

Analyte Excite

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

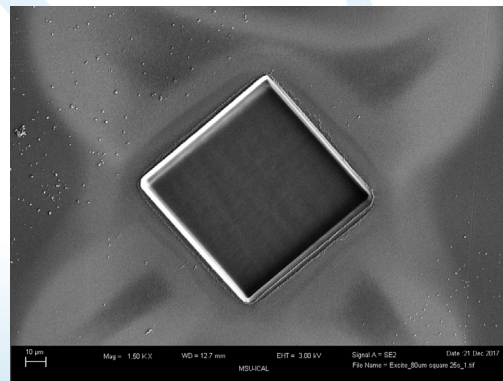
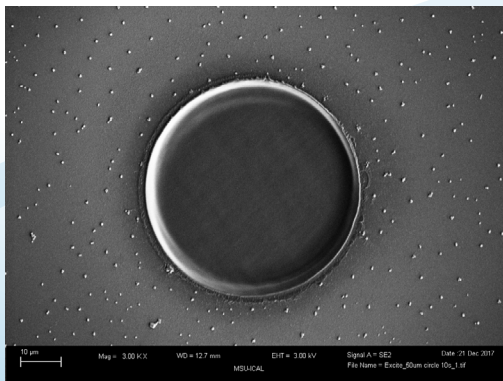
Calcite / Aragonite
Transparent Glasses
Bone / Fossils
Zircons

Ceramics
Plastics
Thin Coatings
Various Minerals

About the Analyte Excite

The Analyte Excite represents the best value in excimer laser ablation systems. It utilizes the latest, highly developed iteration of ATL's solid-state switched laser engine and includes the acclaimed HeEx II Active 2-Volume Ablation Cell and its unique adaptive inner cell. The system delivers finely controlled flat (homogenized) ablations with high sensitivity and split-second response for shot-to-shot spatially resolved analyses. Stage-synchronized "fire-on-the-fly" lasing provides depth profiling of lines and raster areas like never before. Energy density from 1 J/cm² to 15 J/cm² ablates all materials.

Equipped with a high definition, color GigE camera on a high magnification, optical zoom video-microscope, the Excite 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. 32 selections covering 1 µm to greater than 155 µm make the Excite a highly versatile instrument with unique capabilities, ideal for both micro-feature and bulk analysis. All spots are achieved with aperture imaging of the beam to ensure energy densities always remain constant when changing spot sizes.



Using a proprietary component to enable maximum beam homogenization the Analyte Excite system is able to generate beautiful flat bottomed craters with sharp edges and with no visible melting. The 50 µm circle (left) is the result of 10 ablation shots, and the 80 µm square (right) is from a 25 shot ablation.

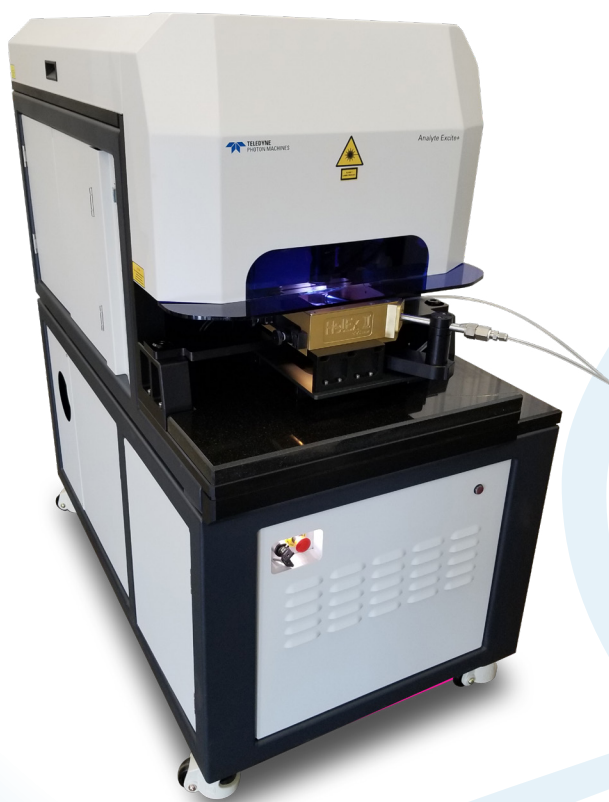


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PHOTON MACHINES
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Analyte Excite Key Features

- Best value in excimer laser ablation systems
- Ultra-short 193 nm wavelength
- Ultrashort < 4 ns pulse length
- Surplus fluence ablates all materials
- Sealed gas cabinet
- Optical homogenization of the laser beam for uniform flat ablations
- 100 × 100 mm stage travel as standard
- 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 155 µm
- 32 apertures as standard; custom masks available
- HelEx II active 2-volume ablation cell compatible
- ExiCheck (option) “fire-and-forget” operation - the performance of an excimer with the ease of a YAG



Analyte Excite+ Laser Ablation Package

The Analyte Excite+ is the ultimate excimer based laser ablation system. It contains all the features as the Analyte Excite, including the HelEx II Active 2-Volume Ablation Cell. The Excite+ also comes fully equipped with the ARIS fast washout accessory, eQC and ExiCheck to allow the best possible performance and flexibility of any excimer-based laser system on the market today. In addition the Analyte Excite+ also has a software controlled integrated Demag switch that allows the selection of 64 spot sizes from 1 µm to 245 µm as a standard feature. Contact your dealer for further details.



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www.teledynecetac.com

Teledyne CETAC Technologies, 14306 Industrial Road, Omaha, NE 68144 USA
+1 402.733.2829 | +1 800.369.2822 | cetacsales@teledyne.com | www.teledynecetac.com

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