

ROT-X-TRACT SERIES

Solvent Extraction Instruments PRODUCT BROCHURE

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Organomation Solvent Extractors Overview

You are in the lab and need to run multiple extractions at once. First you set the Soxhlet extractors up on individual heating mantles or baths. Next, tubing is individually attached to each of the condensers. There are dozens of tubes to deal with, and multiple heating mantles to monitor. The problem with this arrangement is that in the end, you have spent more time assembling and monitoring your apparatuses than performing the actual chemistry.

To conserve valuable bench space, all samples are arranged in a circle and the instrument rotates allowing each sample to be accessed from the front. Individual condensers are connected to the centrally located water manifold through quick disconnect fittings. The water supply and drain manifolds have one water supply line in, one drain line out, allowing the instrument to rotate freely without tangling the tubing.



Organomation instruments are valuable to sample preparation for research and testing with applications in fields such as:

- Environment
- Agriculture
- Food and Beverage
- Medicine
- Quality Assurance
- Forensic Science
- Government
- Academia
- Oil and Grease

CIRCULAR DESIGN

for easy insertion and retrieval of samples

The ROT-X-TRACT product lines eliminate chaos and wasted time by allowing for up to 8, or 10 extractions to be performed simultaneously in a single bath with a single water manifold.

ROT-X-TRACT-S

Rotary Solid-Liquid Soxhlet Extractor

Unlike traditional wire or sand baths which are used to heat receiving flasks, the ROT-X-TRACT-S uses a water steam bath which provides gentle, even heat to delicate samples.



ROT-X-TRACT-LC

Corning Accelerated One-Step Liquid-Liquid Extractor

The ROT-X-TRACT-LC high performance Solvent Extraction Instrument is designed to accommodate up to eight Corning Accelerated One-Step apparatuses.



ROT-X-TRACT-S Series Rotary Solid-Liquid Soxhlet Extractors

Soxhlet extraction is ideal for extracting soluble analytes from a solid sample into an organic solvent. Unlike traditional wire or sand baths which are used to heat receiving flasks, the ROT-X-TRACT-S uses a water steam bath which provides gentle even heat to delicate samples.

The ROT-X-TRACT-S rotary Soxhlet extractor can accommodate up to 8 or 10 Soxhlet extractors. The bath cover disc holes can accommodate round sample flasks from 125 ml-1 L. A wide range of sample sizes and quantities make this instrument ideal for Soxhlet extraction of samples in any lab.

Advantages:

- **Conserves valuable bench space:** all samples are arranged in a circle
- **Easy sample access:** the instrument rotates allowing all samples to be accessed from the front
- **Fewer connections:** one water supply line in, one drain line out

Standard Features:

- Stainless steel construction
- Stepped bath rim and cover disk seals steam chamber
- Each condenser water line attached to centrally located water manifold
- Laboratory grade materials stand up to organic solvents

Optional Features:

- Intrinsically safe type Z purged bath (cat#-Z)
- 240V wiring and plug (cat#-2)



Highlighted Application:

EPA Method 3542: Extraction of Semivolatile Analytes Collected Using Method 0010

This method describes the extraction procedure of semivolatile organic compounds from samples collected in Method 0010. It replaces the extraction procedure for Section 8.1 of Method 0010. Several different extraction procedures are used in this method for different components of the sample train. The particulate matter filter component is extracted using a Soxhlet extractor. The ROT-X-TRACT-S is a great instrument for this step because it combines up to 10 Soxhlet extractors for extraction of multiple samples at once. This saves labs time and valuable fume hood space.

Other Applications:

- EPA Methods 1668, 1699
- California Department of Food and Agriculture EMON-SM-11.3 Revision 2

SPECIFICATIONS

The following Product Specifications table contains detailed technical information for the different models of ROT-X-TRACT-S extractor series products.

Instrument Catalog Number	13070	13090
Max No. of Samples	8	10
Water Bath Size	Medium - 12 Inch ID	Large - 16 Inch ID
Overall Dimensions (Width x Depth x Height)	46 x 41 x 86 cm	61 x 48 x 86 cm
Glassware:		
Required Glassware	GS3137 or GS3129	
Extractor Type	Soxhlet	
Chamber Diameter	37 mm	
Extractor Joint Sizes	45/50, 24/40	
Solvent Flask Type	Round with flat bottom	
Largest Flask Size	250 mL	
Standard Condenser Type	Allihn	
Optional Condenser Type	Friedrichs	
Condenser Joint Size	55/50	
Heating Device Specifications		
Bath Model Number	10125	13165
Heating Medium	Water	Water
Bath Inside Dimensions (Diameter x Depth)	30,5 x 11,4 cm	40,6 x 11,4 cm
Bath Outside Dimensions (Width x Depth x Height)	46 x 41 x 18 cm	61 x 48 x 15 cm
Heaters Total Watts	1100 w	1300 w
Bath Temperature Range	40-100°C	40-100°C
Temperature Controller Type	Dial Thermostat	Digital
Controller Accuracy	+/- 2 °C	+/- 0.5 °C

ROT-X-TRACT-LC Series Corning Accelerated One-Step Liquid-Liquid Extractors

The ROT-X-TRACT-LC is designed to accommodate up to eight (8) Corning Accelerated One-Step apparatuses. The Corning Accelerated One-Step extraction apparatus combines continuous liquid-liquid extraction and concentration into one step. A cold-finger condenser is used to reduce overall height to accommodate traditional laboratory hood specifications; however Allihn condensers can be substituted per customer request.

