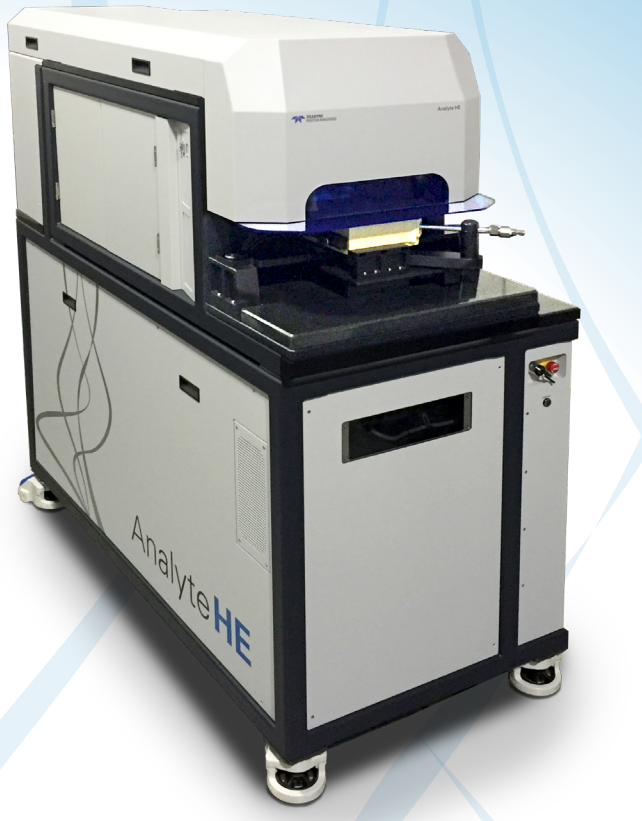
Analyte HE

High Energy Homogenized Excimer Laser Ablation System



Application Areas

Environmental Analysis
Geological Analysis
- Isotope Ratios
- Fluid Inclusions
- Geochronology

Forensics
Isotope Fingerprinting
Imaging / Mapping
Depth Profiling
(Paleo) thermometry

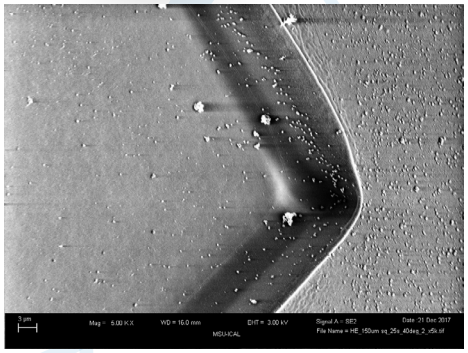
Example Materials

Quartz
Fluorite
Calcite / Aragonite
Transparent Glasses
Bone / Fossils
Zircons
Ceramics
Plastics
Thin Coatings
Various Minerals

About the Analyte HE

The Analyte HE offers excimer technology at 193 nm with all the analytical capabilities you require, delivering finely controlled, "homogenized-flat" ablations with high sensitivity and split second response. "Fire-on-the-fly" lasing that is synchronized to the stage motion, combined with fast washout ablation cells, make precision depth profiling of spots, lines and areas possible and enables high spatial resolution elemental mapping.

Equipped with a high definition, color GigE camera on a high magnification, optical zoom video-microscope, the viewing system is capable of resolving 2 µm features. Flexible lighting systems, rotating cross-polarizers and software selectable camera settings give the user enhanced viewing capabilities.



A proprietary beam homogenization process enables the Analyte HE system to generate beautiful flat bottomed craters with sharp edges and with no visible melting.

With enough energy to ablate even the most challenging materials, the Analyte HE allows you to confidently analyze all materials, including hard quartz and resilient carbonates. The beam energy profile is homogenized to ensure uniform ablations across the entire range of spot sizes and on a wide range of materials.

Key Features

- Ultra-short 193 nm wavelength
- Up to 50 J/cm2 fluence ablates all materials, including quartz and fluorite
- Optical homogenization of the laser beam for uniform flat ablations
- Sealed gas cabinet
- 100 × 100 mm stage travel as standard, 150 x 150 travel option available
- Synchronized "fire-on-the-fly" lasing for the ultimate depth control during ablation
- Independent video and lasing optical element for optimal viewing and crater quality
- Aperture imaged spots ranging from 1 µm to 170 µm
- 30 apertures as standard; custom masks available
- HelEx II active 2-volume ablation cell as standard

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CETAC Technologies and Photon Machines joined forces back in June 2010 with a view to advance laser ablation technology for elemental analysis, and to offer a full range of products globally. This collaboration brought together the experience in Photon Machines' design team with the sample introduction expertise of CETAC. This partnership has taken the next natural step and both companies have merged under the Teledyne Instruments banner.

Teledyne Photon Machines, a brand of Teledyne CETAC Technologies, provides laser ablation systems including CO2 and diode lasers, 213 nm solid state Nd:YAG, 193 excimer laser systems and femtosecond laser systems. In addition, the company provides accessories to enhance the capabilities of laser ablation systems.

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