



# TRANSFORMING TECHNOLOGY

## Agilent 8800 Triple Quadrupole ICP-MS

**Technology transformed. Performance redefined.**

The new Agilent 8800 is the world's first ICP Triple Quad (ICP-QQQ) – a unique instrument that provides applications capabilities and research opportunities never possible before.

The ground-breaking 8800 ICP-QQQ maintains the proven capabilities of Agilent's 7700 Series ICP-MS, and also offers:

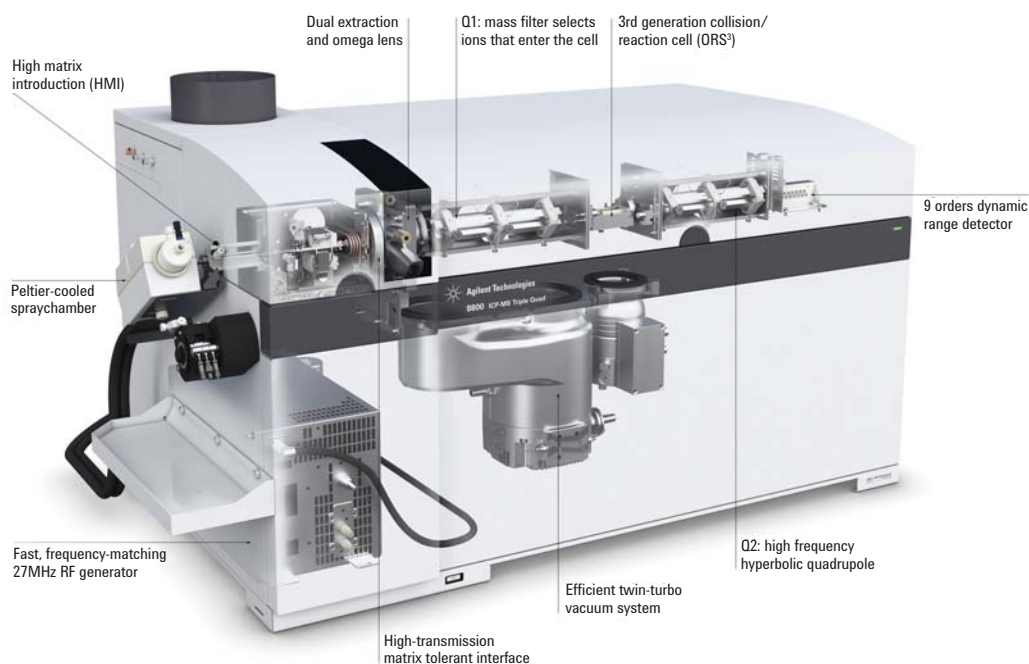
- Unrivalled performance – The 8800 ICP-QQQ has higher sensitivity and lower backgrounds, providing improved performance compared to existing quadrupole ICP-MS instruments.
- Results you can trust – The unique configuration of the 8800 ICP-QQQ enables MS/MS operation, providing precise control of reaction processes in the ORS<sup>3</sup> collision/reaction cell (CRC). MS/MS mode controls the ions that can enter the cell, delivering consistent and reliable results even when the sample composition is complex or variable.
- Maximum flexibility – The 8800 ICP-QQQ provides improved performance in semiconductor manufacturing, advanced materials, clinical and life-science, and a wide range of research and routine applications where problematic interferences hamper measurements with single-quadrupole ICP-MS.

## REMARKABLY BETTER RESULTS



**Transform your laboratory's performance.** Discover the power and potential of ICP-QQQ technology today.

[www.agilent.com/chem/icpqqq](http://www.agilent.com/chem/icpqqq)





