAKERBOND Speedisk™ columns are recommended when higher levels of speed and performance are required.

## Silica-based Columns

Avantor carefully defines and controls critical surface chemistry parameters to ensure performance consistency. Our knowledge and experience have led to the development of wide range of silica products, both endcapped, which offer high hydrolytic stability, and non-endcapped, which are used in extraction of more polar analytes. SPE silica-based sorbents provide predictable and consistent extractions for discrete subsets of a broad range of sample types. Mixed-mode sorbents can be used for the extraction of compounds from more complex matrixes. Avantor's product line offers a complete solution, with both weak and strong cation and anion exchange sorbents.



## Polymer-based Columns

In addition to SPE sorbents, Avantor offers polymeric sorbents that improve the recovery of sample preparation. J.T.Baker® BAKERBOND™ spe SDB phase sorbents have a large surface area and are highly rigid and stable over whole pH range. J.T.Baker® BAKERBOND Speedisk™ polymer columns are packed with polymer resins, products of our ultra-clean polymer micro particle technology. These resin particles have a large surface area and are highly rigid and stable over pH range 1–14, in addition to being water-wettable and not impacted by sorbent drying. Columns are available in hydrophobic, hydrophilic, and ion exchange forms, suitable when advanced detection methods will be used.






## Standard Vacuum Processors for Extraction Columns and Disks

J.T.Baker® standard vacuum processors offer the flexibility of processing SPE devices of different heights, diameters, or formats during the same experiment. The vacuum processor design is familiar throughout the industry and supports all devices and accessories with luer-type fittings such as J.T.Baker® BAKERBOND™ spe, J.T.Baker® BAKERBOND Speedisk™ columns, and J.T.Baker® BAKERBOND Speedisk™ extraction disks.

The J.T.Baker® BAKERBOND Speedisk™ Expanded Extraction Station includes a six-port vacuum manifold and the accessories needed to support the extraction of analyte by J.T.Baker® BAKERBOND Speedisk™ laminar extraction disks

For application notes and other technical information concerning specific use of our products in applications, please visit [www.avantormaterials.com](http://www.avantormaterials.com).

## General product overview table

Attribute	Description	Silica based SPE products	Polymer based SPE products	
J.T.Baker® BAKERBOND™ spe columns	Standard J.T.Baker® BAKERBOND™ spe 1, 3 and 6ml columns, round-rimmed and earshaped in ultraclean polypropylene and glass	Reverse phase Normal phase Ion exchange Adsorption Drug of abuse	SDB* Activated Spherical Carbon	
J.T.Baker® BAKERBOND Speedisk™ Columns	J.T.Baker® BAKERBOND Speedisk™ 1, 3 and 6 ml columns are configured to run 9 times faster than traditions SPE columns, operating with smaller solvent volumes and having higher capacity per milligram sorbent than conventional SPE columns	Reverse phase Normal phase Ion exchange Adsorption Drug of abuse	H2O-Philic DVB** H2O-Philic SC-DVB** H2O-Phobic DVB** H2O-Phobic SC-DVB**	
J.T.Baker® BAKERBOND Speedisk™ Extraction Disks	50 mm disks that are the correct choice for samples from 200 ml to 2 L. They are neither cartridge nor membrane. A thin bed of J.T.Baker® BAKERBOND™ sorbent micro particles is supported in a laminar structure to maintain speed and capacity and enhance reproducibility of adsorption.	Extraction disks for manual extraction stations and for automated extractors	Extraction disks for manual extraction stations and for automated extractors	

\*Styrene Divinylbenzene; \*\* Divinylbenzene

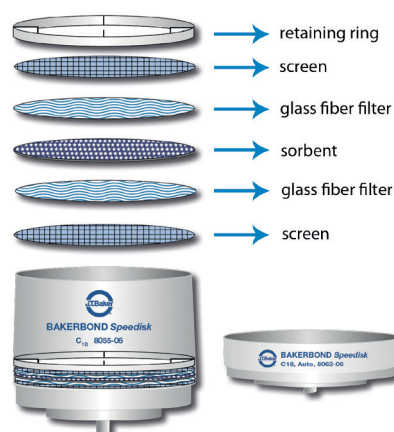
## Summary of Separation Mechanisms for Solid Phase Separations

