

Eclipse Process Analytics

Analysis by Gas Chromatography



Engineered Solutions, Guaranteed Results.



WASSON-ECE
INSTRUMENTATION



Laboratory Grade Hardware

Eclipse uses state of the art laboratory-grade components designed throughout Wasson-ECE's decades of experience in laboratory and process analytics. Capable of handling everything from simple to complex analyses, Eclipse can utilize two MicroConvection ovens (US Pat. 8,512,456) for capillary columns; two isothermal ovens for packed columns, valving or detectors; one valve-inlet-detector (VID) oven for primary chromatographic valving, inlets and detectors; heated bridges for controlled sample transfer; and sample panel options for complex sample handling and multiplexing.



Eclipse Technology

- Online MSD, TCD/FID and PDHID
- Full electronic pressure programming
- Laboratory quality temperature programming
- Two MicroConvection programmable ovens
- Local touchscreen interface
- Wasson-ECE's new chromatography data system
- Rated for hazardous locations
- Modbus RTU, TCP and REST automation
- Sample system

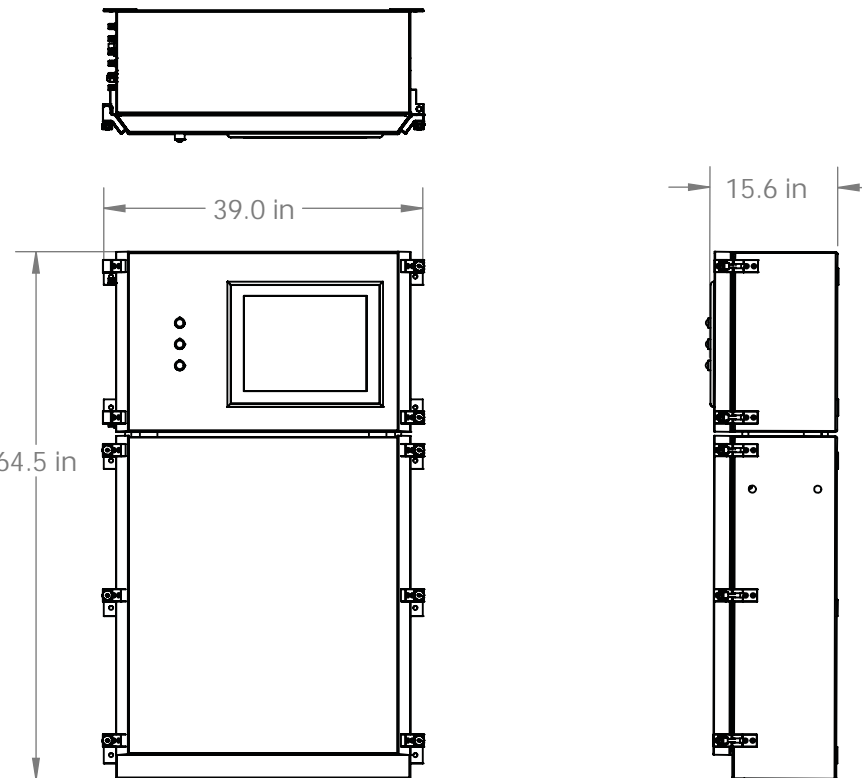
The World of Process GC Just Changed

Wall Mount

Eclipse is wall mountable for convenience and features a nineteen inch touchscreen interface for walk-up interaction with the unit. Instrument status, data analysis and configuration are accessible from the front display or via remote management.

Easy to Maintain

With an enclosure rated for hazardous locations and mounted on a pivoting inner chassis, high precision components are easily serviceable and protected from even the toughest environments.

