



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

Filtered Grab Sampler for TrueSeal™ Canisters

Performing unfiltered sampling into your Silonite™ canister can lead to particulate contamination. This will eventually reduce volatile compound recovery, while making it more difficult to achieve EPA required blank levels. Entech's Grab Samplers are a great solution to keep your canisters clean. The external filter allows rapid equilibration with the local environment to reduce net loss due to adsorption, and the "thimble" geometry provides the surface area required to quickly fill large canisters. All filters are Silonite™ coated to maximize recovery of volatile chemicals.



Time to Fill Canisters (in Minutes)

Part No.	Description	2.7L Canister	6.0L Canister
39-RS-0	Grab Sampler	< 0.2	< 0.3

Filtered Restricted Samplers for TrueSeal™ Canisters

Entech's Restricted Samplers are identical to the Grab Samplers listed above, but also include a sapphire orifice to slow down sampling rates. Fill rates remain constant until the canister is half full. Sampling can be stopped at this point for a true time weighted sample or allowed to continue if a time-weighted average is not required. Approximate times for filling to 50% and 95% of atmospheric pressure are listed in the table below.



Restricted Sampler for TrueSeal™ Canisters
PN 39-RS-x



Replacement Silonite™ Filter
PN 39-92150

Description	Unit	Part #
Grab Sampler for Silonite™ Canisters (No Restrictor)	EA	39-RS-0
Restricted Sampler for Silonite™ Canisters (600cc/min)	EA	39-RS-1
Restricted Sampler for Silonite™ Canisters (150cc/min)	EA	39-RS-2
Restricted Sampler for Silonite™ Canisters (63cc/min)	EA	39-RS-3
Restricted Sampler for Silonite™ Canisters (38cc/min)	EA	39-RS-4
Restricted Sampler for Silonite™ Canisters (19cc/min)	EA	39-RS-5
Restricted Sampler for Silonite™ Canisters (13cc/min)	EA	39-RS-6
Replacement Silonite™ Filter and O-Ring	EA	39-92150

Time to Fill Canisters – Fill to 50% and 95% of Atmospheric Pressure (in Minutes)

Part No.	Code	Approx. Flow Rate	1L Canister		1.4L Canister		2.7L Canister		3.2L Canister		6.0L Canister	
			50%	95%	50%	95%	50%	95%	50%	95%	50%	95%
39-RS-0	0	No Restrictor	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.3
39-RS-1	1	600cc/Min	1	3	1.3	4	3	8	4	10	5	15
39-RS-2	2	150cc/Min	3	8	4	15	10	30	10	35	15	45
39-RS-3	3	63cc/Min	7	20	10	30	20	60	25	70	45	130
39-RS-4	4	38cc/Min	10	30	14	45	30	90	40	100	*	*
39-RS-5	5	19cc/Min	25	75	35	100	75	200	90	250	*	*
39-RS-6	6	13cc/Min	40	100	50	130	*	*	*	*	*	*
39-RS-x			Restricted Sampler for Silonite™ canisters: (Replace x with desired flow code)									

* Canister/Flow combinations not recommended by Entech Instruments.