



Our high recovery SPE disks won't keep you waiting...

Features of GPI's Fiber SPE Disks Include:

- Constructed of glass fiber, instead of Teflon® for improved flow rates.
- Thickness of fiber disk helps trap and isolate particulates.
- Fiber disk with integrated phase promotes even distribution and best recoveries.
- Glass fiber allows high loading of phase to maximize disk capacity.
- Forms an excellent seal in all extraction manifolds.
- Available in 47mm or 90mm sizes, in a variety of phases.

GPI's six position Accu•prep 7000™

SPE Manifold features an integrated Teflon® 3-way sample valve at each position to support the Sample Reservoir, SPE disk and the eluent Collection Vessel. The valve allows the analyst to direct extracted sample to waste, and with a turn of the handle, route the eluent to the collection vessel. *See page 14. Also see our LCM Manifold, page 13.*

CPI: Your Source for Instrument Consumables

- Electron Multipliers
- PID Lamps
- Graphite Furnace Tubes
- ICP Glassware
- Single & Multi-Element Standards
- Pump Tubing

Solid Phase Extraction and Other Sample Preparation



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CPI International recognizes the growing importance of solid phase extraction, and we offer a wide range of SPE products to meet even the most specialized need. Among these products are our own patent-pending disks. These disks solve several technical problems that have plagued SPE for years, will run samples that no other SPE product is capable of and cost less than competing disks. That's one example of the innovation and value you'll discover in our complete range of SPE supplies.

**Solid Phase
Extraction & Other
Sample Preparation**



FastFlo™ pre filter, CPI P/N
4350-010089 (47mm) or
4350-010090 (90mm)

NEW!

CPI offers the following free resources to help your laboratory prepare for upcoming EPA Method 1664 for Oil and Grease analysis. These materials will be sent to your laboratory by next day service. Just call, fax or e-mail CPI to request these items.

Oil & Grease SPE Disks-EPA Method 1664

Pursuant to the Montreal Protocol on Substances that Deplete the Ozone Layer, worldwide countries continue progress toward effectively phasing out the use of all Chlorofluorocarbons. In connection with these efforts, the U.S. EPA has published new Method 1664 to replace existing Oil & Grease Method 413.1 which uses Freon-113, a Class I CFC, as the extraction solvent. New Method 1664 employs n-Hexane as the extraction solvent instead of Freon® and most importantly, permits use of solid phase extraction techniques.

When compared to liquid/liquid extraction, CPI solid phase extraction disks for Oil & Grease are much easier to use, cut extraction time by at least two-thirds, require less than half the solvent, do not form emulsions during sample preparation, and provide equivalent or superior extraction performance:

- **Speed Extraction Time** – *Faster flow rates on most samples*
- **Save Money** – *Less expensive than Liquid/Liquid extraction*
- **Sediment Trapping Design** – *Patented design traps sediment while ridges allow sample to pass*
- **Eliminate Emulsions and Freon®** – *Eliminate shaking, emulsion formation, and reduce solvent usage*

Oil & Grease SPE Disks & Supplies

| Description | CPI P/N | Replaces JT Baker® P/N (Varian®) P/N |
|--|--------------------|--------------------------------------|
| Oil & Grease SPE Disks, 47mm, 20/pk | 4350-13 | 7522-06/8060-06 (1214-5017) |
| Oil & Grease SPE Disks, 90mm, 10/pk | 4350-139 | 7522-09 (1214-5016) |
| FastFlo™ Prefilter, for 47mm glass, 20pk | 4350-010089 | n/a |
| FastFlo™ Prefilter, for 90mm glass, 10pk | 4350-010090 | n/a |
| Oil & Grease Standard, 100mL | 4401-1664-2 | n/a |

The above standard contains Hexadecane and Stearic Acid at 4mg/mL each in Acetone.

