Collision/Reaction cell for ICP-MS - a new concept for an improved removal of low masses

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Overview
Purpose: To provide an exploration of some of the advanced tool models that will be described in all examples of the QCell™ in the iCAP Q™ ICP-MS in both routine and research ICP-MS applications.

Results: Through the application of innovative technologies in the QCell™, a unique design that optimizes the properties of the quadrupole mass analyser in the iCAP Q™ ICP-MS for efficient and robust matrix analysis in high throughput situations. A series of examples are described that, after explanation of the working principle, can be applied to a wide range of matrices. The results presented at the 19th IMSC, Kyoto 2012

QCell Technology

In two recent articles ICP-MS applications are described, that offer new possibilities in collision cell approaches in challenging matrices. A detailed description of the results presented at the 19th IMSC, Kyoto 2012

Results

The iCAP Q™ with the QCell™ provides comprehensive reduction of interferences. As an example of the power of the QED mode for the removal of background and matrix induced polyatomic interferences in ICP-MS, a series of mass spectra were acquired.

Acknowledgements

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Figures 1-4: iCAP Q™ QCell™ with Flatapole rods

Figures 5-8: QCell™ with flatapole rods

Figures 9-12: Flatapole rods

Figures 13-16: Quadrupole rods