Separation Mechanism	Analyte Type	Dissolving solvents	Eluting solvents
Normal Phase (Silica)	Slightly to Moderately Polar	Low eluotropic strength e.g., hexane,chloroform	High eluotropic strength e.g.,methanol
Normal Phase (Polar Bonded Phase)	Moderately to Strongly Polar	Low eluotropic strength e.g., hexane,chloroform	High eluotropic strength e.g.,methanol
Reversed Phase (Nonpolar Bonded Phase)	Nonpolar	High eluotropic strength e.g.,methanol/ water acetonitrile/water	For nonpolar analytes: Low eluotropic strength e.g.,hexane,chloroform For polar analytes: High eluotropic strength e.g.,methanol
Anion Exchange (SAX,WCX)	Ionic Acid	Water or buffer (pH=pKa+2)*	1. Buffer (pH=pKa-2) 2. pH where sorbent or analyte is neutral 3. Solvent with high ionic strength
Cation Exchange (SCX,WCX)	Ionic Base	Water or buffer (pH=pKa-2)	1. Buffer (pH=pKa+2) 2. pH where sorbent or analyte is neutral 3. Solvent with high ionic strength
Size Exclusion	Proteins	Water or buffer	Water or buffer

\*pKa = - logKa where Ka is a measure of the ionic activity of the analyte

## J.T.Baker® BAKERBOND™ spe Columns

With J.T.Baker® BAKERBOND™ spe columns, customers can choose the solid phase extraction column that best fits their sample size and performance requirements. Standard J.T.Baker® BAKERBOND™ spe 1ml, 3ml, and 6ml ultraclean polypropylene and glass columns, packed with 50-3000 mg sorbent, are suitable for samples from 0.2 to 10 ml when standard speed, recovery, and final concentration with good economy are needed.



## J.T.Baker® BAKERBOND Speedisk™ Columns & Disks

J.T.Baker® BAKERBOND Speedisk™ columns reduce SPE run times by 60-80% and may eliminate other time consuming sample preparation steps, such as pre-filtration and an additional evaporation/reconstitution step, often required with conventional SPE columns. The patented, laminar design of J.T.Baker® BAKERBOND Speedisk™ columns is especially useful in clinical and pharmaceutical drug application, as it provides shorter run times, higher capacity, optimum recovery, and more effective separation when tested against like products. J.T.Baker® BAKERBOND Speedisk™ extraction disks are the correct choice for samples from 200 mL to 2 L. Our patented disk is pre-assembled for use in preparing aqueous samples for analysis.

J.T.Baker® BAKERBOND Speedisk™ columns and disks are disposable, ultraclean, polypropylene, pre-packed with high performance micro particles of 10µm (silica-based) and 25µm (polymer-based). These are available in a wide range of formats to meet all your separation needs.



BAKERBOND Speedisk™ Products are protected by U.S. Patent No. 5,595,653

## J.T.Baker® BAKERBOND™ spe and BAKERBOND Speedisk™ Columns Performance Comparison

Sample preparation step	J.T.Baker® BAKERBOND™ spe columns	J.T.Baker® BAKERBOND Speedisk™ columns
Column Size / Sorbent	1 cc / 100 mg	1 cc / 20 mg
Particle Size	40 µm	25 µm
Sample volume	2 ml	1 ml
Column conditioning	2 ml (20-40 sec)	0.5 ml (5-10 sec)
Sample addition	2 ml (100 sec)	50µl - 0.5 ml (50 sec)
Washing	1.5 ml (15-20 sec)	0.4 ml (2-5 sec)
Elution	1-2 ml	0.3-0.6 ml
Sample concentration/ evaporation	3-10 minutes	Reduced or eliminated

The following tables list the various sorbents that we offer pre-packaged in J.T.Baker® BAKERBOND™ spe and BAKERBOND Speedisk™ columns.

