Section 3: Product Characteristics

Formulation:	90% adsorbent particle 10% PTFE
Thickness:	0.5 mm ± 0.05 mm
SPE Flow Rate:	< 10 min/L DI H_2O @ 25°C @ 20 in Hg (47 mm disk)
Solvents:	Compatible with all organic solvents
pH:	Stable between 2 and 12 Range may be extended by short contact times.

Handling and Storage
Disks should be stored at room temperature in a desiccator due to the adsorptive properties of the disk.

Recommended Usage
Vacuum apparatus is available from a number of different suppliers and includes in-line filter holders and manifolds. Buchner funnels are not recommended.

Applications
Empore™ Extraction Disks are used for extraction of semi- and non-volatile organic compounds from water samples or soil extracts.

Section 4: Customer Contact Information

Global Customer and Technical Service

Phone	1-800-541-6593
Fax	1-610-932-4158
Web	www.CDSAnalytical.com/Empore

⚠ **WARNING: To reduce the risks associated with improper disposal and/or handling of contaminants in used cards:** Take appropriate steps to assess the disposal required for any altered product or materials added to the product. (Alteration of the product or the addition of other materials to the product may require different disposal methods.

CDS Analytical, LLC
465 Limestone Road
Oxford, PA 19363 USA
Phone: 1-800-541-6593
Fax: 1-610-932-4158
Website: www.CDSAnalytical.com/Empore

34-8711-5020-6

Empore™
Extraction Disks For Environmental Analysis

with Octyl (C8) or Octadecyl (C18) for use with 47 mm and 90 mm extraction apparatus

Instructions for Use

Empore™ Extraction Disks provide an efficient alternative to liquid/liquid extraction for sample preparation. A CDS process is used to entrap adsorbent particles into a matrix of inert PTFE to create a mechanically stable sorbent disk. The disks can be used for purification and concentration of analytes for analysis. Advantages of Empore Extraction Disks include rapid filtration, reduced solvent usage and a reduction of analytical interference.

The enclosed instructions are general guidelines for use. Sample volume, solvent type and conditioning may be changed to adapt to specific methods and analytes as needed.

Section:

Visit our website at www.CDSAnalytical.com/Empore

Section 1: Extraction Method with Octyl (C8) or Octadecyl (C18) Disk

Step A: Sample Preparation

- Microbiological growth can be retarded by lowering sample pH to 2.
- CDS Filter Aid 400 and/or prefiltration may be helpful if the sample contains excessive suspended solids.

Step B: Extraction Disk Conditioning

Disk conditioning is critical for a successful extraction. Conditioning provides a good interface between the sorbent and the sample matrix. FAILURE TO CONDITION THE EXTRACTION DISKS PROPERLY WILL RESULT IN ERRATIC AND LOW RECOVERIES.

1. Center the extraction disk on the base of the filtration apparatus and clamp the reservoir on top of the disk*.
2. Wash the disk with 10 mL of elution solvent.**
3. Apply vacuum to dry the disk.
4. Add 10 mL methanol to the disk. Apply vacuum and pull approximately 1 mL through the disk. Vent the vacuum and allow the disk to soak for 30 seconds.
5. Apply vacuum and draw methanol through the disk leaving a small amount of methanol on surface.
6. Add 10 mL of reagent grade water to the reservoir, apply vacuum and draw the water through the disk until the water surface just covers the disk surface.

If a disk should become dry while conditioning with methanol or water, repeat steps 4 through 6.

* Place a vial in the vacuum apparatus to collect and dispose of wash and conditioning solvents. Remove vial prior to sample extraction.

** Suggested solvent volume used in the extraction method will vary according to the disk diameter and the amount of filter aid materials. A general guideline for solvent volumes is to completely cover the disk and bed of filter aid such that the solvent just covers the surface.

Step C: Sample Extraction

- Pour the sample into the reservoir and apply vacuum to draw through the disk. Flow rate is dependent on vacuum setting and solids content of the sample. However, recoveries are not affected by flow rate.
- After sample extraction is complete, remove residual water from the disk by applying vacuum to dry the disk for approximately 5-20 minutes.

Step D: Sample Elution

Two elutions with 10 mL solvent are recommended.

- Place tip of filter base into the collection vessel (see diagram).
- Add 10 mL elution solvent to sample container, carefully rinsing the sides. Transfer solvent from sample container to reservoir with a pipet, washing the walls of the reservoir in the process.
- Apply vacuum and draw approximately 1 mL elution solvent through the disk. Vent the vacuum and allow the disk to soak for 30 seconds before reapplying vacuum to dry the disk.
- Repeat this process with a second aliquot of eluting solvent.

Section 2: Empore™ Manifold System Setup

CDS Part # 201-47 and 201-90