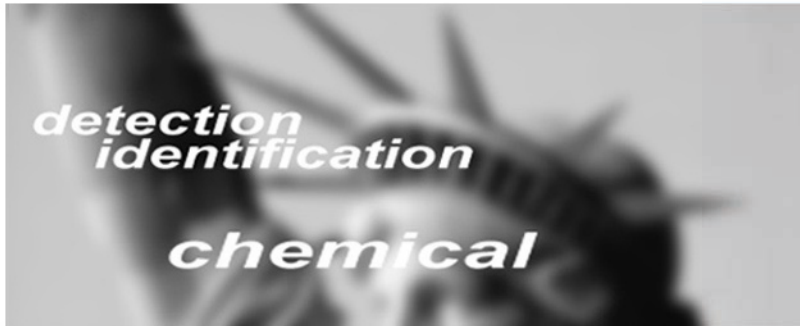


# GRIFFIN G510E

**Person-Portable GC/MS  
Chemical Identifier focused on  
Environmental Applications**



The Griffin™ G510e Gas Chromatograph Mass Spectrometer (GC/MS) is a versatile, person-portable chemical identifier. It complements presumptive techniques used during emergency missions, by enabling responders to analyze all phases of matter (liquid, solid, vapor) and by performing rapid field- confirmation of chemical hazards. The integrated heated sample probe enables hot zone operators to identify vapor-phase chemical threats within seconds when operated in Survey Mode. The G510e focuses specifically on environmental applications that require better separation and sensitivity to lighter volatile organic chemicals (VOCs). The G510e uses a specialized column and preconcentrator combination to meet this demand. The 9" on-board touchscreen delivers automated user controls and can be operated while wearing full personal protective equipment downrange. It is built with an IP65-rated enclosure for harsh environments and supports passive defense, interdiction, elimination, and consequence management missions. Long-lasting, on-board batteries ensure environmental missions are supported from beginning to end.



## MASS SPEC PERFORMANCE REDEFINED

Confidently identify unknowns and take action with guided prompts and simple threat alarms

- Laboratory level, gold-standard linear quadrupole mass analyzer
- Over 60 VOCs in the Target Library along with the full NIST and SWGDRUG chemical library for field identification and analysis of unknown materials and mixtures
- Simple on-board touchscreen with navigation assistant and Method Selector tool
- Visual and audible alarm confirmation with limited data interpretation
- On-board WiFi and GPS assist in maintaining

## ULTIMATE CHEMICAL DETECTION TOOLBOX

Versatile in-field sampling options for vapor, liquid, and solid samples

- Vapor sampling probe with rapid-response survey mode
- Integrated split/splitless liquid injector accepts direct injection of organic liquids
  - Optimized Column and Preconcentrator for VOCs.
- Effortlessly links with SPME and headspace sample collection tools
- High-fidelity, low thermal mass (LTM) GC column for unsurpassed resolution in challenging environments

## BUILT FOR EVERYONE, BUILT FOR EVERYWHERE

Completely self-contained and mission-ready from the field to the lab

- IP65-rated, dust-tight and spray-resistant
- Built-in active pumping system eliminates need for an external service module
- Integrated carrier gas, batteries, and training reference videos
- Simple field maintenance activities for increased uptime
- Extensive training, service, and support options available
- Optional vehicle mount kit for variety of on-the-go missions

# **GRIFFIN G510E** **SPECIFICATIONS**

## **SYSTEM OVERVIEW**

Technology	Gas Chromatography/Mass Spectrometry (GC/MS)
Dimensions (L x W x H)	13.25 x 13.25 x 15.75 in (33.7 x 33.7 x 40 cm) - includes batteries, carrier gas, and vacuum system
Weight	36 lbs (16.3 kg) - includes batteries, carrier gas, and vacuum system
Operating Temp/Humidity	32 to 104 °F (0 to 40 °C); <95% relative humidity
Storage Temp	-13 to 131 °F (-25 to 55 °C)
Decontamination	Sealed for Survey Mode operation in hot-zone; IP65-rated enclosure is dust-tight and spray-resistant
Power Supply	100-240V 50-60Hz (220 W max); 19V (DC); 2 x #2590 @ 15V Li Ion batteries (included)
Battery Life	4 hrs in Survey Mode, 2 hrs in Confirmation Mode; hot swappable
Start Up Time	15 minutes to full operation from cold
Calibrant	Onboard FC-43 (Perfluorotributylamine)
Carrier Gas	On-board helium; external helium connector, automatic switching (Hydrogen capable)

## **SYSTEM INTERFACE**

Display	9" Multitouch Color Display (1280x720 WVGA; 1300 nits brightness)
Alerts	Audible and Visual (Touchscreen and Handheld Probe)
Software	GSS Touch; multiple user levels
Communication	2 x USB 2.0, Bluetooth 4.0, WiFi 802.11n, Ethernet via USB, integrated GPS
Data Storage	Internal ≥128GB SSD
Training Requirements	2 hours basic operation; 8 hours Operator Certification

## **SAMPLING & IDENTIFICATION**

Sample Phase	Solid, liquid, and vapor  <b>Heated Sample Probe (included standard):</b> - Vapor survey mode via Membrane Introduction Mass Spectrometry (MIMS) Inlet - Vapor confirmation via Internal Dual-Bed Preconcentrator
Sample Introduction	<b>Split/splitless injector (included standard) accepts:</b> - Direct liquid sampling (organic solution) via syringe - Liquid extraction via SPME fiber or PSI-Probe w/ Gerstel Twister™ - Headspace Sampler
Threats	Detects and identifies CWAs, TICs, environmental pollutants, and other chemic
Standard Reference Database	NIST/EPA/NIH Mass Spectral Library, SWGDRUG Mass Spectral Library, and GriffinLib Mass Spectral Library included
Sampling & Analysis	Full identification in 4-15 minutes for most chemicals; identification within seconds (near real-time) when operating in Survey Mode

## **MASS SPECTROMETER**

Mass Analyzer Type	Linear quadrupole mass filter
Mass Range / Resolution	15-515 m/z; 0.7 amu @ FWHM
Ionization Type / Source	Electron Impact Ionization; non-radioactive ionization source
Detector	Electron Multiplier
Vacum System	Self-contained miniature turbomolecular & diaphragm pumps
Dynamic Range	7 decades
Detection Limit	PPM (parts per million) – PPT (parts per trillion)

## **GAS CHROMATOGRAPH**

LTM-GC Column	DB-624 (20 m x .18 mm x .25 µm)
Temperature Range	Programmable 40 to 300 °C; ramping of 100 °C/min

Specifications are subject to change without notice.



Method Selector Tool



GSS Touch Chemical Identification Result