## J.T.Baker® BAKERBOND™ spe Silica-based Columns

Description	Functional Mode	General Applications	Particle size, shape	Pore size Å	Typical loading	End capped	Product Number*
Octadecyl (C18)	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	40µm, irregular	60	17.2% C	Yes	7020
Octadecyl (C18) LightLoad	Reverse Phase	Non-ionic, non-polar to polar analytes	40µm, irregular	60	12% C	No	7189
PolarPlus Octadecyl (C18)	Reverse Phase	Non-ionic, basic, non-polar to polar analytes	40µm, irregular	60	16.1% C	No	7466
Octyl (C8)	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	40µm, irregular	60	14.0% C	Yes	7087
Ethyl (C2)	Reverse Phase	Polar and Basic Analytes	40µm, irregular	60	4.8% C	Yes	7273
Phenyl (C6H5)	Reverse Phase	Polar from non-polar/polar solvents using hydrogen bonding like mechanisms	40µm, irregular	60	10.6% C	Yes	7095
Spe 500* ((CH <sub>2</sub> ) <sub>18</sub> CH <sub>3</sub> )	Reverse Phase	Organichlorine pesticides from water	40µm, irregular	60	N/A	Yes	7222-6
Cyano (CN)	Reverse Phase/Normal Phase	Non-ionic, non-polar to polar analytes	40µm, irregular	60	10.5% C 2.4% N	Yes	7021
Diol (COHCOH)	Normal Phase	Non-ionic, polar analytes	40µm, irregular	60	8.6% C	Yes	7094
Amino (NH <sub>2</sub> )	Normal Phase	Lipids (fatty acids, cholesterol)	40µm, irregular	60	6.4% C 2.2% N	Yes	7307
Diamino (NH <sub>2</sub> /NH <sub>2</sub> )	Normal Phase/Ion Exchange	Lipids (fatty acids, cholesterol)	40µm, irregular	60	2.6 meq/g	Yes	7089
Quaternary Amine (N <sup>+</sup> )	Strong Anion Exchange	Ionic, acidic analytes	40µm, irregular	60	0.7 meq/g	Yes	7091
Aromatic Sulfonic Acid (ArSO <sub>3</sub> H)	Strong Cation Exchange	Ionic, basic analytes	40µm, irregular	60	1.0 meq/g	No	7090
Propyl Sulfonic Acid (SO <sub>3</sub> H)	Strong Cation Exchange	Ionic, basic analytes	40µm, irregular	60	0.4 meq/g	Yes	7155
Carboxylic Acid (COOH)	Weak Cation Exchange	Ionic, basic analytes	40µm, irregular	60	0.4 meq/g	Yes	7211
Florisil (Mg <sub>2</sub> SiO <sub>3</sub> )	Adsorption	Low to moderately polar analytes from nonaqueous solutions	73-140µm, irregular	---	----	---	7213
Silica Gel (SiOH)	Adsorption	Polar analytes from non-polar solvents like hydrocarbons and less polar esters and ethers	40µm, irregular	60	----	---	7086
Alumina Neutral	Adsorption	Weakly or moderately polar compounds	50-200µm, irregular	----	----	---	7214
Narc-1 (Δ <sup>9</sup> -carboxy THC)	Mixed Mode	Carboxy-tetrahydrocannabinol (THC)	40µm, irregular	60	N/A	yes	7221
Narc-2 (Cocaine, BEC)	Mixed Mode	Hydrophobic/basic analytes (Cocaine, Benzoyllecgonine)	40µm, irregular	60	N/A	N/A	7225
Wide Pore Butyl (C <sub>4</sub> )	Reverse Phase	Small peptides, separations where C <sub>18</sub> gives excessive retention or poor recovery	40µm, irregular	275	5.9% C	yes	7216
Wide Pore CBX	Weak Cation Exchanger	Weak bases such as purines, pyrimidines, vitamin B <sub>6</sub> , cyclic hydroxyamines	40µm, irregular	275	12.2% C	no	7217
Sephadex	Size Exclusion	Desalting, removal of small molecular weight compounds	50-150µm, irregular	----	----	---	7310

\*xx-different number for every pack size. For detailed product listings and technical information, please visit [www.avantormaterials.com](http://www.avantormaterials.com).

## J.T.Baker® BAKERBOND™ spe Special Application Columns

Extraction Columns for Drugs of Abuse		Product Number*
Narc-1 - rapid, reproducible extraction of Δ THC-carboxylic acid from urine using a unique, patented carboxy ester bonded phase. Narc-1 has a high selectivity for Δ THC-carboxylic acid and provides highly consistent recoveries without co-extracting many other common drugs	500 mg	7221-3
Narc-2 - for the extraction of basic compounds, such as opiates, LSD, phenylcyclidine, amine-based drugs, cocaine, and others. Narc-2 columns can be used for basic drug screening, as well as acidic/neutral drugs	125 mg 250 mg 500 mg	7225-4 7225-5 7225-6
Extraction Columns for PAH Applications For the extraction and clean-up of Poly Aromatic Hydrocarbons (PAH), including the 16 priority pollutant EPA PAH's		
PAH SOIL - designed for the clean-up of PAH's in soil extracts	500mg Cyano (top)/1000mg SiOH	7518-8
PAH AQUA - is designed for the extraction of PAH's from water (DIN 38407	200 mg NH <sub>2</sub> (top)/ 500 mg C18	7490-7
PAH AQUA - is designed for the extraction of PAH's from water (DIN 38407	500 mg NH <sub>2</sub> (top)/ 1000 mg C18	7490-8
Extraction Columns for PCB Applications For the extraction and clean-up of PCB's		
PCB-N - for the extraction of PCB's from oil (DIN 51527, part 1)	500mg Ar-SO <sub>3</sub> (top) / 500 mg SiOH	7524-4
PCB-A - for the extraction of PCB's in oil (dirty samples)	500 mg Sulfuric Acid treated SiOH (top) / 500 mg Ar-SO <sub>3</sub>	7511-4
Extraction Columns for Acrylamide Applications		
Activated Carbon (spherical) - for the extraction and purification of organic compounds such as acrylamide and other polar compounds	500 mg 1000 mg	7575-6 7575-7
Extraction Columns for Pesticides Applications		
For the extraction of pesticides from water	500 mg C18 (top) / 200 mg SDB-1	7650-7
For the extraction of pesticides from water	250 mg C18 Polar Plus (top) / 100 mg SDB-1	7704-6
Extraction Column for Pesticide Residue Analysis		
Carbon/Amino - for the removal of matrix components when performing the clean-up of pesticide residues in, especially, food and feed analysis	500 mg Carbon (top) / 500 mg Amino	7450-7
Extraction Columns and Sorbents for Mineral Oil Index Application		
Clean-up Column - tested according to ISO 9377-2 including ready to use SPE glass column	200 mg Anhydrous Sodium Sulfate (top) / 200 mg Florisil	7495-4
Clean-up Column - tested according to ISO 9377-2 including ready to use SPE glass column	2000 mg Anhydrous Sodium Sulfate (top) / 2000 mg Florisil	7495-18
Clean-up Column - Suitable for the determination of Hydrocarbon Oil Index according ISO-9377-2 and NEN 5733	100 gr Activated Florisil	7061



