

# Aerosol Rapid Introduction System

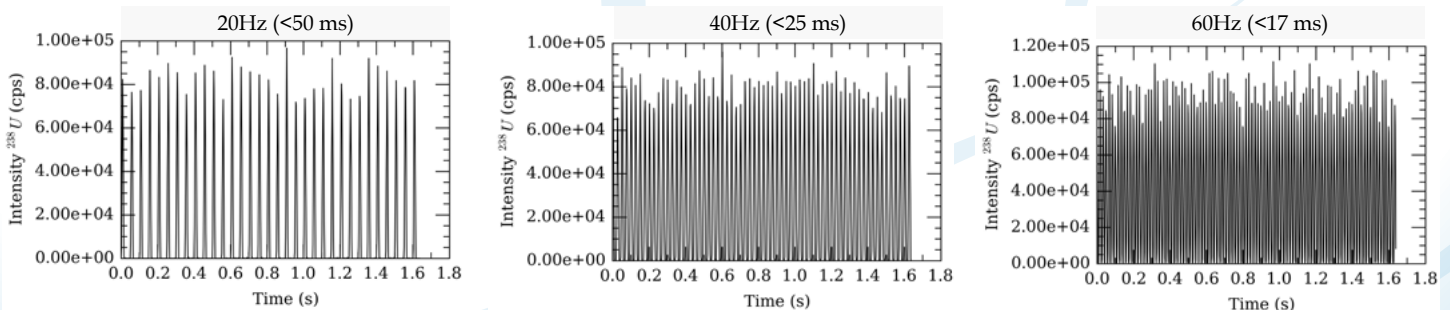
for HelEx II equipped laser ablation systems



Capture single-shot events • Reduce sampling time • Increase throughput

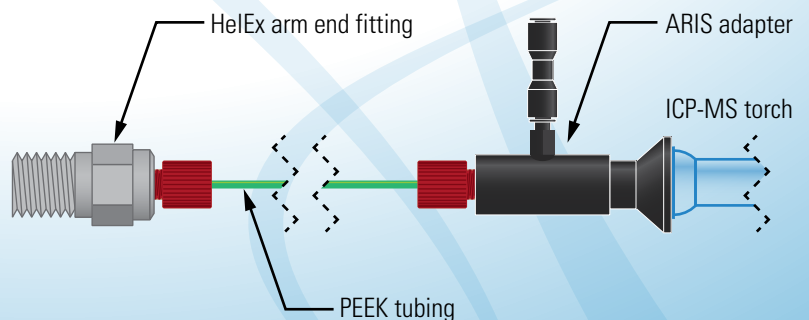
The Aerosol Rapid Introduction System (ARIS) connects a HelEx II laser ablation cell to an ICP-MS instrument with **minimal transfer volume and turbulence**. Unlike “injector” devices, the ARIS delivers the sample directly to the torch without the use of internal valves or torch modifications to deliver **ultrafast washout**.

Combined wash-in and wash-out times of < 20 ms to baseline allow the user to resolve individual single pulses at sample rates of up to 30 Hz for biological materials and up to 60 Hz for geological materials. Washout can be altered to suit ones needs.



Compilation of raw transient signals of the laser firing while raster scanning an area at 20, 40 and 60 Hz, showing baseline separation of individual laser pulses using the HelEx II 2-volume cell (courtesy of the University of Ghent).

The ARIS kit is a set of components designed to reduce the dead volume inside the cell clear through to the torch enhance the performance characteristics of the standard HelEx II cell. The high transfer speeds of the ARIS **negate fractionation attributed to moderate flexing** of the extraction line, while preserving peak shape.



CETAC Technologies and Photon Machines joined forces back in June 2010 with a view to advance laser ablation technology for elemental analysis, and to offer a full range of products globally. This collaboration brought together the experience in Photon Machines' design team with the sample introduction expertise of CETAC. This partnership has taken the next natural step and both companies have merged under the Teledyne Instruments banner.

Teledyne Photon Machines, a brand of Teledyne CETAC Technologies, provides laser ablation systems including CO<sub>2</sub> and diode lasers, 213 nm solid state Nd:YAG, 193 excimer laser systems and femtosecond laser systems. In addition, the company provides accessories to enhance the capabilities of laser ablation systems.



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