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# Spiro TMD

Teflon® Membrane Desolvation

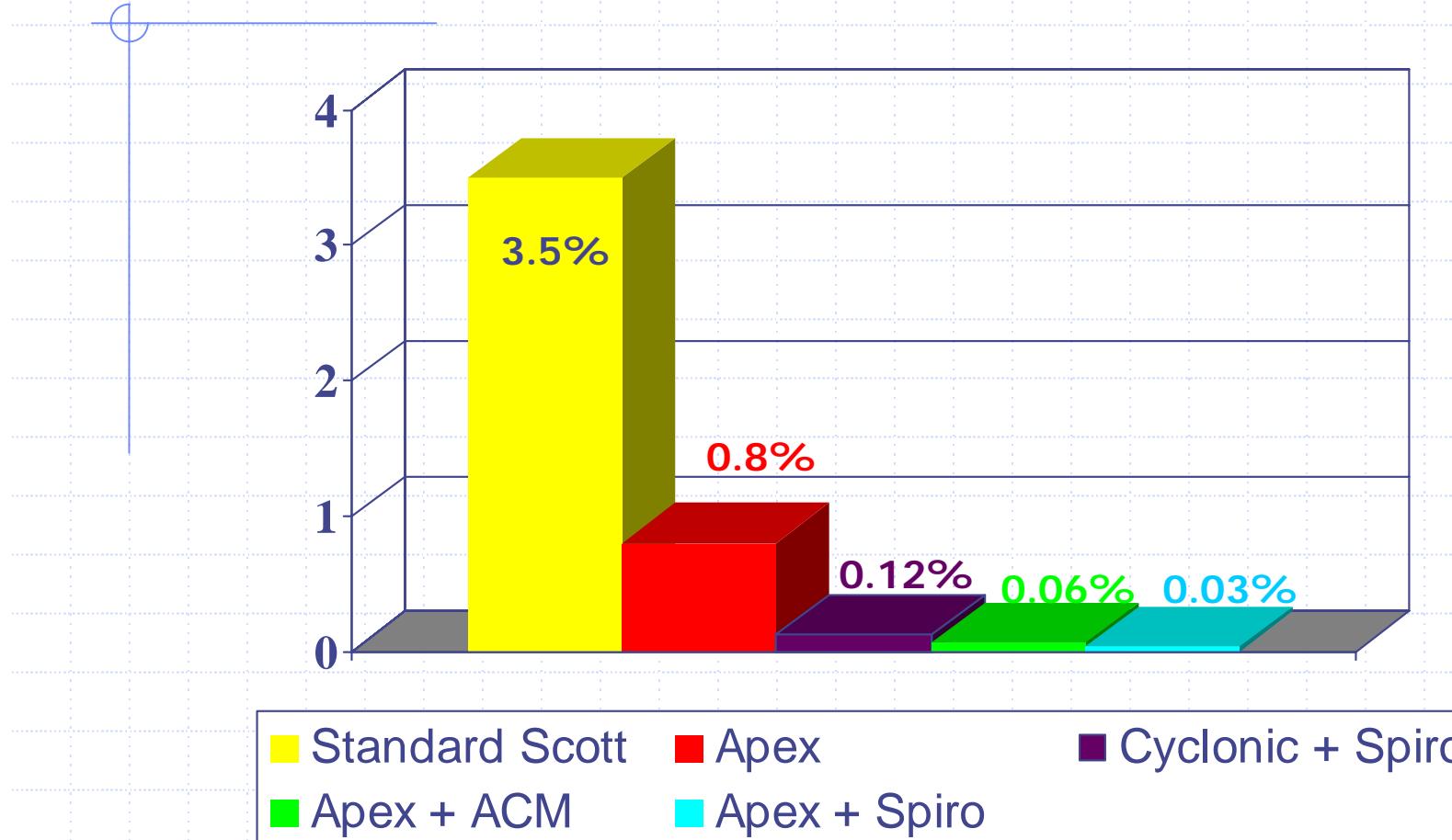
# Spiro TMD

## - Teflon® Membrane Desolvation

- ◆ Macro porous heated Teflon® membrane.
- ◆ Removes both organic and aqueous solvents.
- ◆ Can be used with or without the Apex.
- ◆ Tolerates high dissolved solids matrices.
- ◆ Simple membrane maintenance.