Free Training Material for EPA 1664

| Description | CPI P/N |
|---|--------------------|
| Application Note, Method 1664 <i>"Optimization of glass fiber solid phase extraction disks for the determination of n-hexane extractable materials"</i> <i>This application note covers use of SPE techniques under the requirements of proposed Method 1664. It includes numerous tips for performing the extraction and optimizing recoveries and precision. In addition, this application note compares the performance of five brands of Oil and Grease SPE disks on the market and highlights their strengths and drawbacks. It is a helpful resource for saving method development time in the lab.</i> | 4350-050002 |
| Video Cassette - 1664 & CPI's Accu•prep 7000™ | 4350-050003 |
| Method 1664 <i>Copy of the current draft EPA Method 1664</i> | 4350-050004 |
| Samples of CPI Oil & Grease SPE disks (47mm) <i>Comes complete with step-by-step instructions for performing the extraction to meet Method 1664 performance criteria.</i> | 4350-13S |

Oil & Grease SPE Disks

Using SPE under EPA Method 1664

Performance Based Method

The U.S. EPA has made Method 1664 “performance-based”. This means that although the method is written to include liquid/liquid extraction and requires using n-hexane as the solvent instead of Freon®, the analyst is “permitted (to) modify the method” to save solvent, time and money.

Advantages of SPE for Oil and Grease Analysis

In section 9.1.2, Method 1664 proposes solid phase extraction as a possible alternate extraction technique. CPI also believes that Oil and Grease analysis is well suited for SPE due to the opportunity to greatly reduce solvent volume and extraction time. Using SPE for Oil & Grease analysis in the laboratory means significant material and labor cost savings and improved turnaround time to clients.

Using SPE for Method 1664

According to the Method, the first step in “demonstrating equivalency” of the “modified method” is to determine Initial Precision and Recovery (IPR) using the modified method. The results obtained must meet or exceed stated method limits. At CPI, we’ve done research up front to ensure that your lab receives required recoveries and precision the first time you try our Oil & Grease SPE disks. The results of our IPR analysis are presented below.

| Key Data | Required Limit Per 1664 | CPI O&G Disk Performance |
|---------------|-------------------------|--------------------------|
| HEM Precision | 10% | 6.48% |
| HEM Recovery | 83 - 101% | 99.25% |
| HEM MDL | 1.4mg/L | .78mg/L |

| Other Data | CPI O&G Disks |
|----------------------------|---------------|
| Standard Deviation | 0.378 |
| RSD | 2.20% |
| Extraction Time | 25 min. |
| Elution Time | 5 min. |
| Total Solvent Used | 45mL |
| Solvent Saved by Using SPE | 45mL |

(Note that liq/liq extraction per 1664 requires 90mL of solvent)

Summary of Analysis Performance data above was measured using CPI Oil & Grease SPE disks. Samples were spiked with a hexadecane/stearic acid spiking solution. The purpose of this analysis was to measure MDL and Initial Precision and Recovery (IPR) and compare to Method specified limits (see section 9.2 of 1664). Based on the above, CPI Oil & Grease disks met method requirements for MDL and IPR.

| Flow Rate Comparison - 1 Liter Sample | | | |
|---------------------------------------|---------------|---|---|
| Sample Type | CPI O&G Disks | Membrane Disks | Other Glass Fiber Disks |
| Citrus Producer | 1hr. 38min. | Clogged at 2 hrs., after filtering only 200mL. Total Time: 5hrs | Clogged at 3hrs., after filtering only 300mL. Total Time: 4hrs. |
| Foods Manufacturer | 1hr. 48min. | 2hrs. 18min. | 4.5hrs. |
| Airline | 21min. | 56min. | 41min. |
| Car Wash | 25min. | 42min. | 37min. |



Solid Phase Extraction & Other Sample Preparation

“ In recognition of advances that are occurring in analytical technology, the analyst is permitted certain options to improve separations or lower the costs of measurements, provided that all performance specifications are met. These options include alternate extraction and concentration devices and procedures such as solid-phase extraction...”

Excerpt from EPA Method 1664, Section 9.1.2, “Quality Control”, Rev. April 1995.

Performance that meets Method Requirements...