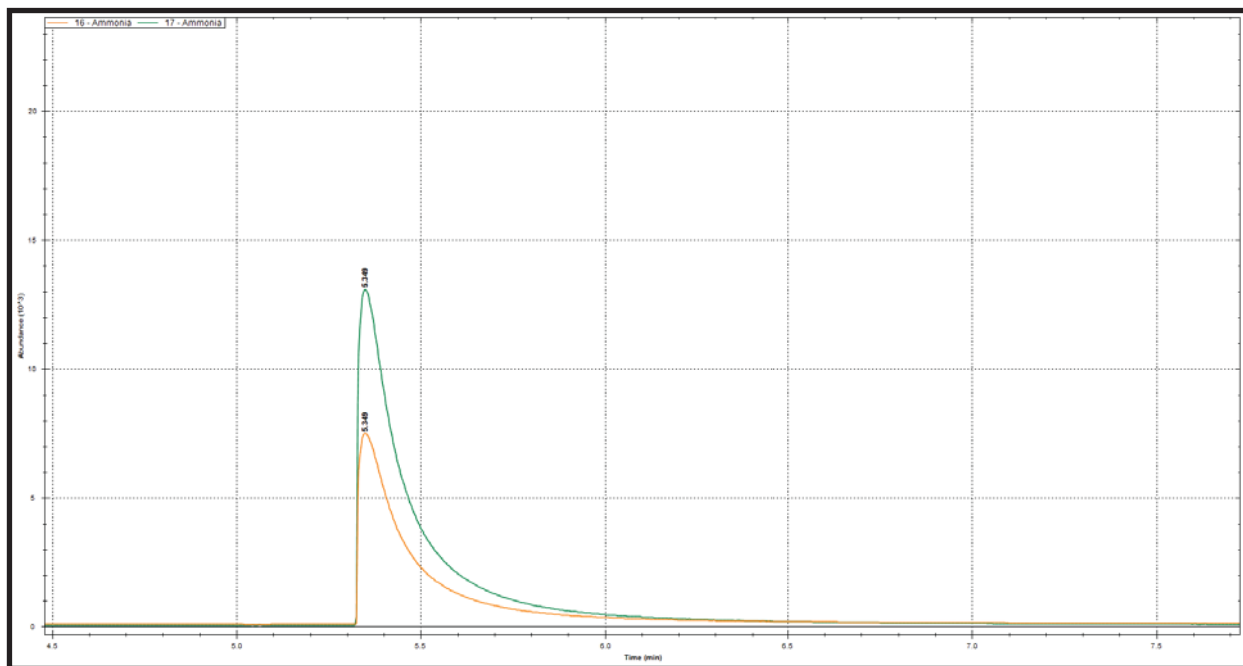


Detectors

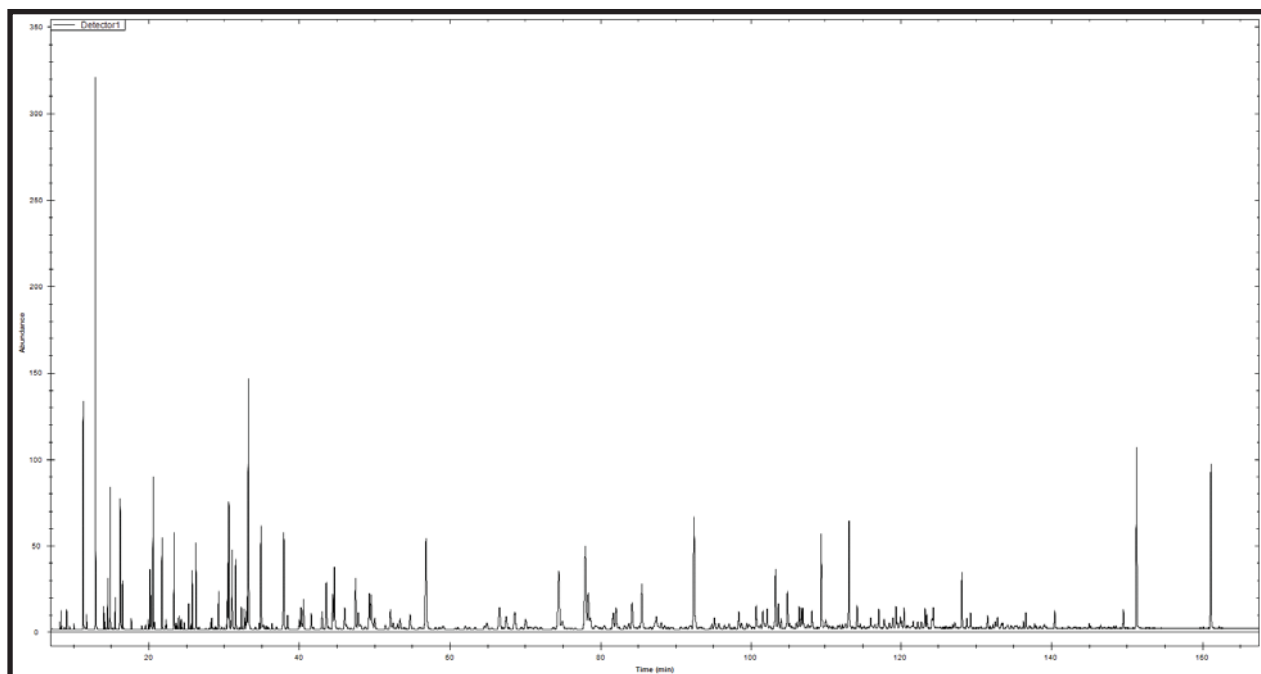
Flexible detector configurations allow Eclipse to scale across a wide range of analyses. From complex analyses requiring low detection limits and high accuracy identification to simple budget-conscious analyses. Eclipse can include a combination of two flame ionization detectors (FID) or pulsed discharge helium ionization detectors (PDHID) and isothermal ovens can contain thermal conductivity detectors (TCD).



