



CE

CDS-7550S

- 72 Position Thermal Desorption Autosampler with Peltier and Pre-Desorb Dual-Mode Analytical Trap

ANALYSIS

Introduction

The CDS 7550S is a stand-alone 72 position thermal desorption autosampler. With the 2nd generation CDS autosampler platform, the CDS 7550S is capable of 3D positioning within 1 mm, and thanks to its unique calibration capability, 7550S can use any 1/4" OD x 3 1/2" L, as well as 6 mm OD x 4 1/2" L, Thermal Desorption tube through an easy calibration interface. These features provide the CDS 7550S with the best thermal desorption tube compatibility.

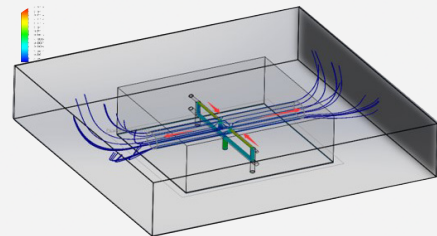
With the optional Peltier electric cooling module, the 7550S is capable of handling C2 level VVOC. If the analyte of interest is above C3 level, the 7550S's built-in three-bed focus trap (Vocarb 3000) use Pre-Heat and Pre-Desorb to improve focusing.

Key Features

- 72 Position Autosampler
- 20°C Peltier Focuser Covering VVOC
- 300°C Valve Oven & Transferline Covering SVOC
- < 2% RSD on Gas Internal Standard Addition
- No Needle Puncture to Bring Cold Spot Issue
- No Special Cap Required on the Tube
- Metal Focusing Trap
- Emergency Sample Capability
- TO-17 Compliant from C₂ to C₄₄
- Support Sample Split to 10,000:1
- Built-in Leak Check and Tube Conditioning



CDS 7550S adopts a Computer Aided design based on Finite Element thermal analysis in the R&D process. The result is that 7550S has a cold-spot free sample path, and the best power efficiency in the Peltier module that only requires 10 cc/min of purge gas.



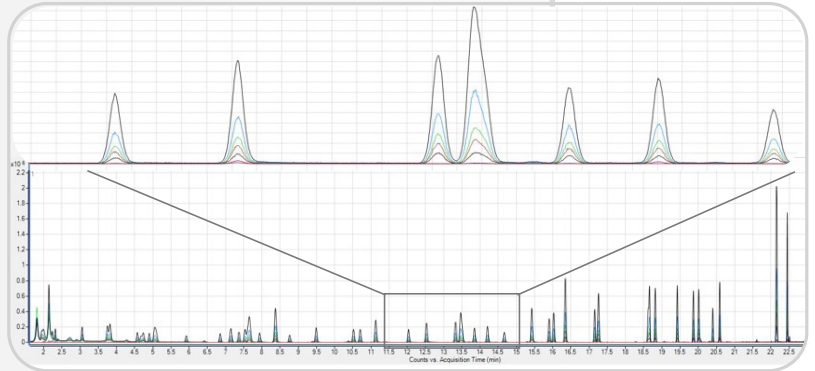
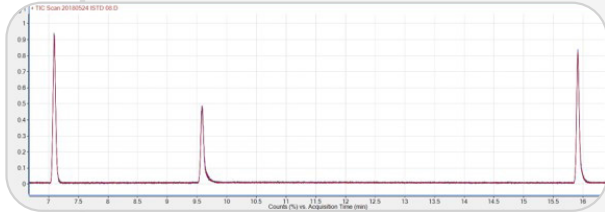
Tubes To Run:		Running:		Total GC Runs:																
3 to 40		Tube #: 3	Run #: 1	39																
TUBE #	GC RUN	METHOD NAME	INT STD	TUBE REST °C	TUBE DRY °C	TUBE DRY MINUTES	TUBE HEAT °C	TUBE HEAT MINUTES	TUBE COOL MINUTES	THERMAL SLICE	TRAP REST °C	TRAP HEAT °C	TRAP HEAT MINUTES	SPLIT ENABLE	SPLIT %	TRAP CONDITION	VALVE OVEN °C	GC XFER LINE °C	GC DELAY MINUTES	NOTES
3	1	Default	<input type="checkbox"/>	40	40	0.1	300	8.0	0.3	<input type="checkbox"/>	25	300	0.4	<input type="checkbox"/>	<input type="checkbox"/>	250	250	15		
70	2	Emergency Sample	<input type="checkbox"/>	40	40	0.1	300	8.0	0.3	<input type="checkbox"/>	25	300	0.4	<input type="checkbox"/>	<input type="checkbox"/>	250	250	15.0		
4	3	Default	<input type="checkbox"/>	40	40	0.1	300	8.0	0.3	<input type="checkbox"/>	25	300	0.4	<input type="checkbox"/>	<input type="checkbox"/>	250	250	15		
5	4	Default	<input type="checkbox"/>	40	40	0.1	300	8.0	0.3	<input type="checkbox"/>	25	300	0.4	<input type="checkbox"/>	<input type="checkbox"/>	250	250	15		
6	5	Default	<input type="checkbox"/>	40	40	0.1	300	8.0	0.3	<input type="checkbox"/>	25	300	0.4	<input type="checkbox"/>	<input type="checkbox"/>	250	250	15		

