Multi-Element
Single Particle ICP-MS
All the elements.
All the time.


Engineered Nanoparticles in the Environment
Nanoparticulate Impurities in Steel Nanoparticles Uptake by Single Cells
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.
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

Interference Control

Detection of single nanosteel particles
- All elements detected simultaneously
- Quantitative element ratios of major elements in every particle
- Performance does not depend on the number of isotopes

Collaborator: Dr. R. Peters, Wageningen University & Research, The Netherlands
All-Element, High Resolution Detection

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.

Interference Control

Detection of single nanosteel particles
• All elements detected simultaneously
• Quantitative element ratios of major elements in every particle
• Performance does not depend on the number of isotopes

QCell™ Collision/Reaction Technology suppresses interferences.

The moderate and high mass resolving power of the icpTOF R and icpTOF 2R separates interferences.
Multi-Element Analysis of Single Particles and Cells

Engineered Nanoparticles in the Environment

Nanoparticulate Impurities in Steel

Nanoparticles Uptake by Single Cells

