



ENTECH
INSTRUMENTS

See What's Really There™



2022 CATALOG

Solutions for Chemical Monitoring & Analysis

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President's Letter



Entech Instruments is continuing its tradition of providing the most advanced and accurate sample preparations systems available for headspace and gas sample analysis by GC and GCMS. Our new Multi-Capillary Column Trapping Systems (MCCTS) are transforming the way that gas phase sample preconcentration is performed prior to GC injection, all without the use of liquid nitrogen or even electronic cooling systems. These "fan cooled", extremely robust and reliable multi-stage capillary column traps manage water and CO₂ hundreds of times better than any packed trap system. This means much faster release for better chromatography, supporting "faster" GC methods, while also demonstrating far better immunity to contamination when exposed to high concentration

samples. Our MCCTS traps have been implemented in a full cryogen free TO15 solution with much faster GC injections and shorter run times than other TO15 systems on the market. Other applications using this revolutionary capillary trapping technology will also soon be announced.

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Entech's patent pending Sorbent Pen™ technology takes SPME to the next level by providing enhanced sensitivity, improved quantitation, and greater robustness than its fiber-based predecessor. Sorbent Pens utilize a unique flow through cartridge that forms a seal on a vial allowing a vacuum to be created within the vial. This new technique called VASE (Vacuum Assisted Sorbent Extraction) has been demonstrated to cover the entire range of analytes from the lightest volatile compounds (Freon 12/Vinyl Chloride and others) to very heavy 5-6 ring PAH compounds, while remaining in the headspace to avoid actual contact with the sample matrix. With 50-150x higher phase loading and the use of traditional adsorbents with thousands of times more surface area than SPME, the Sorbent Pen™ can fully extract difficult compounds from complex matrices providing superior sensitivity and reproducibility. Sorbent Pens are also available for performing Diffusive and Active air monitoring, making the Sorbent Pen technique extremely versatile. Our newly released SPR40 -Sample Preparation Rail promises to be a game changer for headspace sample preparation and general thermal desorption methods. Rather than desorbing a TD tube into a completely different instrument with separate traps, transfer lines, and rotary valves to have to clean and maintain, the SPR40 allows thermal desorption of Sorbent Pens directly into a GC or GCMS to allow dramatically improved recovery, consistency, and easy of maintenance. Watch for a new wave of applications coming out in 2019-2020 using the SPR40 Robotic inlet.

Our unmatched Silonite™ surface coatings continue to be perfected, resulting in the most consistent, durable, and inert coatings available for GC inlet systems and for mercury vapor handling without surface interactions. Silonite™ surface treatments play a vital role in achieving our ultimate goal; to provide our customers with complete solutions for "analytical grade" VOC and SVOC handling and inlet systems that can sample, store, and recover virtually all GCMS compatible compounds.

Finally, for US EPA Method TO-15 and China HJ-759, Entech is proud to be the only supplier that manufacturers and supports the complete solution for sampling and analysis of airborne contaminants using Silonite™ coated stainless steel canisters. Entech has assembled an extraordinary and talented team of Chemists and Service Engineers with a combined knowledge of over 200 years of laboratory and field experience – to provide our clients with premier customer service and on-site support. To our valued customers we would like to say thank you for your patronage through the years and we look forward to servicing your analytical needs for many years to come.

Sincerely,
Daniel B. Cardin – President



Entech Instruments is a leading developer and manufacturer of analytical instrumentation that supports professionals around the world in the Environmental, Industrial Hygiene, Food & Beverage, Product Testing, Forensics, and Clinical Analysis markets.

To provide solutions for such a diverse set of industry applications, Entech has assembled an extraordinary and talented team – a combined knowledge of over 200 years of laboratory and field experience – to provide our clients with premier customer service and on-site support. We invite you to share your application challenges and requirements so we can create a customized solution just for you.

~ The Entech Team

IH1200 Personal Monitoring System

The IH1200 Personal Monitors utilize classical vacuum sampling into MiniCans™ and Bottle-Vacs™ to perform STEL or TWA monitoring for up to 12 hours. Like HDS Personal Monitors, sampling using the IH1200 eliminates the concentration and matrix effects associated with adsorbent-based sampling techniques. The IH1200 is universal, recovering all analytes in a single sampling event with no need to choose different media. Large flow rate adjustments are made by changing inlet restriction (see table below), while fine adjustments (2–3x) are made using a built in flow adjust feature. Enough sample is collected to allow multiple analyses in the laboratory, with detection limits down to low PPB if needed. The IH1200 meets the requirements of OSHA Method PV2120 for determination of workplace contaminants using MiniCan™ samplers. The sampling procedure is easy: Connect an evacuated MC450QT MiniCan™ or 500mL Bottle-Vac™ and sampling starts. Monitor the fill rate on the built-in gauge to document a constant fill rate during the sampling event; disconnect the canister to stop sampling.

Flow Restrictor
(Restrictor elements
shown in table below)



The IH1200 System maintains accurate sampling flow rates without loss of volatile chemicals.

IH200 - Restrictors and Canister Fill Times



IH1200
Personal Monitoring System.

Part No.*	Code	Approx. Flow Range	500mL Bottle-Vac™	450mL MiniCan™	Replacement Restrictor **
39-IH1200QT1	1	50-150cc/Min	2 - 12 Min	2 - 10 Min	39-23010
39-IH1200QT2	2	20-60cc/Min	8 - 30 Min	7 - 25 Min	39-23030
39-IH1200QT3	3	7-21cc/Min	25 - 90 Min	20 - 75 Min	39-23080
39-IH1200QT4	4	2-6cc/Min	1.2 - 4 Hrs	1 - 3 Hrs	39-23240
39-IH1200QT5	5	0.5-1.5cc/Min	4 - 12 Hrs	3 - 10 Hrs	39-24010
* 39-IH1200QTSx Restricted Sampler w/Silonite™ (Replace x with desired flow code)					
** 39-2XXXXS Replacement Restrictor w/Silonite™ (Add "S" to Restrictor PN)					

IH200 Personal Monitoring System & Accessories

Description	Unit	Part #
IH1200 Personal Monitoring System	EA	39-IH1200QTx
Includes:		
Personal Monitoring Flow Controller	EA	39-CS1200Px
Female Micro-QT™ Valve	EA	FQT-400
Sampling Belt	EA	39-35000
Sampling Holster	EA	39-35010
Silonite™ Inlet Line (w/Teflon® Sleeve)	EA	39-36020
Silonite™ Inlet Filter	EA	39-36050
450mL MiniCan™ (w/ Micro-QT™ Valve)	EA	29-MC450QT
500mL Bottle-Vac™ Sampler	EA	29-BV500A
30-0"Hg Vacuum Gauge, Back Port (¼" SS Nut and ¼" G/V Ferrule)	EA	39-27565



Silonite™ Sapphire Restrictor
PN 39-24010S



Use the the FlowProfessor™ to accurately calibrate your IH1200 Samplers.
(See page 76) PN 39-FP-03