



Purge and Trap Sample Introduction Instruments

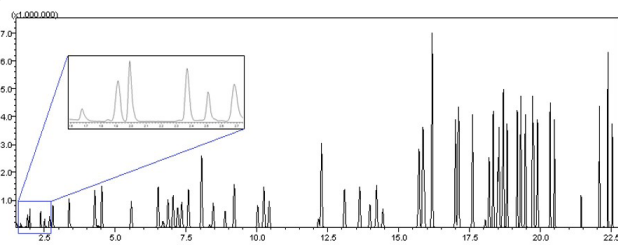
- Reliable Purge and Trap Concentrator with 2nd Generation Autosampler Options for EPA 8260 Water, Soil and TO-17 Air Samples

Introduction

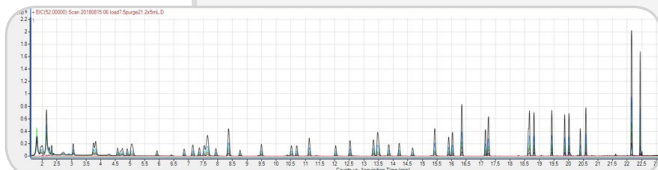
CDS Analytical is celebrating its 50th anniversary. CDS Analytical was founded by Dr. Eugene Levy in Nottingham, PA in 1969, and moved to its state-of-the-art Oxford, PA facility in 1981. Over the past 50 years, CDS Analytical has been expanding its core business from Analytical Pyrolysis to a full range of GC Sample Introduction methods, including Thermal Desorption, Purge & Trap, and Dynamic Headspace.

As of today, CDS Analytical gathers world-class engineers and analytical chemists working together to continue the "Made in USA" legend. We provide the best tool to our customers in analytical chemistry by packaging our continuous renovations in hardware, software, technology and applications into a complete solution.

The CDS-7000E was acknowledged as a workhorse in the industry for decades. With the introduction of the 2nd generation autosampler 7350 and 7450 family, this reliable Purge and Trap concentrator is unlocking its full productivity while maintaining the unrivaled chromatographic resolution and the industrial leading Cost Performance Index. With the optional 7550 tower, this system gives you the unique capability to perform automated EPA 8260 (Soil and Water) and TO-17 (Air) tests in one platform.

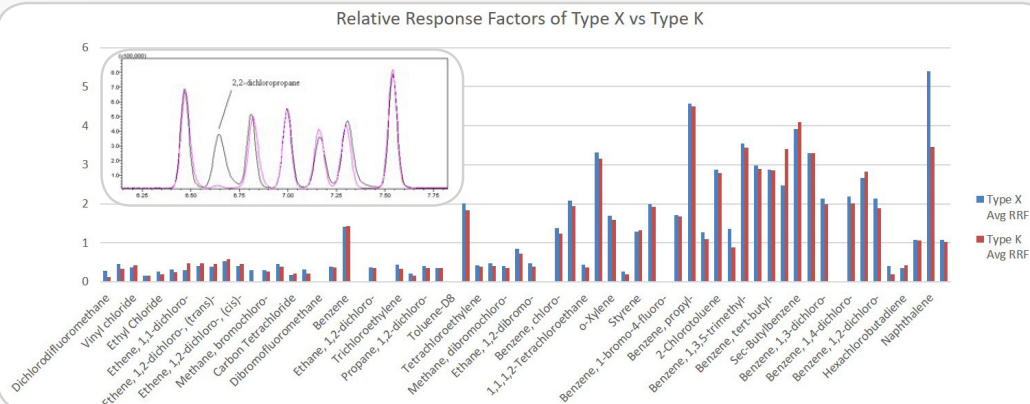


63 EPA 8260 VOC's at 20 ppb concentration from 7000E/7450



65 EPA TO-17 VOC's at 2 ppb concentration from 7000E/7550

- Exceeds the EPA 524.3, 524.4, 624, 8260C, TO-17 Method Requirements
- 10-port Valve with Micro-loop Technology Assures the RSDs under 3%.
- Proprietary X Type Trap Improves the Relative Response Factor Compared to K Type Trap
- Quick Switch between Purge & Trap Method and Thermal Desorption Method with Optional Module



Relative Response Factor Comparison Between CDS X Type and Supelco K Type (Vocarb 3000) Trap

7000E Purge and Trap Concentrator

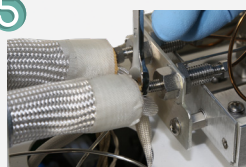


1



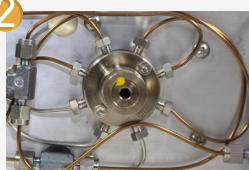
Valve oven reaching as high as 350°C

5



GC transferline and optional soil transferline reaching as high as 350°C

2



8-port high temp valve and silconert 2000 coated sample pathway

6



Quick access panel for easy maintenance

3



Patented foam sensor

7



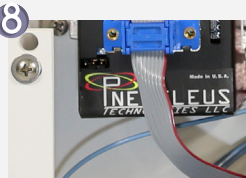
Hydroguard coated wet trap to maximize life span