# % CeO<sub>2</sub>:Ce Ratio



Thermo Element2 'H' Cones

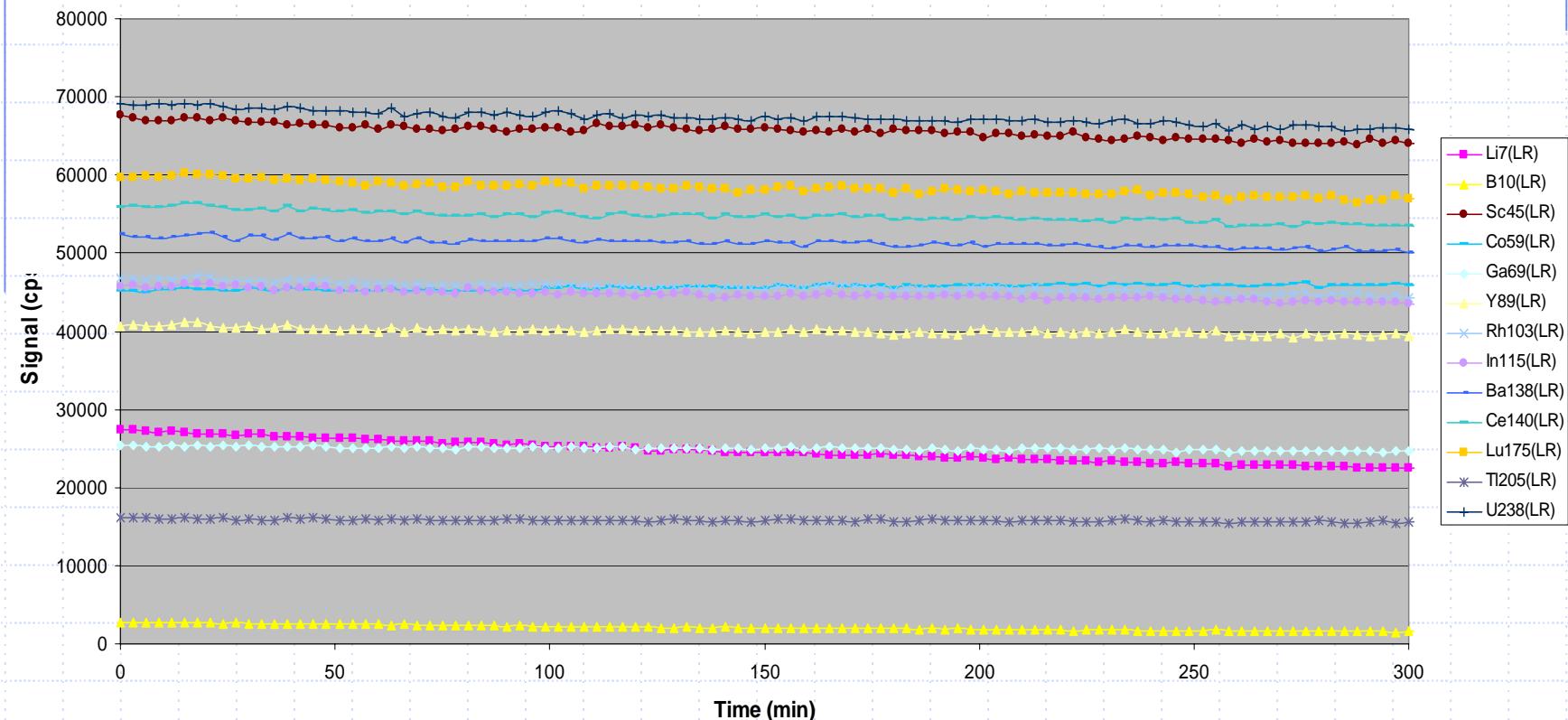


# Cyclonic spray chamber with Spiro Desolvation