The hydrophobic membrane allows the organic solvent to circulate through the 1 liter sample bottle continuously until the extraction is complete. By incorporating a stopcock assembly and 3-ball Snyder column, the Corning One-Step extractor can both extract desired analytes as well as evaporate solvent from the end by-product within the same cycle.

The Corning One-Step extractor comes with an electronic side control box which enables the operator to program specific bath temperatures and time cycles to stay in compliance with the designated methodologies.

Advantages:

- **Multiple simultaneous extractions:** extract and concentrate up to eight samples simultaneously
- **Precise controls:** digital timer and heat controls
- **Fewer connections:** one water supply line in, one drain line out
- **Protects delicate samples:** Organomation vacuum insulated concentrator tubes keep delicate samples safe
- **Gentle concentration:** Water bath is gentler on samples than heat jacketed concentration tubes in traditional set-up

Standard Features:

- Stainless steel construction
- Stepped bath rim and cover disk seals steam chamber
- Each condenser water line attached to centrally located water manifold
- Side control box
- Water flow meter
- Laboratory grade materials stand up to organic solvents

Optional Features:

- Intrinsically safe type Z purged bath (cat#-Z)
- 240V wiring and plug (cat#-2)

Glassware Features:

- Stopcock to switch to sample concentration after extraction is complete
- 1 L sample bottle
- J-shaped Snyder column
- Hydrophobic Corning membranes (sold separately)
- In-line KD flask for optimum heat transfer
- Vacuum insulated concentrator tube



Highlighted Application:

EPA Method 8280B: Polychlorinated Dibenzo-*p*-Dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/Low-Resolution Mass Spectrometry (HRGC/LRMS)

This SW-846 method is used for the detection and quantitative measurement of PCDDs and PCDFs in water, soil, fly ash, and chemical waste samples. EPA Method 8280B defines separate extraction procedures for water and solid samples. Water samples are extracted using methylene chloride in a liquid-liquid extractor. The ROT-X-TRACT-LC uses the Corning One-Step extractor to seamlessly extract and concentrate aqueous samples using methylene chloride. The ROT-X-TRACT-LC is capable of extracting 8 samples at once. Each sample is extracted and concentrated into a vacuum insulated concentrator tube which can be easily removed for further sample processing and analysis after extraction.

Other Applications:



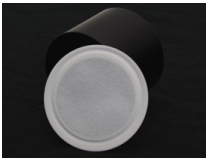
- EPA Methods 608, 625, 680




SPECIFICATIONS

The following Product Specifications table contains detailed technical information for ROT-X-TRACT-LC extractor series products.

Instrument Catalog Number	11318
Max No. of Samples	8
Bench Space (Width x Depth x Height)	61 x 48 x 107 cm
Glassware 1000 ml	GS3380
Extractor Type & Size	Corning One-Step 1000 ml
Solvent Flask Type	In-Line KD
Solvent Flask Size	100 ml
Concentrator Tube Type & Size	Insulated Tip 10 ml 19/22
Snyder Column Type	J Tube
Condenser Type & Size	Cold Finger 45/50
Solvent Collection Flood Extractor	Standard
Hydrophobic Membrane	Standard
Water Flow Meter	0-3,0 lpm
Bath Model Number	14169
Water Bath Catalog Number	B3101
Bath Inside Dimensions (Diameter x Depth)	40,6 x 21,6 cm
Bath Outside Dimensions (Width x Depth x Height)	61 x 48 x 25 cm
Heaters Total Watts	1400 w
Bath Temperature Range	30-100°C
Bath Temperature Accuracy	+/- 0,5°C
Attached Control Box for Power & Timer	Standard

Accessories and Replacement Parts for ROT-X-TRACT Series

Item Description		Picture
Nitrile (Buna-N) O-ring set for use with S-EVAP and ROT-X-TRACT water manifolds		
1 inner and 1 outer ring	P1332	
Corning Accelerated One-Step extractor 1000mL, per position		
Each	GS3380	
Polytetrafluorethylene (PTFE) membrane for using with the Corning Accelerated One-Step Liquid-Liquid Extractor, 47mm		
Pack of 20	GA3446-20	
Pack of 200	GA3446-200	

Item Description		Picture
Pressure Reducing Regulator for water supply		
Each	XA0631	
Boiling grids, Fluorinated ethylene propylene (FEP)		
Set of 100	GA2245	
Stainless steel Bath Covers for unused sample positions		
7,6 cm dia (250 ml flasks)	XA2282	
9,85 cm dia (500 ml flasks)	XA2283	

Solvent Extraction Instruments



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For more product information and literature, please visit our website: www.elementel.com

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