4



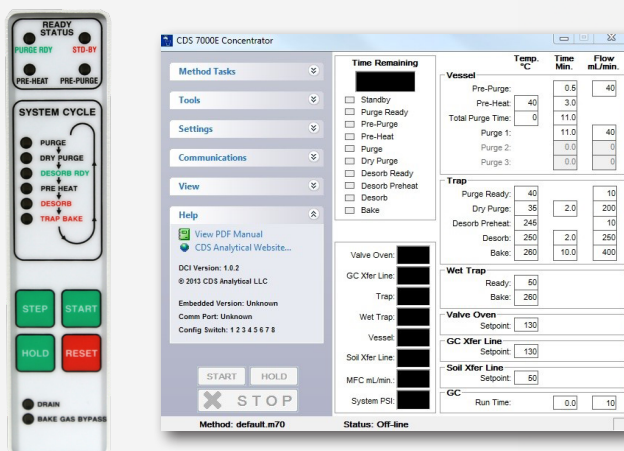
Sample mount for both 5 mL and 25 mL sparge vessel

8



Optional electronic programmable flow control

7000E User Interface



The 7000E keypad (left) serves dual functions to (1) Start, Stop and Hold the instrument; (2) Indicate the current purge and trap stage.

The powerful Windows based control software (right) gives full access to the purge and trap parameter settings, including isothermal zone temperatures, timing, and flow rate. The software also displays the status of the instrument with more digital information than the keypad.

7000E Specifications

- Programmable times: 0–999.9 minutes
- Trap: 0.3 cm OD x 28.5 cm Length
- Transfer Line: 1.5 m Long, 0.020" ID Silconert tubing in flexible heated jacket
- Desorb pre-heat option
- Maximum Operating Temperatures
 - Valve oven 350°C
 - Transfer Line 350°C
 - Wet Trap 425°C
 - Adsorbent Trap 425°C
- Type X Trap
- Weight: 8.6 kg
- 25 cm W x 44 cm H x 46 cm D

Options:

- Heated sparger vessel
- Electronic mass flow controller (He or N₂)

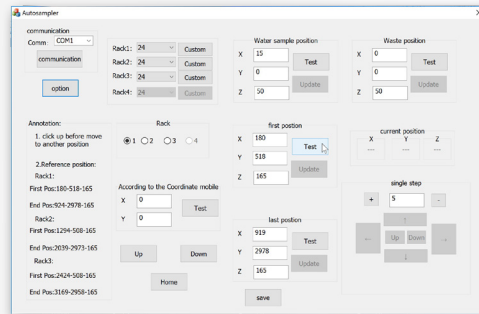
2nd Generation CDS Autosampler Platform

The new generation CDS autosampler platform promises a more precise handling for sample loading. This 2nd generation platform will unlock a new era of GC front-end sampling instruments with the following features:



- (1) Improved Precision: The position accuracy of the 2nd generation autosampler is improved by 50%. Due to a new high precision drive shaft and components, 3D (X, Y and Z) placement accuracy is now within 1 mm compared to 1.5 mm in the first generation.

- (2) **Quicker Operation:** The new autosampler platform does not need to HOME after each movement of the vial or tube. There is less movement needed with the pick-and-place arm which ultimately should extend its useful life.
- (3) **Ease of Alignment:** The alignment calibration has shifted from hardware calibration to software calibration. This greatly improves and accelerates installation set up.
- (4) **Longer Life Expectancy:** The new control board has adopted a SMART acceleration curve to lower the impact on the driving mechanism by 40%. This extends the life of the system as less strain will be applied on the motors and drive shaft.



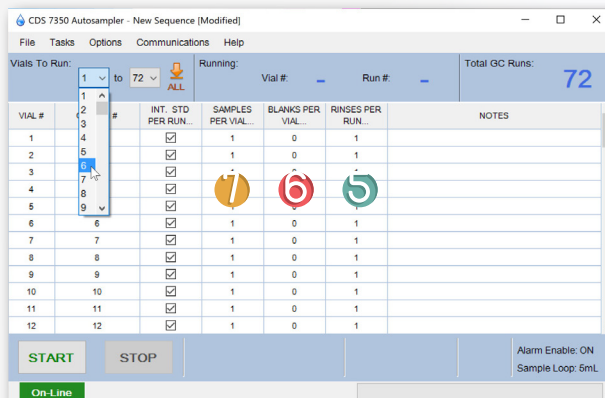
Sample Vial Position Calibration
through the Software

