

# Apex Q

## High Sensitivity Sample

### Introduction System

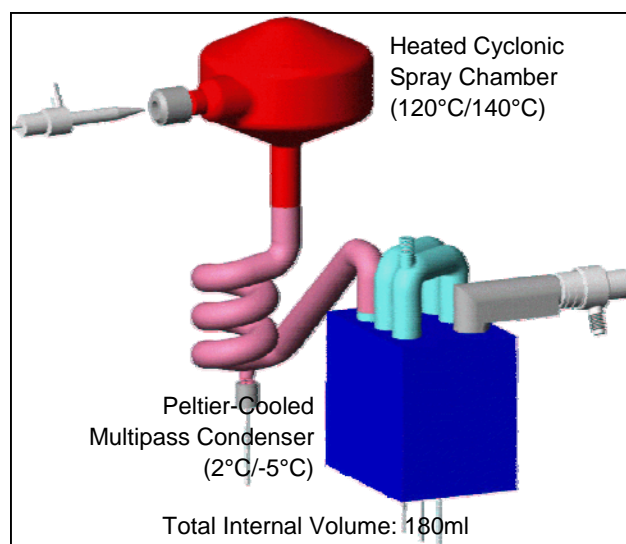
The Apex Q has an o-ring-free Quartz flow path for high sensitivity and low background for samples that do not contain hydrofluoric acid. The Apex Q gives the fastest rinse-out of any high sensitivity ICP introduction system.

Sample transport efficiency is enhanced by nebulizing liquid samples into a heated cyclonic spray chamber using a special version of the PFA MicroFlow nebulizer. A low-volume three-stage Peltier-cooled desolvation system is incorporated for on-line removal of solvent vapor.

- ▲ **Increases sensitivity** by 3x to 10x, depending upon sample flow rate
- ▲ **ppq BECs**
  - self-aspirating PFA nebulizer
  - inert, o-ring-free flow path
- ▲ **Fast rinse out** enables high sample throughput
- ▲ **Couples with nebulizers having a wide range of liquid flow rates** (10-700  $\mu\text{L}/\text{min}$ ).
- ▲ **High Signal Stability**
- ▲ **Low memory effects**
- ▲ **Small size, easy installation**
- ▲ **Optional membrane desolvation**



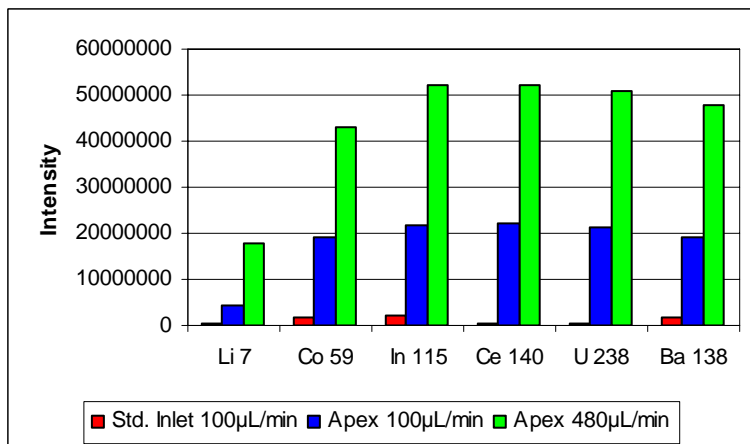
**Apex Q Sample Introduction System**



Preset dual temperature settings for heater and cooler. Patented flow path design ensures rapid wash-in / wash-out.

US Patent # 6864974

Rapid rinse out, over 6 orders of magnitude rinse out of U238 in 60 seconds



The Apex Q is over 90% efficient at transporting the sample analyte to the plasma

### Optional Membrane Desolvation

The addition of the ACM or Spiro can further dramatically reduce the amount of water vapor in the aerosol, reducing oxide interferences. Two membrane units are available for use with the Apex systems:

**Spiro TMD** Heated Macro-Porous Teflon® membrane.

**ACM** Cooled Micro-Porous Nafion®