## J.T.Baker® BAKERBOND™ spe Polymer-based Columns

Description	Functional Mode	General Applications	Product Number*
<b>SDB-1</b>	Adsorption	Slightly polar to non-polar analytes	7519
<b>SDB-2</b>	Adsorption	Polar to non-polar analytes	7523

\*xx-different number for every pack size. For detailed product listings and technical information, please visit [www.avantormaterials.com](http://www.avantormaterials.com).

## J.T.Baker® BAKERBOND Speedisk™ Special Application Columns

Extraction columns for drugs of abuse	Product Number*
<b>Narc-1</b> - rapid, reproducible extraction of Δ THC-carboxylic acid from urine using a unique, patented carboxy ester bonded phase. Narc-1 has a high selectivity for Δ THC-carboxylic acid and provides highly consistent recoveries without co-extracting many other common drugs	8174
<b>Narc-2</b> - for the extraction of basic compounds, such as opiates, LSD, phencyclidine, amine-based drugs, cocaine, and others. narc-2 columns can be used for basic drug screening, as well as acidic/neutral drugs	8175

\*xx-different number for every pack size. For detailed product listings and technical information, please visit [www.avantormaterials.com](http://www.avantormaterials.com).



## J.T.Baker® BAKERBOND Speedisk™ Columns

Description	Functional Mode	General Applications	Product Number*
Silica- based columns			
<b>Octadecyl (C18)</b>	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	7606
<b>Octadecyl (C18) Lightload</b>	Reverse Phase	Non-ionic, non-polar to polar analytes	8151
<b>Octadecyl (C18) PolarPlus</b>	Reverse Phase	Non-ionic, basic, non-polar to polar analytes	8153
<b>Octyl (C8)</b>	Reverse Phase	Non-ionic, non-polar to moderately polar analytes	8154
<b>Quaternary Amine (N+)</b>	Strong Ion Exchange	Ionic, acidic analytes	8168
<b>Diol (COHCOH)</b>	Normal Phase	Non-ionic, polar analytes	8167
<b>Amino (NH2)</b>	Ion Exchange/ Normal Phase	Lipids (fatty acids, cholesterol)	8165
<b>Aromatic Sulfonic Acid</b>	Strong Ion Exchange	Ionic, basic analytes	8170
<b>Carboxylic Acid</b>	Weak Cation Exchange	Ionic, basic analytes	8172
<b>Silica</b>	Adsorption	Adsorbs polar analytes from non-polar solvents like hydrocarbons and less polar esters and ethers	8163
<b>Narc-1 (Δ9-carboxy THC)</b>	-	Carboxy-tetrahydrocannabinol (THC)	8174
<b>Narc-2 (Cocaine, BEC)</b>	Mixed	Hydrophobic/basic analytes (Cocaine, Benzoyllecgonine)	8175
Polymer- based columns			
<b>Hydrophilic DVB</b>	Adsorption	Polar to non-polar analytes	8108
<b>Hydrophilic SC-DVB (SO3)</b>	Mixed Mode	Ionic, basic analytes	8111
<b>Hydrophobic DVB</b>	Adsorption	Slightly polar to non-polar analytes	8109
<b>Hydrophobic SC-DVB (SO3)</b>	Mixed Mode	Ionic, basic analytes	8196

\*xx-different number for every pack size. For detailed product listings and technical information, please visit [www.avantormaterials.com](http://www.avantormaterials.com).

