High-Speed Laser Ablation Imaging

icpTOF

High throughput elemental mapping at up to 50x the rate of other mass spectrometers.

Learn More www.tofwerk.com

Collaborators: Teledyne Technologies and O.B. Bauer, U. Karst, University of Muenster

A rat kidney treated with Cis-Platin was imaged at a lateral resolution of 20 µm and scan rate of 200 µm/s using the Teledyne CETAC Technologies Analyte G2 193 nm laser ablation system with Aerosol Rapid Introduction System ARIS.

Talk to Our Team icp@tofwerk.com

High-Speed Laser Ablation Imaging
All the elements. All the time.
All-Element Detection

All-Element, High Resolution Detection

All the elements. All the time. The icpTOF always records complete mass spectra, so you never miss an analyte or interference signal.

High mass resolution. The icpTOF 2R has a mass resolving power of 6000 allowing you to separate interfering ions.

Precise isotope ratios. The icpTOF simultaneously measures all isotopes, thus eliminating the susceptibility of your measurements to source and sample fluctuations. Precision approaches statistical limits.

High speed detection. The icpTOF records a complete mass spectrum every 30-50 µs making it the optimum detector for fast transient signals such as individual nanoparticles, fluid inclusions and laser ablation pixels.
Fast, All-Element Detection

All-Element Analysis: Records complete mass spectra of individual laser pulses for LA-ICP-MS imaging.

Element maps

Single Pulse Response

Pixel spectrum

Garnet from a micaschist (South Carpathians, Romania): 10 mm² mapped at 5 µm resolution and 150 Hz pixel acquisition rate utilizing a Teledyne Cetac Analyte G2 (193 nm) laser ablation system with Cobalt cell.

Courtesy of Gavril Săbău, Geological Institute of Romania, and Ciprian Stremtan, Teledyne Cetac.
Interference Control

The high mass resolving power of the icpTOF R separates interferences.

Iron signal, 10 ppb Fe, 700 kcps

Iron solution: 1 ppb, Q-cell: NO gas

Iron solution: 1 ppb, Q-cell: H2

All-Element Detection

All-Element Analysis: Records complete mass spectra of individual laser pulses for LA-ICP-MS imaging.

Garnet from a micaschist (South Carpathians, Romania): 10 mm² mapped at 5 µm resolution and 150 Hz pixel acquisition rate utilizing a Teledyne Cetac Analyte G2 (193 nm) laser ablation system with Cobalt cell. Courtesy of Gavril Săbău, Geological Institute of Romania, and Ciprian Stremtan, Teledyne Cetac.

QCell™ Collision/Reaction Technology suppresses interferences.

Choose from the icpTOF R and the higher resolution icpTOF 2R All the elements. All the time.

The icpTOF always records complete mass spectra, so you never miss an analyte or interference signal.

High mass resolution. The icpTOF 2R has a mass resolving power of 6000 allowing you to separate interfering ions.

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