Eclipse Process Analyzer



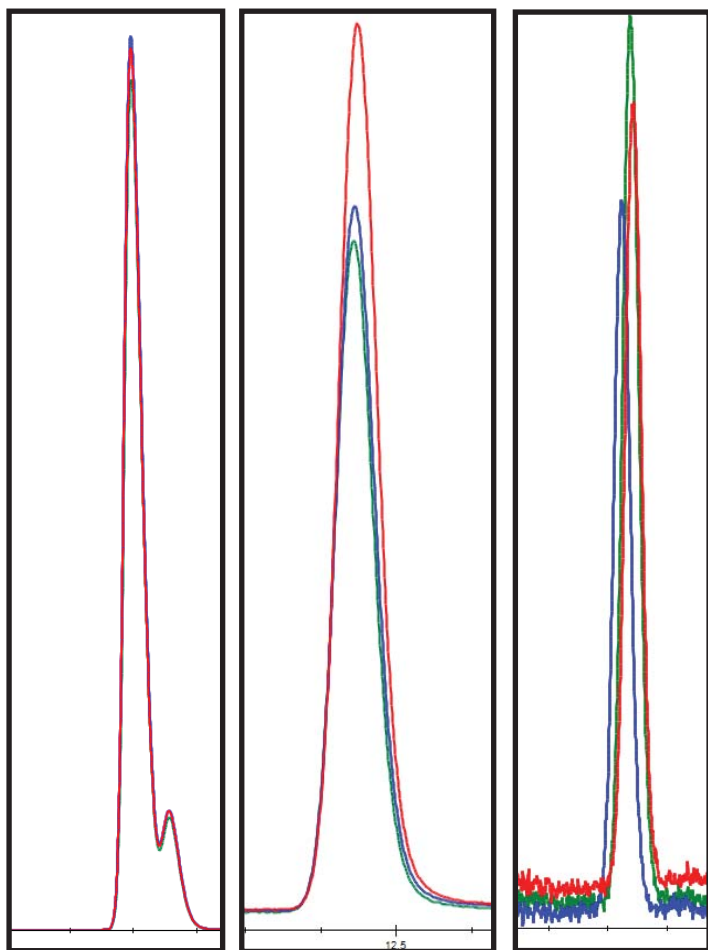
Component confirmation using the power of mass spectrometry:
m/z 17 and 18 of ammonia in ethylene.



Utilizing high-resolution capillary chromatography.

Laboratory performance on-line!

The World of Process GC Just Changed



Eclipse Oven Performance

Component	Methane Retention Time (min)	Dodecane Retention Time (min)
Run 1	5.395	22.448
Run 2	5.396	22.477
Run 3	5.395	22.448
RSD %	0.011	0.075

MicroConvection Oven

Two independent MicroConvection ovens allow for precise and repeatable control of capillary column temperatures. Analyses that were unattainable with packed columns alone can now be accomplished in an automated and repeatable fashion. With less than 0.08% relative standard deviation (RSD) at twenty-two minutes, Wasson-ECE's MicroConvection ovens allow Eclipse to challenge the analytic performance of both traditional process and laboratory gas chromatographs.