## J.T.Baker® SPE Sorbent and Solvent Selection Guide

The guide below can help you select appropriate sorbents and solvents for separations based on sample type and separation parameters.

### Organic Samples MW< 2000 (in solution)

Sample Solu- bility	Organic Solvent Soluble			Water Soluble				
Sample Solubility				Ionic		Non-ionic/Ion-paired		
	Organic	Organic	Aqueous	Aqueous		Aqueous	Aqueous	Aqueous
	Polar	Moderately Polar	Non Polar	Anionic	Cationic	Non Polar	Moderately Polar	Polar
Mechanism <sup>1</sup>	NPC	LSC	RPC	IEC	IEC	RPC	LSC	NPC
SPE Phase Recommended <sup>2</sup>	H <sub>2</sub> O-Philic DVB Cyano Diol Amino 1,2 Amino	H <sub>2</sub> O-Phobic DVB H <sub>2</sub> O-Philic DVB Silica gel Florisil Alumina	H <sub>2</sub> O-Phobic DVB H <sub>2</sub> O-Philic DVB SDB-1/SDB-2 Octadecyl Octyl Cyclohexyl Phenyl Cyano	Amino 1,2 Amino Quaternary Amine	H <sub>2</sub> O-Phobic SC-DVB H <sub>2</sub> O-Philic SC-DVB Cyano Carboxylic Acid Sulfonic Acid	H <sub>2</sub> O-Phobic DVB H <sub>2</sub> O-Philic DVB SDB-1/SDB-2 Octadecyl Octyl Cyclohexyl Phenyl Cyano	H <sub>2</sub> O-Phobic DVB H <sub>2</sub> O-Philic DVB Silica gel Florisil Alumin	H <sub>2</sub> O-Philic DVB Cyano Diol Amino 1,2 Amino
Solvents <sup>3,4</sup>	Hexane Chloroform Dichloromethane Acetone Methanol	Heane Chloroform Dichloromethane Ethyl acetate Methanol	Hexane Dichloromethane Acetone Acetonitrile Methanol Water	Acids, buffers	Acids, bases, buffers	Hexane Dichloromethane Acetone Acetonitrile Methanol Water	Hexane Chloroform Dichloromethane Ethyl acetate Methanol	Hexane Chloroform Dichloromethane Acetone Methanol

<sup>1</sup>Separation Mechanisms

LSC: Liquid Solid Chromatography (Adsorption)

NPC: Normal Phase Chromatography (Bonded Phase Partition)

RPC: Reversed Phase Chromatography (Bonded Phase Partition)

IEC: Ion-Exchange Chromatography (Bonded Phase Ion-Exchange)

SDB: styrene divinyl benzene

DVB: divinyl benzene

H<sub>2</sub>O-Phobic WA DVB: Weak anion exchanger

H<sub>2</sub>O-Phobic SC DVB: Strong cation exchanger

H<sub>2</sub>O-Philic SA DVB: Strong anion exchanger

H<sub>2</sub>O-Philic SC DVB: Strong cation exchanger

<sup>2</sup>Bonded phases listed in order of increasing polarity

<sup>3</sup>Eluting solvents listed in order of increasing polarity

Selective elution can be performed by combining two or more miscible solvents to achieve various degrees of polarity

<sup>3,4</sup>Solvents:

9262 Hexane, ULTRA RESI-ANALYZED™

9257 Chloroform, ULTRA RESI-ANALYZED™

9264 Dichloromethane, ULTRA RESI-ANALYZED™

9260 Ethyl acetate, ULTRA RESI-ANALYZED™

9254 Acetone, ULTRA RESI-ANALYZED™

9255 Acetonitrile, ULTRA RESI-ANALYZED™

9077 Methanol, ULTRA RESI-ANALYZED™

4219 Water, ULTRA RESI-ANALYZED™

## J.T.Baker® BAKERBOND Speedisk™ Extraction Disks

Versatile, silica- and polymer- based J.T.Baker® BAKERBOND Speedisk™ extraction disks are the correct choice for samples from 200 mL to 2 L. Our patented disk is pre-assembled for use in preparing aqueous samples for analysis, and the laminar configuration provides filtration capacity and inlet characteristics that maximize access of analyte molecules to the microparticulate sorbent. The J.T.Baker® BAKERBOND Speedisk™ design resists clogging and ensures high throughput rate, making it ideal to use for analysis of both clear and particle-rich samples. Capacity, recovery, and precision are high due to the unique disk configuration and performance of J.T.Baker® BAKERBOND™ sorbents.

