Eclipse 4760

Purge-and-Trap Sample Concentrator

NEW!

High-Performance Technology for Accurate, Reliable Volatiles Analysis

- Patented Cyclone Water Management™ system removes >96% of water during the thermal desorb step, allowing improved analysis of polar compounds & minimizing water transfer to the GC column
- Intuitive, simplified user-interface and Trap View™ software
- See the system's status instantly at a glance with TruColour™ LED indicator
- Heats sparger during bake to reduce carryover
- Patented technologies for foam sensing and purge abort to prevent system contamination
- Sparge Overfill Sensor (SOS™) prevents overfilling of the sparge vessel and system flooding
- Patented Infra-Sparge™ Sample Heater ensures consistent sample temperature conditions for consistent recoveries
- Direct resistance heating of the trap at >1,000 °C/min eliminates the need for a trap preheating step and decreases overall purge and trap cycle time

Product Description

The **Eclipse 4760 Purge-and-Trap Sample Concentrator** processes samples for the analysis of volatile organic compounds (VOCs) by GC or GC/MS. Innovative, patented components within the Eclipse significantly improve purge-and-trap sample processing steps. A key technology is the Cyclone Water Management system that removes water during the thermal desorb step. The high efficiency of water removal allows for the more accurate analysis of polar compounds and the reduction of GC or GC/MS system maintenance.

Operating Principle

The Eclipse purges VOCs from liquid, solid, or gaseous matrices using a regulated flow of inert gas for a fixed time period. Analytes stripped from the sample (or transferred from an autosampler) concentrate onto a sorbent trap specific for the application. The trap heats rapidly, desorbing the analytes as a "plug" onto the GC column using a reversed carrier gas flow. The water management fitting removes the trapped water, minimizing the chance of introducing excess moisture into the GC.

Applications

Drinking water

Wastewater

Groundwater

Leaking Underground Storage Tank (LUST) monitoring

Storm water

Geosmin and 2-MIB

Oxygenates

Methods

USEPA 502.1, 502.2, 503.1, 524, 601, 602, 603, 624, 8010, 8015, 8020, 8021, 8030, 8260

ISO 15680:2003

Massachusetts VPH & GRO methods

ASTM and Standard Methods

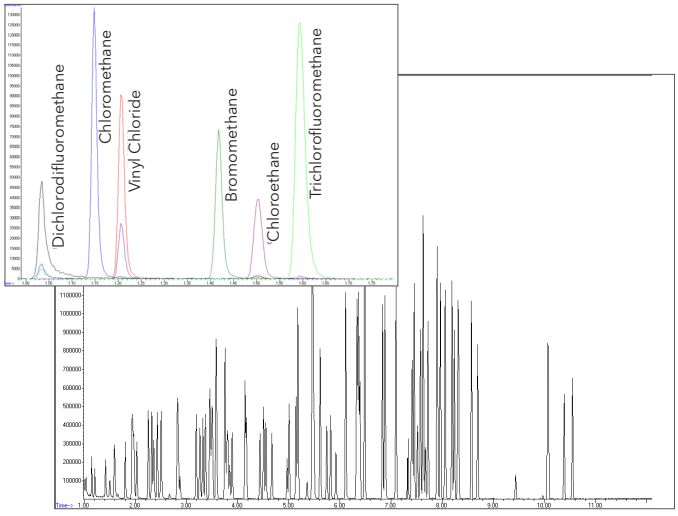
O·I·Analytical
a xylem brand

Eclipse 4760 Specifications

Dimensions	48.9 cm H x 18.4 cm W x 45.76 cm D (19.25" H x 7.25" W x 18" D)
Weight	16.3 kg (36 lbs)
Power requirements	115 VAC ±10%; 50/60 Hz; 230 VAC ±10%; 50/60 Hz; 750 VA maximum
Gas requirements	99.999% (UHP Grade) He or N_2 purge gas

Safety/EMI Certifications

Safety	LVD 2006/95/EC EN61010-1:2010 3rd
EMC	Directive 2004/108/EC EN61326-1:2013 CISPR 11:2009 and A1:2010
RoHS	Directive 2011/65/EU



The Eclipse was used to prepare a chromatogram of an expanded list of USEPA Method 8260 standard. It illustrates superb chromatographic performance with baseline resolution for all light gases and polar compounds, even with high-speed columns.

Options

pH*Detect* (automates sample pH measurement)
Foam Buster
Foam Sensor
Sparge Overfill Sensing (SOS)
Infra-Sparge Sample Heater
Air-Tube Desorber Accessory
On-Trap Injection Port
Purge-and-Trap Low-Dead-Volume Injector (LDVI) for GC Autosamplers

Sparge vessel	5-mL standard, 10-mL and 25-mL optional
Autosampler (options)	4551A (water samples) 4100 (water/soil samples)
Standard injection (options)	SAM and LV-20
Trap	3.175 mm O.D. x 2.227 mm I.D. (0.125" O.D. x 0.105" I.D.)
Trap heating	Direct resistance heating
Trap temperature	Programmable ambient to 450 °C in Purge, Desorb, and Bake steps
Trap cooling	>240 °C/minute (200 °C to 30 °C in <50 sec) Cool down to ambient temperature +1 °C
Water management	Eliminates >96% of trapped water, Maximum temperature: 240 °C Cool down temperature: ambient +1 °C
Sample transfer line	1/16" x 48" standard (60" optional)
Sample transfer line temperature	Programmable ambient to 295 °C
Communications	USB to RS-485 adapter cable

Software

Operating system	Windows® 7, 8, and 10
Operator interface	Windows-based graphical user interface
Available languages	English

Patents

US 5,250,093 5,261,937 5,337,619 6,894,784B2

Publication 42370216

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