## ICP-QQQ

ICP-MS

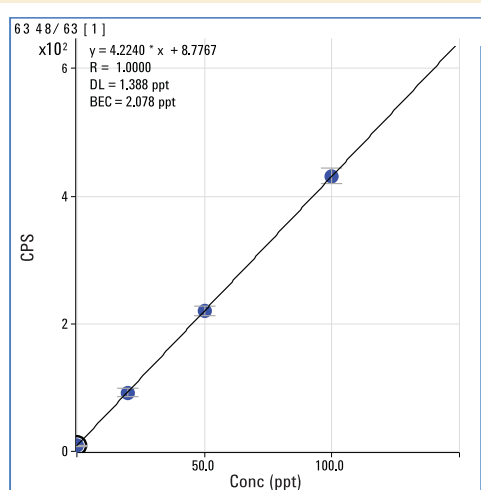


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### Ultra-trace analysis

Reaction mode is commonly used for ultra-trace analysis in high-purity semiconductor reagents. The 8800 ICP-QQQ offers a new level of accuracy in these materials, providing reliable and consistent results that are independent of the sample matrix or other analytes.

$\text{NH}_3$  cluster ion analysis on the 8800 ICP-QQQ is controlled and consistent, as MS/MS mode ensures that only the target precursor ion enters the cell. Cluster ion analysis with ICP-QQQ MS/MS is illustrated in the calibration (below) which shows the measurement of Ti at single ng/L (ppt) in 9.8%  $\text{H}_2\text{SO}_4$ . MS/MS mode ensures that the Ti- $\text{NH}_3$  cluster ions at mass 63, 114, and 115 are completely free from overlap from Cu, Cd, Sn, In and other cluster ions formed from Zn and Cu, all of which can affect Ti analysis on conventional quadrupole ICP-MS instruments.



### For More Information

Contact your local Agilent representative or visit [www.agilent.com/chem/icpqqq](http://www.agilent.com/chem/icpqqq)

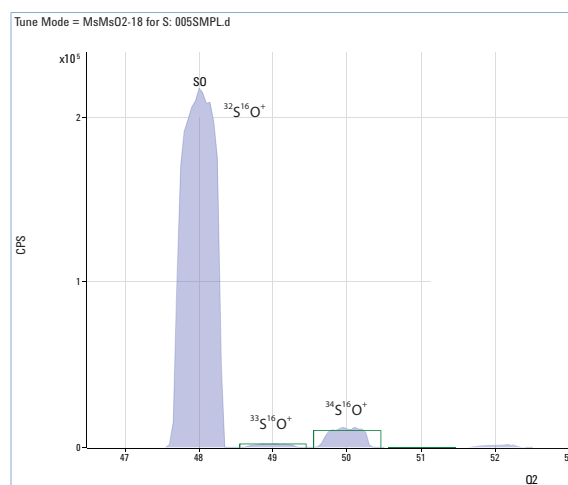
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### Difficult elements measured easily

Elements that have been difficult to analyze at low levels using conventional ICP-MS can be measured reliably with the 8800 ICP-QQQ.

The 8800 ICP-QQQ enables lower level analysis of sulfur using  $\text{O}_2$  reaction mode. MS/MS provides controlled reaction chemistry, ensuring that the  $^{48}\text{SO}^+$  reaction product ion is measured independently, free from any overlap from  $^{48}\text{Ca}^+$ ,  $^{48}\text{Ti}^+$ , and  $^{36}\text{Ar}^{12}\text{C}^+$ . The 8800 ICP-QQQ also allows accurate sulfur isotope analysis, as  $^{34}\text{S}^{16}\text{O}^+$  is completely separated from  $^{32}\text{S}^{18}\text{O}^+$  (shown below).



### A proven foundation

While the 8800 Triple Quad ICP-MS is unique in its configuration and performance, it shares many hardware components and its software platform with Agilent's market-leading 7700 Series single-quad ICP-MS.

The 7700 Series ICP-MS remains the benchmark for high-performance, cost-effective ICP-MS analysis, delivering unmatched interference removal in He mode. And now the 8800 ICP-QQQ offers superior performance and flexibility with a range of unique and powerful modes of operation to deliver even higher performance for difficult applications.

Agilent has a global network of factory-trained ICP-MS specialists ready to provide support with hardware, software, or applications.

### Availability

Agilent will begin selling the 8800 ICP-QQQ from April 1st, 2012.



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