The patented J.T.Baker® BAKERBOND Speedisk™ extraction disk is neither cartridge nor membrane. A thin bed of micro-particles of J.T.Baker® BAKERBOND™ sorbent is supported in a laminar structure to maintain speed and capacity and enhance reproducibility of adsorption. With J.T.Baker® BAKERBOND Speedisk™ extraction disk sample contamination is virtually eliminated. Hands never touch the wetted parts of the pre-assembled disk, the sorbent and disk housing are pre-cleaned, and polyester packaging provides a barrier that repels moisture and eliminates the risk of contamination by plastic additives (e.g., phthalates).



## Advantages

- Shortened extraction time – less than one hour
- Rapid run completion, even with dirty samples
- Reduced solvent consumption and hazardous waste
- Improved precision with its optimized flow path design
- Provides additional technology options to meet EPA requirements
- Compatible with J.T.Baker® standard vacuum processors and the J.T.Baker® BAKERBOND Speedisk™ Extraction Station

## Typical Applications

- Multiresidue Analysis Method of Triazines
- Organochlorine Pesticides and Polyaromatic Hydrocarbons in Drinking Water
- Phenols in aqueous matrix such as SW 846 Method 8041 or EPA Method 528 analytes
- Extraction of Semivolatile Organic Compounds using a Single pH - EPA Method 8270 Analytes
- Extraction of Carbamates from Water using BAKERBOND™ spe SDB-1 or BAKERBOND Speedisk™ H<sub>2</sub>O-Phobic DVB Column
- Extraction of Chlorinated Acids from Water (EPA Method 515.2)
- Extraction of EPA Method 525.2 Analytes from Water
- Extraction of EPA Method 528 and 8041 Analytes from Water
- Extraction of EPA Method 608/8080 Analytes
- Extraction of EPA Method 8081A or 8082 Analytes - Organochlorine Pesticides or Polychlorinated Biphenyls using BAKERBOND Speedisk™ H<sub>2</sub>O-Phobic DVB Extraction Disk
- Extraction of Pharmaceuticals from Water
- Extraction of Polycyclic Aromatic Hydrocarbons from Drinking Water
- Extraction of Phthalate and Adipate Esters from Drinking Water

## J.T.Baker® BAKERBOND Speedisk™ Extraction Disks

Description	General Applications	Quantity per box	Product Number
C18 (octadecyl) 50 mm disks for water samples	For Use in EPA Methods 500 Series, 608, SW 846/3535 and with slightly polar to non-polar industrial samples	20	8055-6
C18 (octadecyl) 50 mm disks for water samples, High capacity		20	8055-7
C18 Polar Plus 50 mm disks for water samples containing slightly polar to non-polar analytes	For extraction of slightly polar to moderately polar compounds such as sulfonyleureas, phenols, chlor-phenoxy acids and urones	20	8061-6
C18 XF (Extra filter) 50 mm disks for crude and dirty samples	For dirty samples: EPA method 608, 846 and slightly polar to non-polar industrial samples	20	8056-6
C8 (octyl) 50 mm disks for diquat/paraquat	For diquat, paraquat, EPA method 549.1	20	8057-6
H2O Phobic DVB (DiVinylBenzene) 50 mm disks for chlorinated acids	For chlorinated acids, EPA Method 515.2. Slightly polar to non-polar analytes	20	8068-6
H2O Phobic DVB (DiVinylBenzene) 50 mm disks, High capacity*		20	8068-7
H2O Philic DVB (DiVinylBenzene) 50 mm disks for chlorinated acids	For SW846 hydrophobic to slightly hydrophilic compounds	20	8072-6
H2O Philic DVB (DiVinylBenzene) 50 mm disks, High capacity*		20	8072-7
Oil & Grease 50 mm disks for hydrocarbons / Oil & Grease	For SW846 hydrophobic to slightly hydrophilic compounds	20	8060-6
SAX (Strong Anion Exchanger) 50 mm disks for haloacetic acids / Dalapon	For EPA Method 552.1, haloacetic acids and Dalapon	20	8058-6

\* High capacity: higher sorbent mass

## General SPE Accessories

Description	Quantity per package	Product Number
Reservoirs for use with 1, 3 and 6 ml spe columns, 15 ml	10	7119-1
Reservoirs for use with 3 and 6 ml columns, 75 ml	10	7120-3
Adaptor (white-colored) PTFE for glass SPE columns	12	4528
Adaptor (blue-colored) for attaching reservoir or luer tip to PP spe columns	10	7300



## J.T.Baker® Standard Vacuum Processors for Extraction Columns and Disks

J.T.Baker® standard vacuum processors offer the flexibility of processing SPE devices of different heights, diameters, or formats during the same experiment. The vacuum processor design is familiar throughout the industry, and it supports all devices and accessories with luer-type fittings such as J.T.Baker® BAKERBOND spe, J.T.Baker® BAKERBOND Speedisk™ columns as well as J.T.Baker® BAKERBOND Speedisk™ extraction disks.