Eclipse Process Analyzer



Electronics

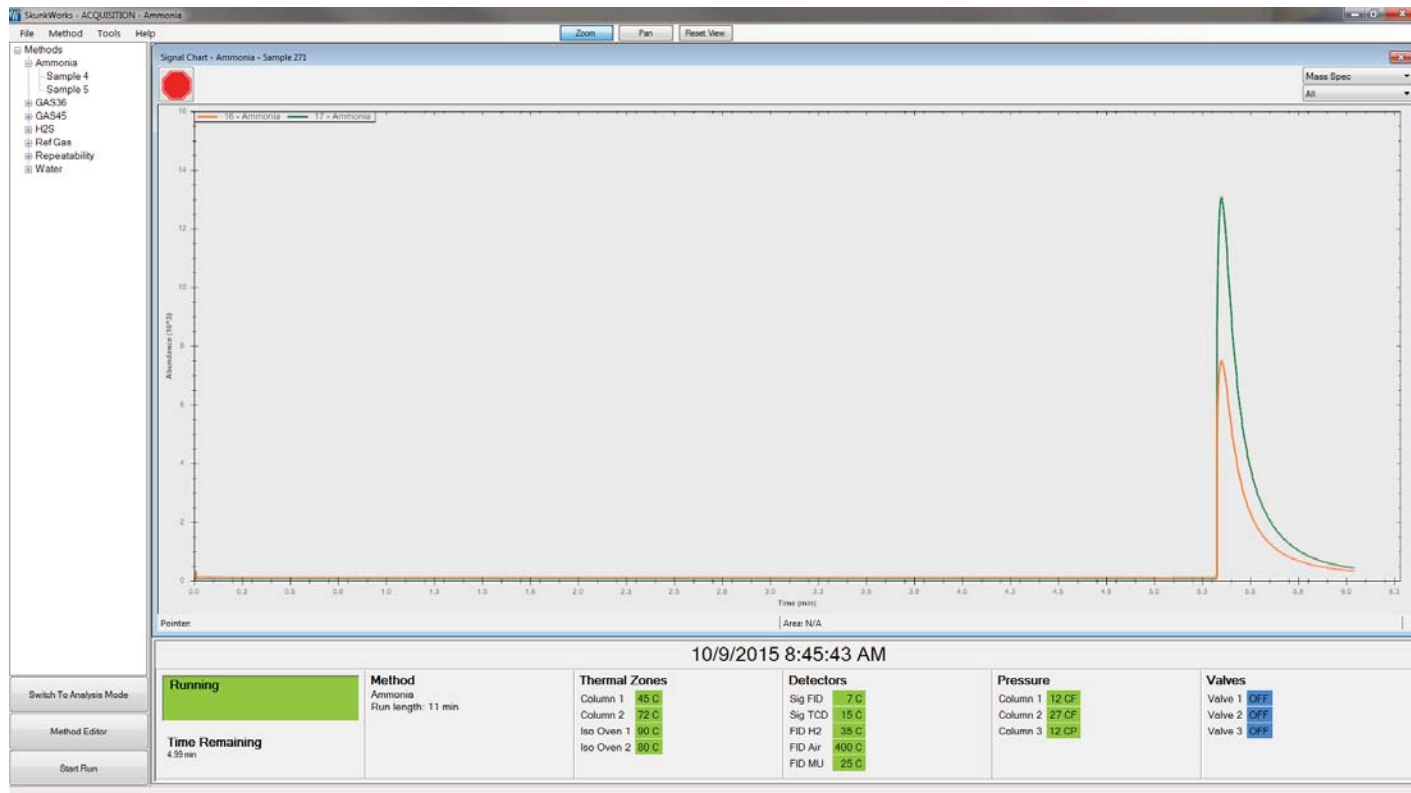
Complete control over data paths ensures data integrity, higher precision and faster collection speeds. Eclipse data is handled entirely by Wasson-ECE electronics and software including our newly designed FID, autonomous thermal zones and a new chromatography data package.

Wasson-ECE CDS

Wasson-ECE's chromatography data system (CDS) for process instrumentation is newly developed from the ground up for improved performance and reliability. Consistent user experience and data models across all stages of method development, installation and unattended operation provides efficient access to the data crucial to process operation.

Neutrino Process GC-MS

Coming in 2016, Neutrino expands the Eclipse platform with the ability to reach lower detection limits with unparalleled identification accuracy. Combining the separation of gas chromatography with the identification power mass spectrometry, Neutrino allows users to detect and quantify components that would be impossible with other detectors.



550ppm ammonia analysis using Neutrino's MSD

The World of Process GC Just Changed



Eclipse on shipping dolly.

Wasson-ECE Instrumentation

Engineered Solutions, Guaranteed Results.

Wasson-ECE Instrumentation specializes in configuring and modifying new or existing gas chromatographs exclusively from Agilent Technologies to provide guaranteed, turn-key analytical systems. Our customers describe their objectives and their samples: analytes, concentration ranges, phases, temperature, throughput and any special needs. From this dialog we configure a task specific instrument. We add extra ovens, valves, plumbing, flow control, columns, electronics and software to yield a complete solution. This saves our clients valuable time and delivers instruments that are state-of-the-art and ready for use upon installation.

The complete analytical method is developed, tested, and documented utilizing our experience working with numerous companies that have similar needs and goals. The resulting chromatograms and reports are inspected by our application chemists and customers, to ensure system performance and design quality. Our field engineers then install each system and provide training. After installation, and throughout the life of the chromatograph, our support chemists are ready to help. We can assist with application details, questions, training, calibration, maintenance and on-site service. Wasson-ECE brings experience and efficiency to your project, giving you confidence in the quality of your results.



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