Call for free samples of CPI Oil & Grease Disks

**Solid Phase
Extraction & Other
Sample Preparation**



Nu•phase™ SPE Disks

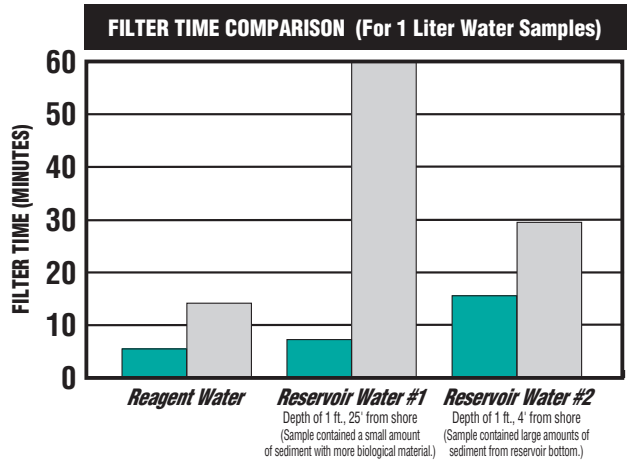
Many laboratories choose Solid Phase Extraction (SPE) as an efficient, accurate method for analyte concentration prior to GC analysis. SPE offers significant advantages over conventional liquid/liquid extraction. These advantages include faster extraction and concentration time, reduced solvent usage, and lower required sample volume.

Today, there is a better alternative to SPE cartridges or Teflon® SPE disks...

Why wait for Teflon® SPE Disks to filter particulate samples?

Our goal in developing a high-flow, high-retention SPE disk was to increase sample flow rate without compromising recoveries. To meet this objective, we use a porous

glass-fiber filter media to contain the phase instead of Teflon® or a glass frit (both of which impede flow rate due to their density and propensity for clogging). The result is an SPE disk yielding reproducible recoveries at an outstanding flow rate, as indicated at right.



Note: All samples were extracted using a 47mm filter flask apparatus. Teflon® disks were run at 15 in. Hg.

60% faster flow rates!

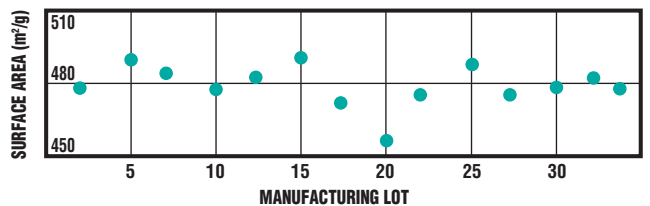
Reproducible results!

We use only the highest quality Silica...

Nu•phase™ SPE disks are manufactured with only the highest quality bonded-phase silica. With a mean pore size of 60Å, our silica provides maximum total surface area with even bonding. Our specialized, controlled manufacturing procedures result in only nominal variances in total surface area from lot to lot.

Even Silica distribution through unique, patent pending processes...

Reproducible performance depends upon consistent and even loading of the bonded silica from disk to disk and from lot to lot. To help promote consistency in loading, we incorporate our bonded silica during production of the fiber filter media. Through this unique patent pending manufacturing technology, we are able to achieve an SPE disk with maximum loading and even phase distribution throughout the entire depth of the fiber media.



| Nu•phase™ SPE Disks | | |
|--------------------------------------|---------|----------------------------------|
| Description | CPI P/N | Replaces JT Baker® (Varian®) P/N |
| C18 Nu•phase™ SPE Disks, 47mm, 20/pk | 4350-12 | 7460-06/8055-06 (1214-5004) |
| C18 Nu•phase™ SPE Disks, 90mm, 10/pk | 4350-14 | 7460-09/8056-06 (1214-5007) |

ORDERING COLITAG SPE TOX/AOX GC AAS ICP STANDARDS INDEX

LCM Manifold & Quick Dry Module

Oil & Grease SPE Analysis At Its Most Efficient & Economical

Reap the rewards of the Oil & Grease Testing Market without the budget-busting expense of high priced equipment. Get the affordable LCM Manifold from CPI International!

For less than the cost of a couple cases of Freon, you can participate in the benefits of SPE for Oil & Grease. The LCM makes it all possible:



**CPI P/N 4350-010500
LCM Manifold, 3 Station Complete**

- Designed exclusively for Method 1664
- Integrated 3-way valve system for eluting without disassembly
- Elute directly to your weigh dish eliminates transfer errors
- Aspirate directly from your sampling bottle - minimal cleanup
- Small footprint takes up minimal space under your hood
- No glassware, no costly breakage
- Unlimited expandability through linking
- User-friendly design
- Affordably priced for a true competitive edge

You can afford to compete in the Oil & Grease Testing Market.