The J.T.Baker® BAKER spe-12G is a 12-port system, suitable for processing up to 12 SPE columns at the same time. The processor comes complete with a glass vacuum basin, a cover with luer fittings and gasket, individual flow control stopcocks, stainless steel needles, a sample collection rack, height-adjustable shelves, and a vacuum gauge/controller. A 24-port system with the same components is also available

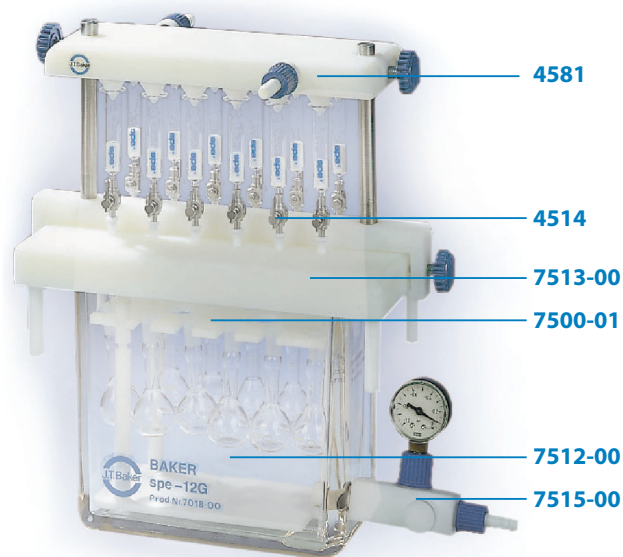
### J.T.Baker® BAKER spe-12G Column Processor (PTFE Design) (7520-94)

J.T.Baker® BAKER spe-12G Column Processor (PTFE Design) includes: 1 borosilicate glass vacuum chamber, 1 white-colored polyamide lid inclusive 12 luer PTFE connectors, plugs (12x) for lid, 1 polyethylene gasket, 12 Luer PP Stopcocks, 1 PTFE sample collection rack set including height adjustable shelves, 1 vacuum gauge/PTFE controller assembly, 1 instruction sheet.

The J.T.Baker® BAKER spe-12G is also available in a glass design (PN 6998-00).

### Accessories for J.T.Baker® BAKER spe-12G Column Processor (PTFE design)

Description	Quantity per package	Product Number
Autosampler Plate	1	7509-1
Drying Top, polyamide for drying (columns) or evaporation (eluates) purpose	1	4581
Luer Stainless Steel Stopcocks	12	4505
PTFE Lined Luer locks (taps), Stainless Steel	12	4514
Stop Cocks, polypropylene	12	7166



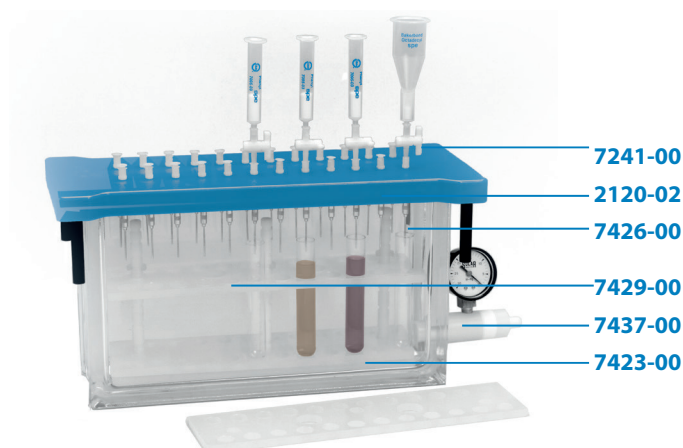
### Extraction Column Processor Replacement Parts for J.T.Baker® BAKER spe-12G Column Processor (PTFE design)

Description	Quantity per package	Product Number
Borosilicate Glass Vacuum / Chamber	1	7512
Polyamide Lid (with 12 PTFE luer connectors)	1	7513
PTFE Sample Collection Rack Set	1	7500-1
Polyethylene Gasket Seals	2	7430
Neoprene Gasket Seals	2	7433
Plugs for lid that fits into luer PTFE connectors (4586)	30	7517
Luer PTFE Stopcocks	12	7514
Luer PTFE Connectors (one-piece)	12	4586
Polypropylene Stopcocks	12	7166
Vacuum Gauge/PTFE Controller Assembly	1 Assembly	7515



## J.T.Baker® BAKER spe-24G Column Processor (PN 7208-00)

J.T.Baker® BAKER spe-24G Column Processor complete-includes: 1 glass vacuum chamber, 1 nylon cover with luer fitting connectors and 1 polyethylene gasket, 24 individual flow control polypropylene stopcocks, 24 stainless steel needles, 1 sample collection rack with 3 support posts, 3 height adjustable shelves, 9 shelf support clips, 1 vacuum gauge/polypropylene controller assembly, 1 instruction sheet.



