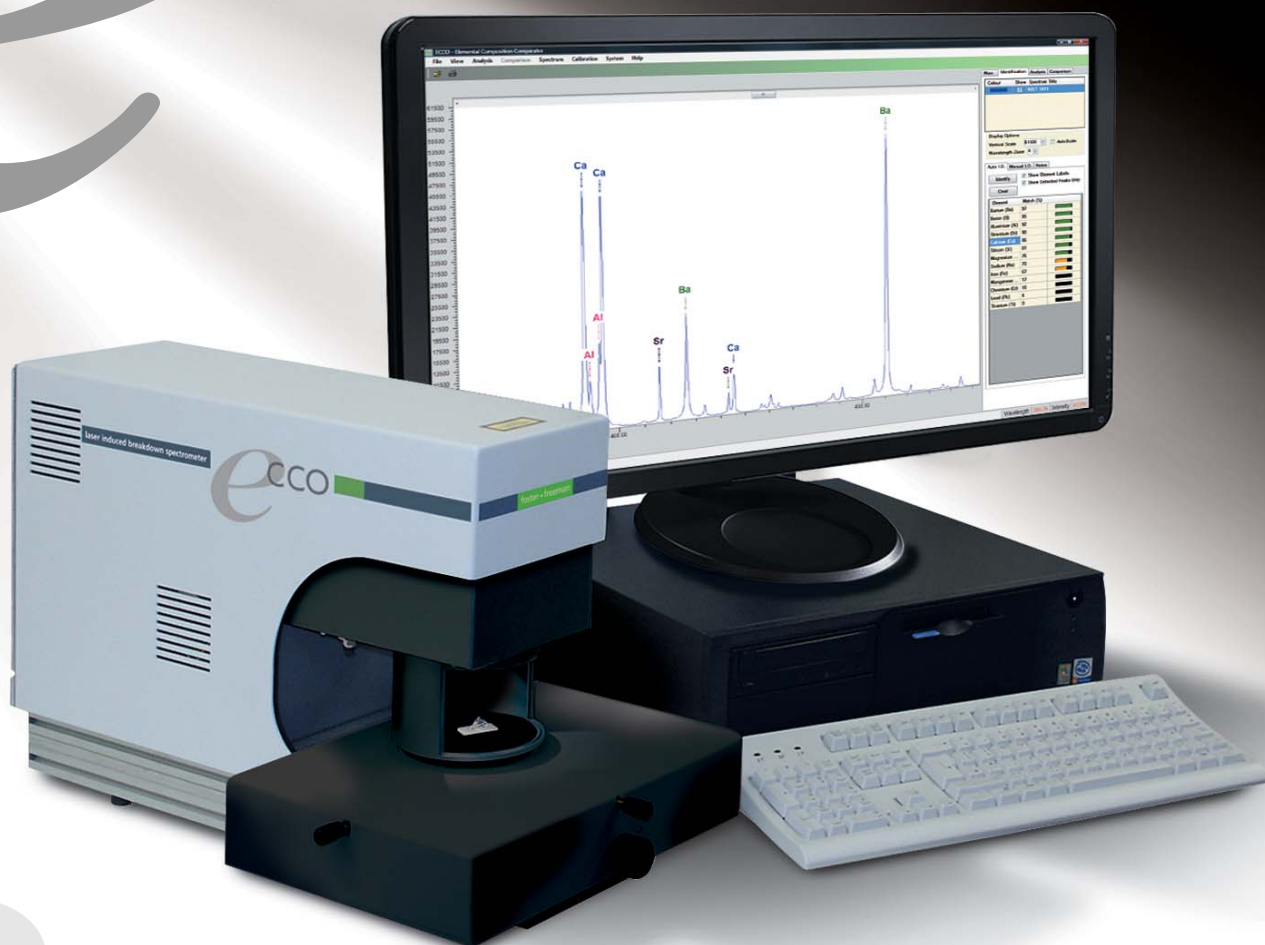


ECCO™

foster+freeman



Laser Induced Breakdown Spectroscopy *for forensic science*

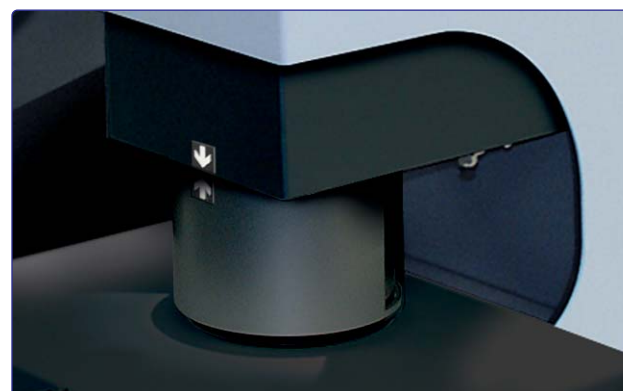
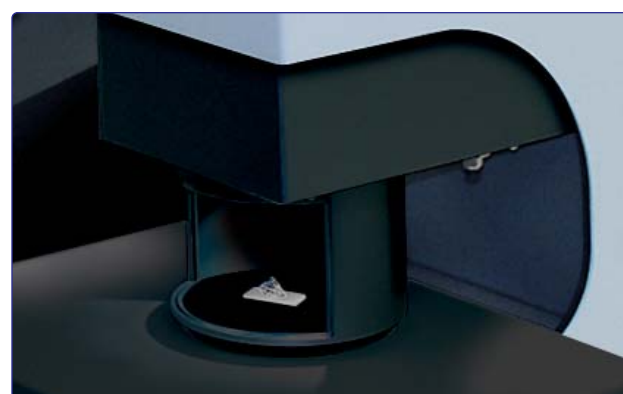
ECCO™ is a new instrument, designed and manufactured by Foster & Freeman for the elemental analysis of glass and other inorganic substances employing the novel analysis technique of Laser Induced Breakdown Spectroscopy (LIBS).

The technique utilizes a very high energy pulse laser to ablate a microscopic amount of material and raise its temperature by tens of thousands of degrees. The excited matter subsequently emits a characteristic emission spectrum as the various elements return to their ground states.

The ECCO™ can be used as a faster and more cost effective alternative to older elemental analysis techniques such as XRF and SEM.