Low in cost - but high in quality - this 47mm disk extraction manifold can process three samples simultaneously. Constructed of aluminum, UHMW polyethylene and stainless steel, the LCM Manifold is built for durability and convenience. No fragile glass unions, tubing, or reservoirs to break. NO individual vacuum manifold bars to purchase. LCM Manifolds are designed to be linked in sequence to provide an increased number of positions.

CPI's Quick Dry Module takes the guesswork out of your Oil & Grease evaporations.

- Evaporates 3 samples simultaneously
- 30ml of hexane to dryness in 20 minutes
- Accommodates standard 70mm aluminum weigh dishes
- Faster and safer than a hotplate

Most analyte loss in Oil & Grease analysis occurs while evaporating hexane as the analytes burn off at temperatures just above the boiling point of the solvent. The QDM uses NO HEAT and can evaporate 30ml of hexane in only 20 minutes. Using vacuum pressure the QDM safely and effectively evaporates your samples. It's faster than a hot plate and never burns a sample.



**CPI P/N 4350-010505
Quick Dry Module, 3 Station Complete**

Solid Phase Extraction & Other Sample Preparation

CPI Nu•phase SPE disks offer superior analytical performance and significantly faster flow rates, all at an economical price.

**Solid Phase
Extraction & Other
Sample Preparation**

Accu•prep 7000™ SPE Manifold

As solid phase disk extraction continues to gain acceptance as a quick, solvent saving extraction technique the modern laboratory will increasingly depend on a high production, durable extraction device to meet growing sample preparation needs. More than ever, devices with maximum capacity, rugged construction and simplicity in design are being sought as an alternative to temporary, fragile and frustrating less expensive units. The Accu•prep 7000™ SPE manifold from CPI is designed specifically to meet these needs. With unlimited expandability, exceptionally durable construction, and an integrated, production-oriented design, the Accu•prep 7000™ is ready to perform all your current and future solid phase disk extractions.

**Unique features,
durability and
economical price
set the Accu•prep
7000™ ahead of the
competition...**

Unique Features of The Accu•prep 7000™

Our integrated 3-way valve system allows eluting to be performed directly after extraction without disassembly of the manifold. In extraction mode, the collection vessel may be removed without breaking the system vacuum. The valve is constructed entirely of Teflon.

3-way valve includes 316 SS disk support screen and incorporates a unique Aluminum threaded Screw Cap to provide simple, leak-free attachment of 300mL, 600mL or 1,000mL sample reservoir. Using an ingenious adapter, the valve easily converts to accept 90mm disks.



**Accu•prep7000™
Advantages:**

- Unlimited Expandability through Linking
- Offered Complete or Station by Station
- Economically Priced
- Exceptional Durability, Stability and Inertness
- Compact, Efficient Size
- User-Friendly Design for Maximum Productivity
- Designed for All SPE Sample Prep Methods
- Accepts Many Standard Collection Vessels
- Warranted for Complete Satisfaction

In extraction mode, waste travels down a clear drain, allowing the analyst to monitor extraction flow rate.

Our 3-way valve system incorporates standard GPI 24-410 internal threads to accept a range of commonly available collection vessels. An adapter allows 24/25 or 24/40 ground-joint boiling flasks to be used also.

Accu•prep units link together via the vacuum attachments at each end of the base, allowing unlimited expandability and the ability to conserve space. Durable base supports six extraction positions with a compact footprint of only 10"W x 17"L. Design distributes load evenly to prevent tip-over when Manifold is fully loaded. Hard-anodized finish will not corrode or discolor over time.

Accu•prep 7000™ SPE Manifold

High Productivity, Simplicity.

The key to the simplicity of the Accu•prep 7000 is the 3-way sample valve. This component acts as an inert valve, while also supporting the Glass Sample Reservoir, SPE Disk and the Sample Collection Vessel. **This one part accomplishes what three parts do in competing brand manifolds.** Fewer parts means less cleaning time and less pieces to replace.