## Extraction Column Processor Replacement Parts for J.T.Baker® BAKER spe-24G Column Processor

Description	Quantity per package	Product Number
Glass Vacuum Chamber	1	7423
Nylon (blue-colored) Lid (with luer connectors)	1	7426
Polypropylene Rack Set	1	7429
Neoprene Gasket Seals	2	7435
Polypropylene Replacement Needles	12	7436
Vacuum Gauge / Controller Assembly	1 assembly	7437
Plugs for Lid	30	7327
Polypropylene Stopcocks	12	7166
Polypropylene Luer Connector Female	12	2120-2
Polypropylene Luer Connector Male	12	2121-20
Stainless steel needles	12	7292

## Accessories for J.T.Baker® BAKER spe-24G Column Processor

Description	Quantity per package	Product Number
Inert Flow Control Valves	12	7425
Luer PTFE Stopcocks	12	7514
Luer Stainless Steel Stopcocks	12	4505

## J.T.Baker® BAKERBOND Speedisk™ Expanded Extraction Station (PN 8095-06)

Versatile, silica- and polymer- based J.T.Baker® Whatever your space and sample loading requirements, we have a vacuum extraction disk processor to meet your needs - J.T.Baker® BAKERBOND Speedisk™ Expanded Extraction Station used in reservoir, inverted, or remote sample feed modes.

The J.T.Baker® BAKERBOND Speedisk™ Expanded Extraction Station includes a six-port vacuum manifold and the accessories needed to support the extraction of analyte by J.T.Baker® BAKERBOND Speedisk™ laminar extraction disks. The manifold has a rectangular footprint and inter-port spacing to accommodate six, side-by-side, 1 liter sample reservoirs. Each vacuum port has an individual open/close valve.

Includes: extraction station, 2 remote sample adapters, 2 collection chamber and 2 vials, 6 reservoirs of 185ml.



## J.T.Baker® BAKERBOND Speedisk™ Expanded Extraction Station Accessories

Description	Quantity per package	Product Number
Adapters		
<b>Remote sample adapter</b> For transfer of sample from remote container to Speedisk Disk	6	8099-6
Reservoirs		
<b>185 ml Reservoir</b> Holds inverted 1L reservoir or 185 ml sample	6	8097-6
<b>1L Glass reservoir</b> 1L sample reservoir, fits directly into a Speedisk extraction disk	1	8104-1
<b>Collection chamber (includes sample vial)</b>	2	8096-2
<b>Collection vials (Sample vials)</b>	100	8990-1
<b>Sample tray</b> Holds up to four 1L bottle at a tilt to ensure complete sample uptake by remote sample adapter suction tube	1	8101-1
<b>70mm/ Mason Jar Adapter</b> Enables inverted feed directly to extraction disk from sample jar	4	8102-4



## Also available from Avantor: J.T.Baker® brand product portfolio

J.T.Baker® brand chemicals are known worldwide for reliable results that help our customers to achieve new heights in chemistry. Our products are application-optimized to help you get the most from high performance specialty instrumentation used across pharmaceutical, environmental, and other markets.

**ULTRA LC/MS products** — ideal for cutting-edge applications such as proteomics, pharmacokinetics, clinical research and drug discovery

**LC/MS products** — function-tested and optimized for minimal impurities and interference-free baselines, giving you performance you can trust

**HPLC products** — pure and trusted chromatography solvents to improve your processes

**GC solvents** — low UV absorbance, residue after evaporation and water levels that create flat base lines and extend column life in demanding gas chromatography analysis applications

**Acids** — full range of products to prepare your samples with the utmost consistency, highest purity and stability, offered in three different grades — ppt, ppb or ppm trace metal acids

**Volumetric solutions** — ready-to-use solutions manufactured in large lots that will save you the time and expense of preparation and standardization, assisting customers in streamlining their high-volume analytical work

**Biosolvents** — sophisticated reagents proven to expand process control, reduce variables, maximize coupling efficiencies and boost yields

**Bioreagents** — high purity reagents tested for use in biotechnology applications, such as electrophoresis, and liquid chromatography. Where applicable, tests include DNase, RNase, Protease, heavy metals and insoluble matter

**Salts** — For reliable performance, unmatched lot-to-lot consistency, interference-free chromatography separations and low UV absorption and fluorescence — synonymous with dependable performance



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