# Multi-element Stability Study

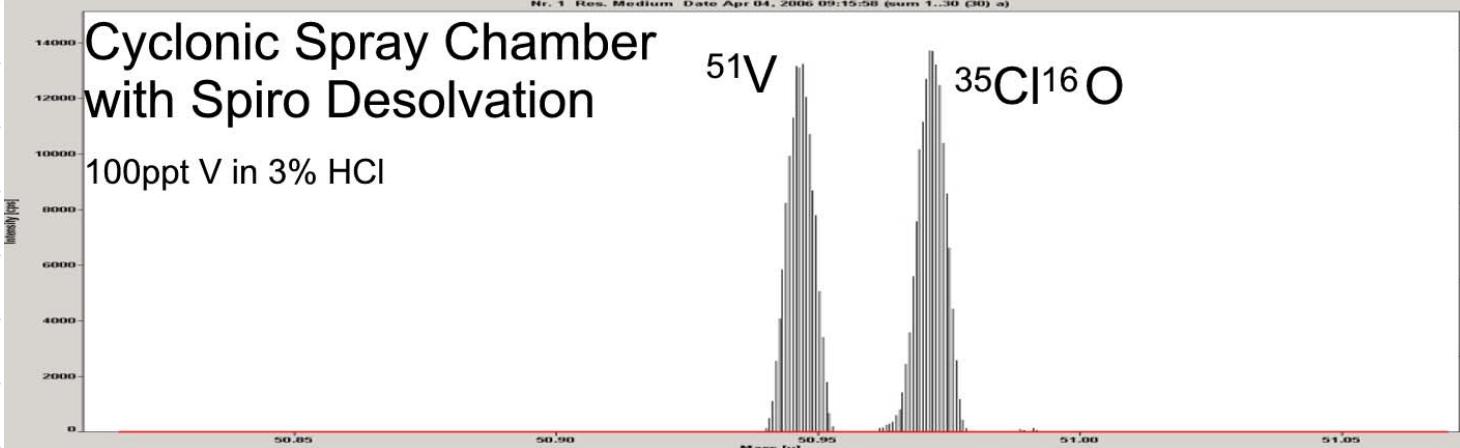
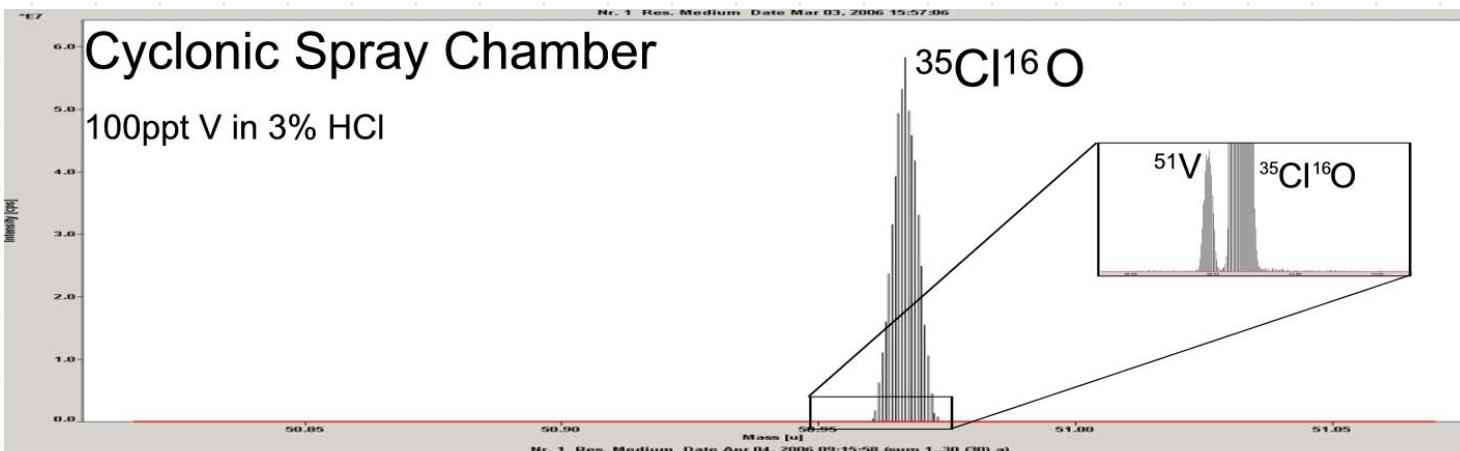
Spiro Stability Study: 100ppt Multielement spike.