The 3-way sample valve is designed to route the extracted sample to waste and with a turn of the valve handle, route the eluent to the Sample Collection Vessel (*Figure 1*). Because the collection vessel mounts to the valve, you don't have to disassemble the manifold to access the eluent. The routing valve for each position can be adjusted to control vacuum pressure in both the extraction and eluting modes. Since the valve isolates vacuum pressure to one mode or the other, the eluent may be removed while the next SPE disk is being conditioned. The 3-way sample valve also includes an off position to shut down the individual station when not in use.

Flexibility

Whether you are performing Oil and Grease Method 1664, Method 525.1, 525.2, 550.1, 608, or 549.1, our Manifold has been designed to facilitate your analysis.

For easy loading and leak-proof sealing of the SPE disk, the Accu•prep 7000™ utilizes a unique threaded Screw Cap to hold the glass sample reservoir in place over the disk (*Figure 2*). To install an SPE disk, the Screw Cap is simply loosened enough to permit removal of the glass sample reservoir. Once the reservoir is slid out of position, an SPE disk may be set in place over the 316 stainless support screen. The reservoir is then replaced and the screw cap tightened to seal the disk. This unique design allows for simple replacement of the SPE disk with minimal disassembly of the manifold.

The Accu•prep 7000™ allows the analyst to easily convert from 47mm to 90mm disks on a station by station basis (*Figure 3*). Using CPI's unique 90mm adapter, a 47mm station can be easily converted to run 90mm disks by simply removing the 47mm glass sample reservoir and Screw Cap. Once removed, the 90mm adapter assembly is simply threaded onto the top of the 47mm station to achieve a guaranteed leak-proof seal (note that the Accu•prep 7000™ may also be ordered with any number of 90mm Stations, eliminating the need to purchase the 90mm adapter).

The Accu•prep 7000™ 3-way valve also includes a GPI 24-410 universal thread size at the collection vessel attachment, allowing the analyst to select between a range of vessels, including flat bottom 40mL VOA vials and 70mL test tubes (*Figure 4*). An adapter is also available to accept 24/25, 24/40 or 19/22 ground-joint vessels, if desired.



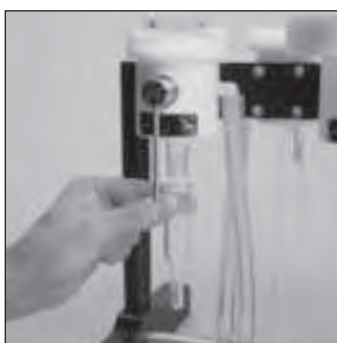
(Figure 1)



(Figure 2)



(Figure 3)



(Figure 4)

Solid Phase Extraction & Other Sample Preparation

Changing the
Accu•prep 7000™ to
run 90mm disks is
fast and easy, with
no handling of fragile
glass assemblies!

**Solid Phase
Extraction & Other
Sample Preparation**

Accu•prep 7000™ SPE Manifold

The Accu•prep 7000™ is available complete or station by station. You may purchase the manifold complete with six extraction stations or purchase the six position manifold rack (CPI P/N 4350-352), and one or more extraction stations as desired. 90mm stations are also available (CPI P/N 4350-389). Accu•prep 7000 manifolds are designed to be linked in sequence to provide an unlimited number of positions.



