

Laser focused carbon analysis

Fast, accurate, portable LIBS analysis

Discover the Thermo Scientific™ Niton™ Apollo™ handheld LIBS analyser. Engineered to help conquer your toughest analytical challenges, the Niton Apollo specialises in measuring carbon content in a convenient, portable form factor. Powered by Laser Induced Breakdown Spectroscopy (LIBS), the Niton Apollo delivers unmatched speed, superior performance and enhanced productivity. Unleash the possibilities and bring the power of lab analysis to the field.



Applications

- Determine alloy composition and grade for a wide range of metallurgical samples
- Calculate carbon equivalency to determine piping weld ability
- Verify critical assets, such as, piping, valves and reaction vessels for Positive Material Identification (PMI)
- Inspect materials at receiving, in-process fabrication and outgoing Quality Control (QC)
- Qualify Material Test Reports (MTR)
- Prevent contaminated scrap from entering the supply stream
- Detect tramp and trace elements to meet regulatory standards



The Niton Apollo in use, verifying incoming materials

Analytical performance

Designed to provide fast analysis and low detection limits, the Niton Apollo ensures superior results. Powered by an effective laser and high purity argon purge, the Niton Apollo delivers lab quality results in about 10 seconds. Users can calculate carbon equivalency and perform advanced averaging, while also identifying alloys and pseudo elements. Data is displayed in real time, enabling fast and efficient decision making.

Expanded field use

Avoid manoeuvring heavy equipment into tight spaces. Weighing just 6.4 pounds (2.9 kilograms), the Niton Apollo transforms a traditional laboratory, or cart-mounted Optical Emission Spectroscopy (OES) system, into a highly portable handheld analyser. Experience a whole new range of motion as you seamlessly climb up pipelines and into trenches. A tapered nose helps users achieve even more coverage to measure difficult to reach areas.

Increased productivity

Discover high-speed performance combined with point and shoot simplicity. With minimal training, the Niton Apollo is easily operated even by non-technical users. Fast analysis times help increase sample throughput and production. A hot-swap Milwaukee® battery also keeps users up and running when it's time to replace a low battery.

Safe analysis

Operating a powerful laser should be taken with the utmost care. The Niton Apollo comes equipped with three robust safety interlocks to help users reduce the risk of a laser misfire.

Tried, tested, and validated by a third party, our interlocks help keep operators safe. Designed to measure chamber pressure, spectral type, and light/ dark conditions, users can securely operate the Niton Apollo with peace of mind.

Functionality

Vivid icons and an application interface ease navigation and configuration. Utilise swipe and touch screen functionality, even with a gloved hand. The Niton Apollos' optional directional keys provide added usability. A micro and macro camera enable precise sample positioning and collect images for better record keeping. WiFi accessibility also automatically transmits data from your device to PC.



Product Specification

Weight	6.4 lbs with battery (2.9 kg)
Dimensions	12 x 13 x 4 in (30.48 x 33.02 x 10.16 cm)
Laser	1064nm laser
Safety Features	Chamber pressure, spectral type, and light/ dark sensor interlocks
Models / Analytical Range	Stainless Steel: C, Al, Si, Ti, V, Cr, Mn, Co, Ni, Cu, Nb, Mo, W Low Alloy / Carbon Steel: C, Al, Si, Ti, V, Cr, Mn, Ni, Cu, Mo, W
Argon Usage	About 200 shots per cartridge
Libraries	Default alloy libraries based on SAE, AISI, ASTM standards Users may create, clone and edit libraries
IP Rating	IP54 (splash and dust proof)
Operating Environment	Temperature: 32°F - 104°F (0°C - 40°C)
Altitude	3,000 ft maximum
Display	Tilting, colour, resistive touchscreen display
Power	24V, 3.75A, 90W power supply
Macro Camera	Integrated CCD macro camera for capturing overview images of parts and tagging measurement locations
Micro Camera	Integrated CCD micro camera for locating and recording measurement positions
Global Positioning System	Internal GPS (ability to include coordinates with sample information)
Bluetooth	Bluetooth 4.0 (supports print functionality)
Memory / Data Storage	512 MB internal system memory / 16 GB industrial grade storage Stores approximately 5,000 readings with spectra (fewer if macro and micro images are saved)
Data Entry	Touchscreen keyboard User customisable data entry
Data Transfer	WiFi, USB
Operating System	Linux
Support Software	NitonConnect PC software
Security	Password-protected user security
Languages	English
Standard Accessories	Locking shielded carrying case Two (2) Milwaukee® M18™ Redlithium™ High Demand™ CP2.0 battery packs One (1) Milwaukee® M18™ & M12™ multi-voltage charger One (1) Box Thermo Scientific™ Analytical Argon - 5 pack Setup standards Laser safety glasses Instrument cleaning kit Safety lanyard and carabiner PC connection cable
Optional Accessories	Thermo Scientific™ bulk argon adapter Additional laser safety glasses
Compliance	CE, RoHS, FCC, Industry Canada, Safety to IEC 61010-1:2010
Licensing / Registration	Varies by region. Contact Niton UK



WARNING: INVISIBLE LASER RADIATION AVOID EXPOSURE TO THE BEAM. CLASS 3B LASER
Wavelength: 1064 nm **Peak Pulse Energy: <12.5 mJ**
Pulse Duration: <10ns **Repetition Rate: 20 Hz**
 Complies with 21 CFR 1040 with deviations pursuant to Laser Notice
 No. 50 dated June 24, 2007 and IEC/EN 60825-1:2014, Ed. 3.0

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