The user interface is intuitive with instrument parameters listed on a single page. The emergency sample feature is available along with the dynamic sequence table to prioritize sample runs .

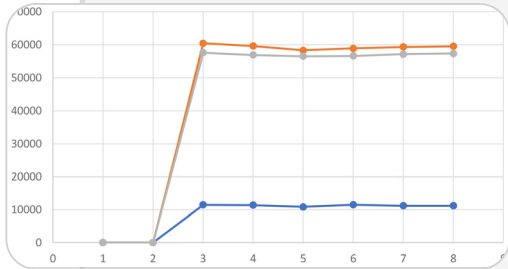
CDS 7550s Product Analytical Performance

Most TO-17 Compounds $R^2 > 0.999$

RSD < 2% for TO-17 Gas Internal Standard

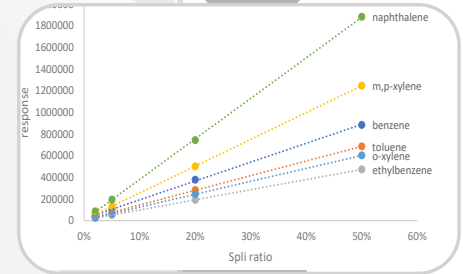
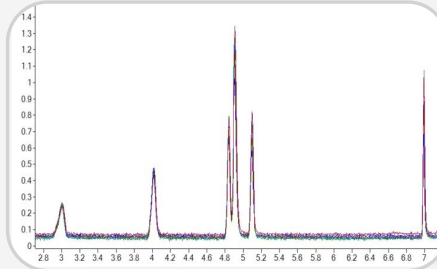


62 Components TO-17 Mix
1, 2, 3, 5, 10 ppb. Top Zoom in from 12 min to 15 min



Internal Standard Reproducibility

Bromochloromethane RSD = 2%
1,2-difluorobenzene RSD = 1%
Chlorobenzene-d5 RSD = 0.7%



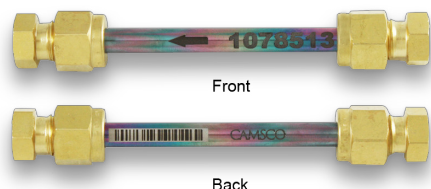
Quantitative Sample Split

TIC and calibration curve of 6-component VOCs mix at 4 different split ratio of 2%, 5%, 20% and 50% with 89 mL/min total purge flow

Technical Comparison:

	TurboMatrix 650 ATD	Markes TD-100	CDS 7550S
Valve Oven Max	300°C	200°C	300°C
Transferline Max	300°C	250°C	350°C
Sample Positions	50	100	72
Peltier Trap Min	-30°C	-40°C	-20°C
Needle Puncture	No	No	No
Tube Cap	Required	Required	No
Sample Split	Supported	Supported	Supported
Focusing Trap Material	Quartz	Quartz	Coated Stainless Steel
Focusing	Peltier	Peltier	Peltier + Pre-Desorb

Thermal Desorption Consumables



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

Every single thermal desorption tube and analytical trap has been fully tested on mechanical tolerance and analytical performance before releasing 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 focusing trap is made of stainless steel and 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
9301-5055	Vocarb 3000 (C3-C33)	Yes	1/8"x 115mm
CTC30424-1	Benzene C6	Yes	1/8"x 115mm
CTC30420	Tenax TA	Yes	1/8"x 115mm
CTC30425	Emissions (C4-C32)	Yes	1/8"x 115mm
CTC30420-7	Chemical Weapon	Yes	1/8"x 115mm



Thermal Desorption

Pyrolysis

Purge and Trap

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