

# SOLVENT TRAY

MOBILE-PHASE RECYCLER FOR LIQUID CHROMATOGRAPHY

The  
Chromatography  
Solvent  
Recycler  
For  
Purists



**axxiom**  
CHROMATOGRAPHY

# SOLVENTTRAK

## What Does SolventTrak Do?

*SolventTrak™* from **Axxiom Chromatography** is a solvent conservation system designed to recycle uncontaminated solvents used in isocratic HPLC processes. In most systems, a high percentage of the mobile phase can be recycled and reused which saves money by reducing solvent consumption and disposal costs.

## Why is SolventTrak Reliably Accurate?

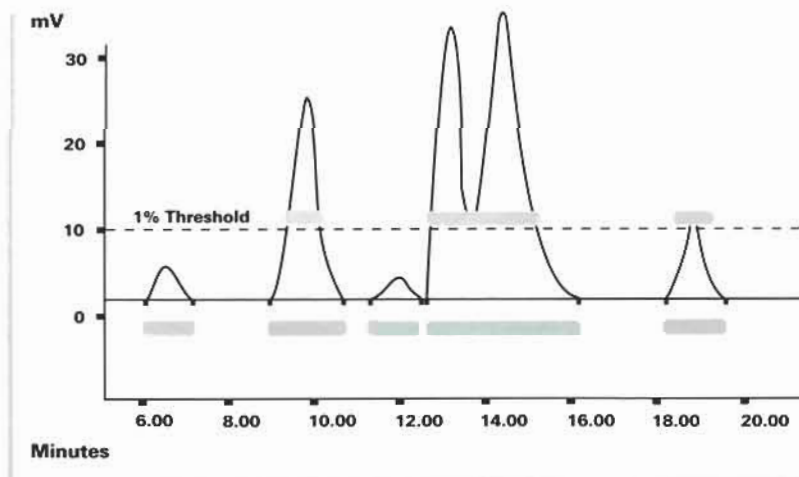
*SolventTrak* automatically detects eluting peaks and diverts them to waste while sending the clean, uncontaminated solvent back to the reservoir for recycling.

Traditional recycling systems use a fixed voltage level (or threshold above baseline) which must be exceeded before peaks can be detected. If the baseline changes, new settings must be applied or contaminants may be recycled instead of sent to waste. Conversely, pure solvent may be sent to waste rather than being recycled.

- *SolventTrak* incorporates a *unique integration algorithm* to accurately detect peaks in the eluent so that contaminants are eliminated even if chromatography system conditions cause the baseline to drift up or down.
- Solvents recycled with *SolventTrak* are cleaner and can be used longer.

Each *SolventTrak* is **calibrated and certified**  
to an **NIST traceable standard**  
and arrives with a **Certificate of Validation**.

### SolventTrak Detection of Eluting Peaks



### SolventTrak Eliminates More Contaminants

*Solvent diverted to waste by traditional recyclers which fail to detect small peaks that are below the set threshold level.*

*Solvent diverted to waste using SolventTrak and its 'intelligent' algorithm which accurately detects all peaks and sweeps each entire peak to waste.*

**Saves up to 90% of Isocratic HPLC Solvent Consumption**

**Unique Peak Detection Algorithm Accurately Defines Peaks...Diverts Them to Waste Automatically**

**Returns Reliably Clean Solvent to Mobile-Phase Reservoir**

## Important Special Features

*SolventTrak* can place a tick mark (*peak marker*) on the output signal to show exactly where peaks have been detected and sent to waste. This is very useful during initial system set-up and significantly more important during system testing and validation.

*Sophisticated circuitry permits the signal to be zeroed automatically via a contact closure or manually using front-panel touch controls.*

## How Does SolventTrak Work?

The signal from any HPLC detector is connected to *SolventTrak*, which monitors and continuously displays the voltage level on a large, highly readable LCD panel located on the front of the instrument. The signal, if desired, can be connected directly to a chromatography data system or integrator.

- *SolventTrak* peak detection sensitivity may be adjusted by touch-sensitive controls which change familiar peak width and peak threshold parameters, similar to those found on most integrators and data systems.