**The Accu•prep 7000™
can be ordered
complete or station
by station for your
convenience!**

**Choose any
combination of 47mm
or 90mm stations!**

Accu•prep 7000™ SPE Manifold

| CPI Description | P/N |
|--|-----------------|
| Accu•prep 7000™ System Complete <i>Includes pre-assembled manifold rack with six 47mm Extraction Stations. Each Extraction Station comes complete with a 300mL Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-07 |
| Accu•prep 7000™ System Complete (47mm, 1000mL) <i>Includes pre-assembled manifold rack with six 47mm Extraction Stations. Each Extraction Station comes complete with a 1000mL Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-08 |
| Accu•prep 7000™ System Complete (90mm, 1000mL) <i>Includes pre-assembled manifold rack with six 90mm Extraction Stations. Each Extraction Station comes complete with a 1000mL Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-09 |
| Accu•prep 7000™ Rack <i>Includes pre-assembled Manifold Rack without Extraction Stations. Stations may be purchased as needed to build the Manifold from one to six positions.</i> | 4350-352 |
| Single Extraction Station, 47mm, for Accu•prep 7000™ (300mL) <i>A complete 47mm Extraction Station used to expand the Accu•prep 7000 up to six total stations. Comes complete with mounting hardware, Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-380 |
| Single Extraction Station, 47mm, for Accu•prep 7000™ (1000mL) <i>A complete 47mm Extraction Station used to expand the Accu•prep 7000 up to six total stations. Comes complete with mounting hardware, Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-383 |
| Single Extraction Station, 90mm, for Accu•prep 7000™ (1000mL) <i>A complete 90mm Extraction Station used to expand the Accu•prep 7000 up to six total stations. Comes complete with mounting hardware, Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-389 |
| Adapter Kit, 47mm to 90mm <i>Converts one 47mm station to accept 90mm SPE disks. Includes 1000ml Glass Sample Reservoir, Disk Support Screen and 24 x 200mm Sample Collection Vessel.</i> | 4350-375 |
| Adapter Kit, 90mm to 47mm <i>Same as above, but converts 90mm position to 47mm position.</i> | 4350-376 |

Manifold Replacement Parts and Accessories

| Description | CPI P/N |
|--|-------------|
| Oil & Grease Nu•phase™ SPE Disks, 47mm, 20/pk | 4350-13 |
| Oil & Grease Nu•phase™ SPE Disks, 90mm, 10/pk | 4350-139 |
| C18 Nu•phase™ SPE Disks, 47mm, 20/pk | 4350-12 |
| Glass Sample Reservoir, 47mm, 300mL | 4350-379 |
| Glass Sample Reservoir, 47mm, 1,000mL | 4350-432 |
| Glass Sample Reservoir, 90mm, 1,000mL | 4350-431 |
| FastFlo™ Prefilter, for 47mm glass | 4350-010089 |
| FastFlo™ Prefilter, for 90mm glass | 4350-010090 |
| Disk Support Screen | 4350-236 |
| Sample Collection Vessel, 24mm x 200mm, 70mL, 36/pk | 4250-52 |
| Sample Collection Vessel, 24mm x 95mm, Flat Bottom, 40ml, 144/pk | 4250-51 |
| Screw Cap, Aluminum 47mm | 4350-358 |
| Screw Cap, Aluminum 90mm | 4350-359 |
| Screen, 47mm | 4350-236 |
| Screen, 90mm | 4350-336 |
| Flask, Flat Bottom, 125ml | 4350-420 |
| Adapter Screw to 24/25 and 24/40 | 4350-414 |
| Adapter Screw to 19/22 | 4350-415 |
| Keck Plastic Clamp, 6/pk (for 19/22 joint) | 4350-416 |
| Keck Plastic Clamp, 6/pk (for 24/25 and 24/40 joints) | 4350-417 |

Solid Phase Extraction & Other Sample Preparation

Call for free samples of CPI Nu•phase™ SPE disks for Oil & Grease analysis or other EPA methods

NEW!

CPI's unique FastFlo™ prefilter is designed to fit into the glass sample reservoir of the Accu•prep 7000™. This prefilter seals against the walls of the reservoir to help prevent heavy particulates from clogging the surface of the disk. This filter is specifically designed for Oil & Grease samples.



FastFlo™ pre filter, CPI P/N 4350-010089 (47mm) or 4350-010090 (90mm)

A Complete SPE Vacuum System



A Manifold **B** Tubing **C** Aspirator **D** Trap in Ice Bath **E** Vacuum Pump

System Components

| | | |
|---|--|-------------|
| A | Accu•prep 7000™ SPE Manifold, 6 position | 4350-08 |
| B | Vacuum Tubing, 10 feet | 4350-010109 |
| C | Aspirator Bottle | 4350-010110 |
| | Two Hole Rubber Stopper | 4350-010118 |
| D | Cold Vapor Trap, 1000ml | 4350-010111 |
| E | Vacuum Pump, 1/3 hp, 26" Hg | 4350-010112 |



Two Hole Rubber Stopper for Aspirator Bottle, CPI P/N 4350-010118

Count on CPI for a Complete System for your SPE Disk Extractions...