CDS-7350 Purge and Trap Water Autosampler

Key Features:

- 1 72 position autosampler
- 2 10-port valve with micro-loop technology for IS addition
- 3 5 mL and/or 25 ml sample loop available
- 4 PEEK aqueous sample pathway
- 5 Programmable rinses
- 6 Programmable blanks
- 7 Multiple aliquots





7350 Control Interface

When coupled with CDS-7000E Purge and Trap concentrator, the system is capable of meeting criteria from:

- EPA Method 624
- EPA Method 524
- EPA Method 5030
- EPA Method 8260 (water only)

CDS-7450 Purge and Trap Soil/Water Autosampler with Optional 7550 Air Tower



Key Features:

All standard 7350 features:

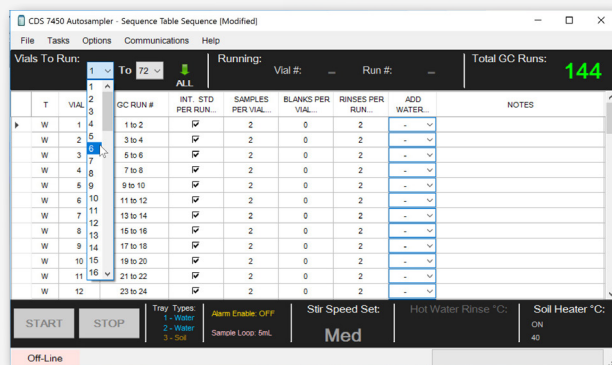
- 72 position autosampler
- 10-port valve with micro-loop
- 5 mL and/or 25 mL sample loop
- PEEK aqueous sample pathway
- Programmable rinses
- Programmable blanks
- Multiple aliquots



7450 Dynamic Headspace Tower for Soil Sample

Additional Key Features:

- 1 Dynamic headspace for soil sample
- 2 Soil heater to 80 °C
- 3 Magnetic stirrer
- 4 Water addition to soil sample
- 5 Optional Thermal Desorption Tower for 1/4" OD X 3.5" L Tube



7450 Control Interface

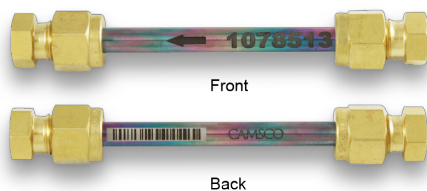
When coupled with CDS-7000E Purge and Trap concentrator, the system is compliant with:

- EPA Method 624
- EPA Method 524.3 and 524.4
- EPA Method 8260 (water and soil)
- EPA Method 5030
- EPA Method 5035
- EPA TO-17 (with optional 7550 tower)

7350 and 7450 Specifications

	Autosampler Dimensions
Height	48.2 cm (19.0")
Width	56.9 cm (18.4")
Depth	62.2 cm (24.5")
Weight	23 kg (50 lbs.) - 7350 24 kg (53 lbs.) - 7450
Line Voltage	115 Vac or 220Vac

7000E/7350/7450/7550 Consumables



CDS Analytical works with CAMSCO, who has manufactured more than two million sorbent tubes, in supplying the highest quality consumables to our customers.

Every single sorbent tube and analytical trap has been fully tested on mechanical tolerance and analytical performance before being released from the factory.

Part Number	Description	Coating/Conditioned	Compression Cap
C-SIC60567-B	Product Emission (C4-C32)	Yes	Yes
C-SIC60564-B	PAH (C6-C40)	Yes	Yes
C-SIC60524-B	Benzene C6	Yes	Yes
C-SIC60520-B	Tenax TA	Yes	Yes
SU60533	Universal (C3-C33)	No	No
SU60520-60	Tenax TA	No	No
SU644-4	TO-17	No	No

CDS Analytical's 7000E focusing trap is made of stainless steel and is inert coated to remove any active site. A laser printed arrow is marked on the body to show the trap direction in installation.



Part Number	Description	Inert Coating	Size
30E2-5113	Type X	Yes	1/8" x 11 1/4"
30E2-5114	Type K (Vocarb 3000)	Yes	1/8" x 11 1/4"
30E3-5063	Tenax TA	Yes	1/8" x 11 1/4"
30E3-5069	3% SP-2100/Tenax TA	Yes	1/8" x 11 1/4"



Thermal Desorption

Pyrolysis

Purge and Trap

CDS Analytical Headquarters:

465 Limestone Road P.O. Box 277 Oxford, PA 19363-0277 Tel: 800.541.6593 610.932.3636 www.cdsanalytical.com