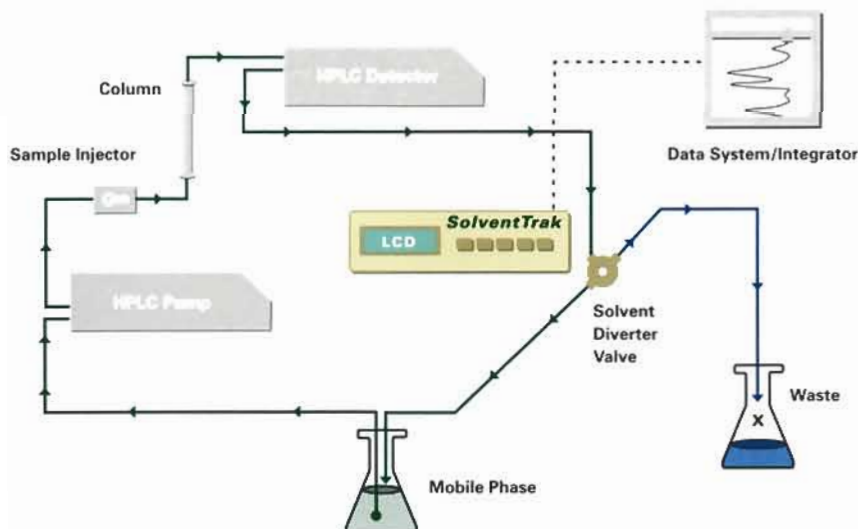
## How Does SolventTrak Further Enhance Purity?

When a peak is identified an additional delay time may be set to allow for volume between the detector and the valve. This further enhances the accuracy and purity of the recycling. An LCD indicator and a switchable audible alarm alert the operator that a peak has been detected.

- A reliable and inert electrically actuated solvent diverter valve automatically switches mobile phase to waste when peaks are detected. The valve may also be intentionally switched via TTL or contact closure by actuating that command on the front panel keypad if and when required.

Additionally, an optional, low-cost *Clean-Up™* kit is available for automated system and column clean up using a wash solvent. It consists of a second diverter valve and mounting bracket. Clean-Up control programming software is included as standard with *SolventTrak*.

SolventTrak with Isocratic LC System



Compatible with Any Isocratic Liquid Chromatography System

Decreases HPLC Solvent Disposal Costs

Contributes to a Cleaner and Safer Environment

Installs Easily in Any Isocratic LC System

Automatic Performance Validation for Every Run

Easy to Use...No Complex Programming



## SolventTrak Saves...

With the high cost of solvent and solvent disposal, a routine analytical HPLC system can recover the cost of *SolventTrak* in 60 to 90 days. Then continue to save with *SolventTrak* on:

- Solvent Purchases
- Disposal Costs
- Preparation Time

# **SOLVENTTRAK**

Mobile-Phase Recycler for Liquid Chromatography

## **Specifications**

### **Peak Detection**

Signal Input Range: -1.000V to + 1.000V  
Sampling Rate: 200 Hz, continuous during operation  
Number of Inputs Supported: One  
Peak Width Range: User-settable; 1, 5, 15, 30, 45, 60, 75, 90, 105, 120, 150, 180, 210, 240, 270, or 300 seconds  
Peak Slope Ranges: User-settable, 15 to 14,400  
Diverter Valve Delay Timer: User-settable, 0 to 99 seconds, 1 second increments  
Peak Waste/Valve Open Marker: Defeatable, duration 0.1 second; Tick Mark height is user-adjustable  
Contact Closure Outputs: Normally Open/Normally Closed;  
Peak Waste/Valve Open, 1 second duration; Clean Complete  
Contact Closure/TTL Inputs: Enable/Disable Autozero, 1 second duration  
Enable Peak Waste/Valve Override (continuous)  
Clean (Start CleanUp Cycle)  
Peak-to-Waste/Valve Open Indicators: LCD Display Status, 1 second audio beep (defeatable)  
Display: LCD, Active input voltage display  
Autozero: Manual Autozero Key or Contact Closure Enable (1 second duration)

### **Diverter Valve**

Type: Solenoid-controlled, 3-way, high efficiency, zero dead volume  
Wetted Surfaces: All internal Teflon  
Mounting Ports: 1/4 - 28 Flat Bottom (valve can be mounted in any orientation)  
Operating Pressure: Up to 30 psi (2 bar)  
Response Time: Approximately 5 milliseconds  
NOTE: Contact AXIOM or your AXIOM dealer for special valve requirements.

### **Requirements**

Power: 100VAC to 240VAC, 50/60 Hz, self-switching  
Environment: 40 to 90° F (4.4 to 32.2° C), 10% to 60% relative humidity (non-condensing)

### **Physical**

Size: 9" W x 10" D x 3.75" H (23 cm x 26 cm x 8.3 cm)  
Weight: 7 lbs (3.15 kg)

### **Ordering Information**

Catalog Number: 100-300  
Description: SolventTrak Solvent Conservation System with switching valve, Teflon tubing, fittings, cables and operation manual.

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SMI-LabHut Limited  
The Granary  
The Steadings Business Centre  
Maisemore, Glos GL2 8EY U.K.

Tel: +44 1452 310210  
Fax: +44 1452 300075

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