**Solid Phase
Extraction & Other
Sample Preparation**



**CPI's In
Line Sample
Temperature Probe**

- PFA Teflon® coated temperature probe
- User selectable to control and monitor via block or sample temperature
- Fits all versions (50ml, 70ml, 100ml & miniMOD) of the CPI Mod Block

You can now measure and control your digestion process using sample temperature. The new in-line temperature probe incorporates a PFA Teflon® coated RTD Sensor for reliable monitoring and temperature control of your samples. Using the new in-line temperature probe you can now optimize your digestions to maintain a higher sample temperature with no operator involvement.

Works hand-in-hand with CPI's ModBlock Metals Digestion Unit.

ModBlock™ Metals Block Digester

Eliminate the Hot Plate Shuffle with CPI's ModBlock™!



Simplify your Metals Digestion and Improve Sample Throughput with these features:

- 70mL - 24, 48, or 96 (2 x 48) or 100mL - 33 or 66 (2 x 33) Sample Capacity
- Disposable Metal-Free Polypropylene Vessels - 70mL and 100mL formats
- Small Footprint
- Meets standard requirements for EPA 3000 series Method
- Temperature Range from Ambient to 180°C
- Corrosion Resistant Treated Graphite Block ensures no metals contamination
- Modular programmable PID controller sits outside the fume hood & can operate multiple ModBlock™ units simultaneously to efficiently & economically increase throughput

ModBlock Metals Digester

Corrosion Resistant...

The ModBlock™ is engineered to withstand the harsh environment of the metals digestion lab. The entire system is constructed of Graphite and advanced composites that eliminate the possibility of corrosion and metals contamination. Disposable polypropylene sample tubes mean no cross contamination and significant time savings. High throughput is the name of the game in today's competitive world and the ModBlock™ puts you and your lab in the lead by digesting up to 96 samples at a time.

Sleek and Slim...

The narrow width of the ModBlock™ maximizes your fume hood space by taking advantage of the depth of your hood, freeing the front working area, while the low profile allows you to keep the sash of the hood down ensuring proper exhaust of the acid fumes.

ModBlock™ Metals Block Digester

Modularity Means Long Life, Ease of Use and Low Cost Capacity Enhancement...

The unique design of the ModBlock™ incorporates an external controller, which can be placed outside the fume hood. This guarantees that the electronic components are not exposed to acid fumes and thus will have a longer useful life.

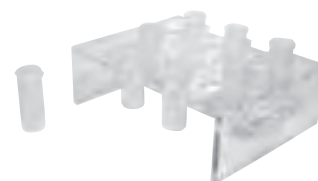
Complete Control of Your Digestion...

The ModBlock™ system is regulated by a state-of-the-art programmable PID controller. The easy-to-use control overlay makes programming simple. With the push of a button, you operate each ModBlock™ unit independently, with complete temperature and time precision. For each block, you can select between a manual or automatic mode. The manual mode will keep your ModBlock™ hot all day and also give you temperature and timer control with an audible and visible alarm when time has elapsed on each block. The automatic mode also gives complete temperature control and an audible and visible time-out alarm, but will automatically start your samples heating and/or automatically shut power off to cool at the end of the selected time period.

Convenient Sample Racks and Disposable Tubes...

The ModBlock™ also includes a convenient racking system that allows you to load and remove all samples from the block quickly. Our disposable, metal-free polypropylene sample tubes allow 70mL and 100mL capacity.

Solid Phase Extraction & Other Sample Preparation



| 70mL ModBlocks & Accessories | |
|---|-------------|
| Description | CPI P/N |
| miniMOD™, 24 Place Unit <i>Includes 24 place miniMOD™ block, external PID controller, 2 sample racks and qty. 400-70mL hinged-cap tubes. Other specifications: 110 VAC power, 750 Watts, In-line power fuse.</i> | 4370-010400 |
| ModBlock™, 48-Place Unit, <i>Includes a 48-place ModBlock™, external dual channel controller to allow future capacity upgrade to 96 places, 2 sample racks and qty. 400-70mL hinged-cap tubes.</i> | 4370-010007 |
| ModBlock™, 96-Place System <i>Includes two 48-place Blocks, external dual channel controller, 4 sample racks and 800-70mL hinged-cap tubes.</i> | 4370-010008 |
| ModBlock™, 48-Place Block - Upgrade <i>Includes 48-place ModBlock™, 2 sample racks and 400-70mL hinged-cap tubes.</i> | 4370-010010 |
| Sample Tubes, with hinged-caps, 70mL, 400/pk | 4370-010020 |
| Watch Glass, Ribbed, Polypropylene, 400/pk | 4370-010024 |