ECCO™ gives you routine LIBS examinations

- Minimal sample preparation
- Compact bench top facility
- Minimal technical training
- Rapid analysis
- Guaranteed support



ECCO™

Laser Induced Breakdown Spectroscopy

FEATURES INCLUDE

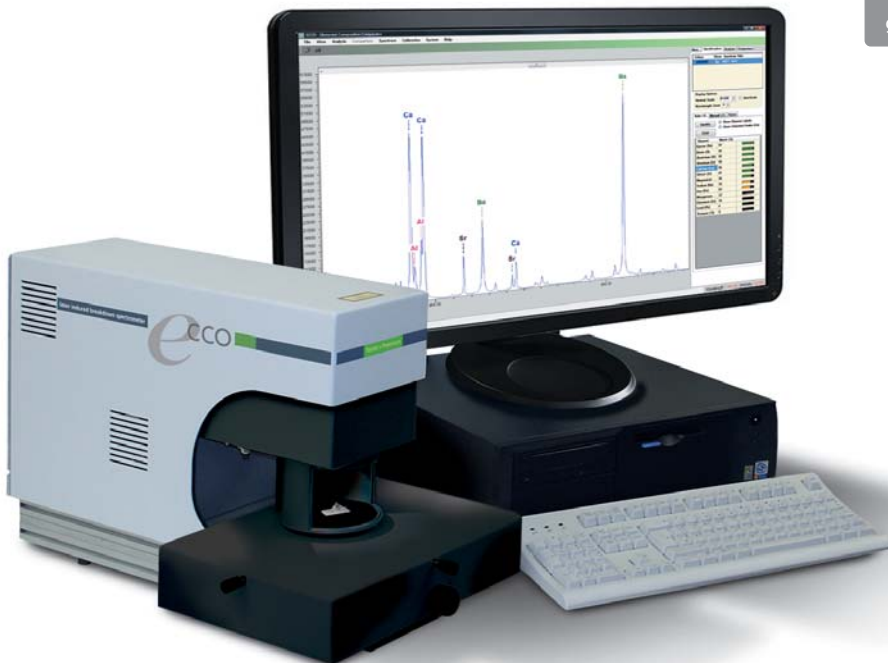
- Air Cooled Q-switched Nd:YAG laser with 1064nm emission.
- Integral colour camera with digital zoom for sample selection.
- XYZ sample positioning/focusing stage.
- Automatic identification of elements.
- Comparative display of spectra and peak ratios.
- Automatic measurement of peak statistics.
- Comprehensive library of element emission lines.
- Research operation mode.
- Rugged optical design.
- Full laser safety features.
- Miniature footprint.
- Software module for the routine analysis of glass evidence.

