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.

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

Bottle-Vac™ Samplers

Bottle-Vac™ samplers are the most economical gas-phase sample collection containers available. They use Micro-QT™ Valves which are small and non-contaminating by design. Our Bottle-Vac™ samplers are as gas-tight as stainless-steel canisters, making them a low-cost alternative for whole air sampling. A sample is only exposed to treated glass, 316 stainless or Silonite™ coated stainless-steel, and a small O-ring which forms the seal at the cap. All of these materials are inert, allowing for a wide range of analytes to be recovered. Time-weighted sampling techniques are possible using MiniCan™ sampling inlets, or by using Helium Diffusion Sampling.

Bottle-Vac™ Samplers

Description	Unit	Part #
40mL Bottle-Vac™ Sampler	EA	29-BV040A
60mL Bottle-Vac™ Sampler	EA	29-BV060A
125mL Bottle-Vac™ Sampler	EA	29-BV125A
125mL Bottle-Vac™ Sampler (w/ Silonite™ Valve)	EA	29-BV125AS
250mL Bottle-Vac™ Sampler	EA	29-BV250A
250mL Bottle-Vac™ Sampler (w/ Silonite™ Valve)	EA	29-BV250AS
500mL Bottle-Vac™ Sampler	EA	29-BV500A
500mL Bottle-Vac™ Sampler (w/ Silonite™ Valve)	EA	29-BV500AS
1L Bottle-Vac™ Sampler	EA	29-BVL1A
1L Bottle-Vac™ Sampler (w/ Silonite™ Valve)	EA	29-BVL1AS
30-0"Hg Vacuum Gauge (w/ Micro-QT™)	EA	29-70010QT
30"Hg-0-30psig Compound Gauge (w/ Micro-QT™)	EA	29-70020QT

REPLACEMENT PARTS

Description	Unit	Part #
Micro-QT™ Valve (40 /60 / 125mL)	EA	MQT-BV24
Micro-QT™ Valve, Silonite™ (40/ 60 / 125mL)	EA	MQT-BV24S
Micro-QT™ Valve (250 / 500/ 1L)	EA	MQT-BV28
Micro-QT™ Valve, Silonite™ (250 / 500 / 1L)	EA	MQT-BV28S
125mL Amber Bottles, deactivated*	EA	39-75125AD
250mL Amber Bottles, deactivated*	EA	39-75250AD
500mL Amber Bottles, deactivated*	EA	39-75500AD
1L Amber Bottles, deactivated*	EA	39-75L1AD
Netting for 250mL Bottle-Vac™	EA	29-59108
Netting for 500mL Bottle-Vac™	EA	29-59116
Netting for 1L Bottle-Vac™	EA	29-59132
Valve Caps, 125mL, (no valve)	EA	39-76044B
Valve Caps, 250, 500 or 1L, (no valve)	EA	39-76464

* These items require valves, caps, and netting to be ordered separately.

Bottle-Vac™ Sample Analysis

In the laboratory, analysis by loop injection requires either pressurizing to 3−7psig, or heating to 60−70˚C to increase the pressure to purge a loop. Bottle-Vac™ samplers can also be analyzed using a 7200 or 7100A Preconcentrator to withdraw a larger volume for low PPB analysis. Automated analysis can be performed using the 7650, 7410D, or 7032A Autosamplers.

Bottle-Vac™ Cleaning

Bottle-Vac™ samplers are reusable, making them less expensive per sampling event than other sampling devices, even Tedlar® bags. For PPB sampling, the bottles should be flushed with nitrogen or zero air in an oven after the fittings have been removed, then evacuated after the fittings are reattached. Fittings can be heated, flushed and stored under nitrogen in a separate container. For PPM sampling, the valves and bottles can simply be heated in an oven overnight with the fittings removed, then reassembled for immediate evacuation and delivery to the field. Bottle-Vacs™can also be easily cleaned on Entech's canister cleaning systems.

Applications – *(All Tedlar® Bag uses, plus:)*
- Indoor Air Quality
- Ceiling / STEL / TWA Monitoring
- Fugitive Emissions
- Landfill Gas / Soil Gas
- Fenceline Monitoring
- Breath Analysis
- Mold Detection *(MVOCs)*
- Impurities in Gases
- Stack Gas

Instruments

Silonite™

Sampling

Applications