| 100mL ModBlocks & Accessories | |
|---|-------------|
| Description | CPI P/N |
| ModBlock™, 33-Place Unit, Dual Channel <i>Includes a 33-place ModBlock™, external dual channel controller to allow future capacity upgrade to 66 places, 2 sample racks and qty. 250-100mL hinged-cap tubes.</i> | 4370-010226 |
| ModBlock™, 66-Place, Dual Channel <i>Includes two 48-place Blocks, external dual channel controller, 4 sample racks and 500-100mL hinged-cap tubes.</i> | 4370-010228 |
| ModBlock™, 33-Place Block - Upgrade <i>Includes 33-place ModBlock™, 2 sample racks and 250-100mL hinged-cap tubes.</i> | 4370-010227 |
| Sample Tubes, with hinged-caps, 100mL, 250/pk | 4370-010202 |

ModBlock™ Distillation System

16 Position ModBlock Distillation System ideal for EPA methods 335.4

CPI's new ModBlock Distillation System has been designed to support methods for drinking, ground, surface and sea waters – as well as domestic and industrial wastes.



*CPI's Cyanide
Distillation
Glassware is
compatible with
the ModBlock
heating system.*



- 16 simultaneous distillations
- Superior temperature control using the CPI ModBlock Heating System
- PID temperature control with digital display
- 90% reduction in solvent usage and sample size versus conventional method (saves on waste disposal)
- Can also be used for trace metal digestions
- Glass & accessories can be used to upgrade existing 70ml ModBlock systems

NitroVap Sample Concentrator

Introducing the NitroVap – the sample concentrator/evaporator that ACCELERATES your sample preparation process!

- 48 Sample capacity - ideal for running 2 complete batches including blanks and QC
- Heated nitrogen for maximum speed of evaporation
- Small footprint (12" x 20") conserves bench space
- Gas flow and heater control allows user to set any gas temperature
- Hydraulic lift system for ease of use



Today's Chromatographs offer high levels of automation allowing for rapid, unattended sample analysis. Until now the bottleneck has been the laboratory's ability to prepare samples fast enough. Now your lab personnel can keep pace with the instruments. The NitroVap uses warmed nitrogen to gently evaporate solvent. This allows for fast, effective concentration of samples without the dangers of direct heat. The NitroVap is up to twice as fast as a standard nitrogen evaporator, and no direct heat means virtually no analyte loss!

TKN Digestion Block

*Solid Phase
Extraction & Other
Sample Preparation*

CPI's 20-Place TKN Digestion Block and Accessories

Range from room temperature to 450°C is able to satisfy all the requirements for standard and Kjeldahl digestions.

Sample size is up to 15 ml for liquid or 5 g for solids, digestion times vary according to the treated material and to the methods used. CPI TKN Digestion Systems allow you to work in reproducible conditions, with full safety, saving chemicals and work space in comparison to the traditional methods. The system is manufactured from stainless steel and protected by special resin and paints giving a high resistance to chemicals and mechanical corrosion. The heating block holding the test tubes allows an optimal distribution of heat at all the selected temperatures. The heater is sealed within the instrument to avoid damage in the case of accidental liquid spills.



**CPI P/N 4370-010250
TKN Digestion Block**

A dedicated microprocessor controller controls the temperature of the heating block. The temperature probe does not require manual calibration. An automated calibration is performed by the electronics on each run. This allow for very good precision and repeatability of tests. It is possible to upgrade the software for use with a personal computer.

The system can store up to 20 programs. For each program it is possible to select up to four temperatures with the corresponding durations. Per GLP (Good Laboratory Practice) requirements it is possible to send the data related to a performed test to a printer or to a personal computer for storage.



**CPI P/N 4370-010256
Optional 2-Tier
Support System**



**CPI P/N 4370-010251
Sample Rack**



**CPI P/N 4370-010255
Exhaust Manifold**



**CPI P/N 4370-010254
Fume Scrubber**