Examination of glass evidence

LIBS can be used to identify many of the main elements present in glass as well as minor and trace elements down to concentrations of low PPM. In addition the ratios of the spectral peaks of minor and trace elements to those of the major elements provide useful discrimination between glasses.

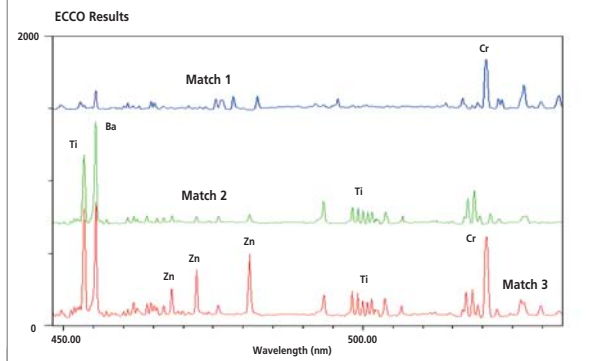
LIBS with ECCO™ is fast and simple to use and requires little technical training to achieve reproducible results. Once the operator has located and focused on to the sample for analysis, results take only a few seconds to capture. Results from recovered and controlled glasses can be instantly displayed for comparative examination.

ECCO™ provides a turnkey system for the examination of forensic material, complete with PC, interfaces and software.

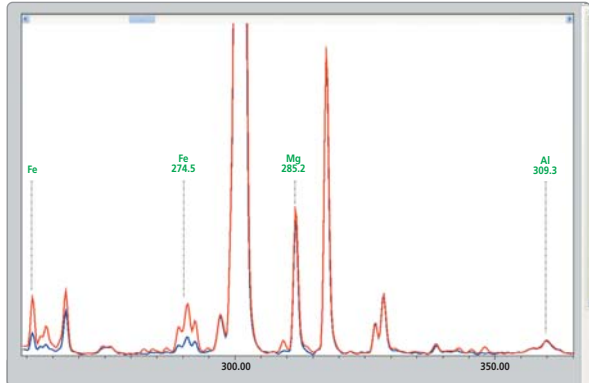


**CLASS 1
LASER PRODUCT**

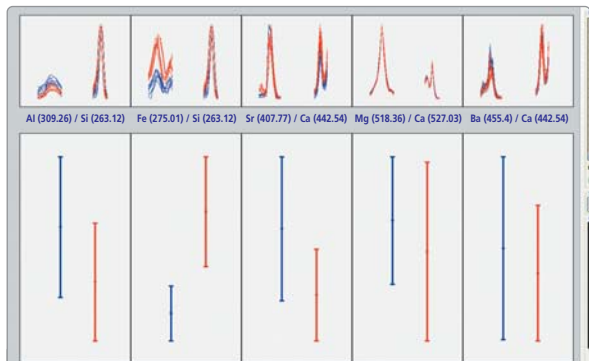
Foster & Freeman Ltd reserve the right to alter the specification of the ECCO™ or any accessories without prior notice.



Other applications include examination of match heads found at sites of suspected arson.



Comparative display of two glass samples with identical RI.



The Fe/Si peak ratio taken from the emission spectra of two glass samples with identical RI show positive discrimination.

Appointed Agent:

foster+freeman

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