



Thermal Desorber Sampling System

AN ACCESSORY FOR
HAPSITE ER CHEMICAL IDENTIFICATION SYSTEM

TRACE LEVEL QUANTITATIVE VOC ANALYSIS

The Thermal Desorber Sampling System (TDSS) expands the air sampling sensitivity of the field-proven, person-portable HAPSITE ER Chemical Identification System. The accessory is easily attached to the HAPSITE ER Universal Interface for fast sample analysis utilizing the GC/MS or MS only. Small and lightweight, the Thermal Desorber (TD) sampling pump can go virtually anywhere and collect samples for a user-defined period of time, providing the utmost flexibility in detection and identification capabilities. The TDSS allows for the collection of trace level Volatile Organic Compounds (VOCs) in multiple sampling locations for fast quantitative analysis right at the scene.



Thermal Desorber connected to the HAPSITE ER universal interface

RESULTS IN MINUTES

The Thermal Desorber Sampling System is easy to use. Simply take the optional sample pump outfitted with a Thermal Desorber tube to the desired location. Sample the surrounding air for a user-determined time and flow rate. Remove the tube from the pump and insert it into the Thermal Desorber accessory for quick, accurate analysis in minutes. Results are easily retrieved from HAPSITE ER through simple front panel or laptop operation.

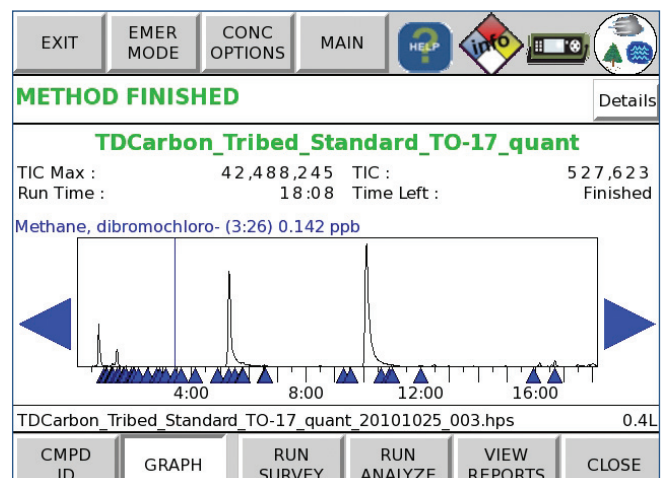


Simply load the tube into the Thermal Desorber for quick analysis

Not only is the TDSS analysis fast, but multiple sampling pumps can be used to collect samples from several locations at the same time, including “hot zones” and other strategic spots. More areas can be sampled in less time, providing maximum opportunity to survey the scene and take action. Plus, the sample pump is intrinsically safe, allowing for samples to be collected in potentially explosive environments and brought back to HAPSITE for analysis.

FEATURES AT A GLANCE

- Quickly analyzes samples collected from remote locations
- Intrinsically safe sampling pump – samples can be collected in potentially explosive environments
- Optional person-portable sample pump can be worn for breathing zone monitoring
- TD Survey – analytes can be sent directly to the mass spectrometer, by-passing the gas chromatograph, for chemical identification in minutes
- Sample pump can be programmed to draw samples for a user-defined period of time
- TD Quantitative methods included on HAPSITE ER
- Sampling pump volume can be set from 20-225 ml/min



Quantitation of trace level VOCs shown on the bright, graphical HAPSITE ER front panel display.

HOW IT WORKS

Controlled through HAPSITE ER IQ software, the Thermal Desorber heats the sample and desorbs the analytes off the TD tube. Using nitrogen supplied by HAPSITE ER, analytes are carried into the system's sample pathway for analysis. The sample is either desorbed on the concentrator for GC/MS analysis, or sent directly to the mass spectrometer for fast survey analysis. Results are quickly and clearly shown on the bright, graphical HAPSITE ER

front panel display. For added flexibility, custom quantitative methods can be created for analytes of particular interest.

Once the analytes are desorbed, the desorber tube can be reused, saving on costly replacement. To eliminate the demand for external consumables, the Thermal Desorber is designed to acquire nitrogen and power from HAPSITE ER.

SPECIFICATIONS

| Thermal Desorber | |
|--|---|
| Dimensions (LxWxD) | 7.5" x 3.6" x 2.9" (19.1 cm X 9.1 cm X 7.4 cm) |
| Weight | 1.2 lbs (0.54 kg) |
| Operating Temperature | 5-45°C, 0-95% Relative Humidity (non-condensing) |
| Analytical Interface | HAPSITE ER Universal Interface |
| Instrument Compatibility | HAPSITE ER, only |
| Power Requirement (from HAPSITE ER) | 24 V(dc); NiMH battery |
| Battery Life (HAPSITE ER + Thermal Desorber) | 1-1.5 hours |
| Carrier Gas | High purity nitrogen, supplied by HAPSITE ER |
| Operation | Thermal Desorber accessory controlled by HAPSITE ER IQ software |
| Methods | Quantitative GC/MS methods |
| Calibration Standard | HAPSITE Internal Standard introduction capability |
| Thermal Desorption Tubes | Glass, fritted ¼" (6.35 mm) O.D. x 3.5" (89 mm) long Preconditioned and stored in a sealed storage container Adsorbents: Single and multi-bed Tenax [®] and Carbon adsorbents Sampling flow rate, typical range 10-200 ml/min. |
| Thermal Desorption Parameters | Temperature Range, 40-330°C Temperature Ramp, 1.0-1.5°C/sec Nitrogen carrier gas flow, 20 ml/min. |
| Safety | LED indicator - Green – Thermal Desorption tube is <50°C and can be safely removed - Red (flashing) – Thermal Desorption tube is heated, >50°C, and must not be removed Thermal Desorber housing <80°C |
| Detection Limits | Parts Per Trillion (PPT) for most analytes |
| Thermal Desorber Sampling Pump (Optional) | |
| Intrinsically Safe | Yes |
| Dimensions (LxWxD) | 4.5" X 2.2" X 1.4" (11.4 cm X 5.6 cm X 3.6 cm) |
| Weight | 0.3 lb (0.142 kg) |
| Flow Rate | 20 to 225 ml/min |
| Flow Control Accuracy | ±5% set-point in constant flow mode after calibration |
| Type Run Time | 12 hrs. at 200 ml/min |
| Charge Time | 6 hours with pocket pump charger (battery attached to pump) |
| Operating Temperature | 0 to 45°C |

DETECT TO PROTECT™



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