PFA-100 with cyclonic spray chamber and Spiro

# Spiro desolvation

- stand alone

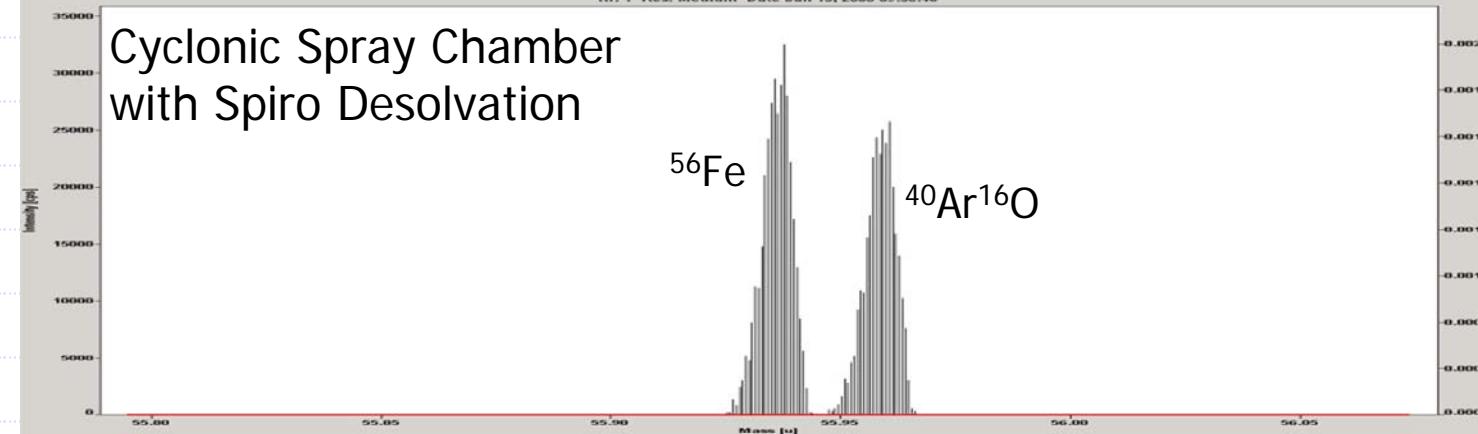
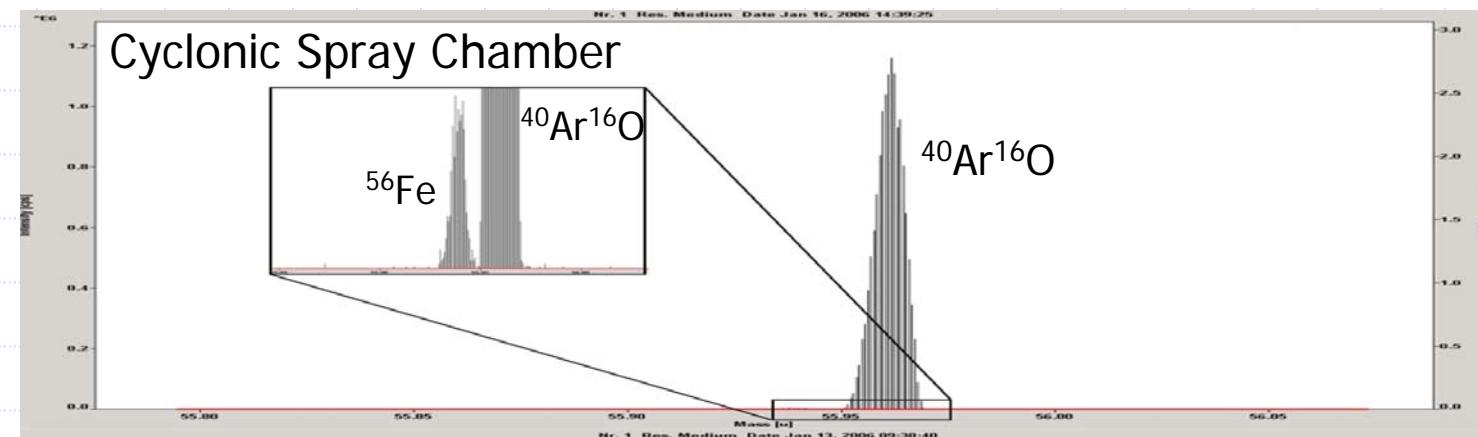


Dramatic reduction in acid matrix interferences



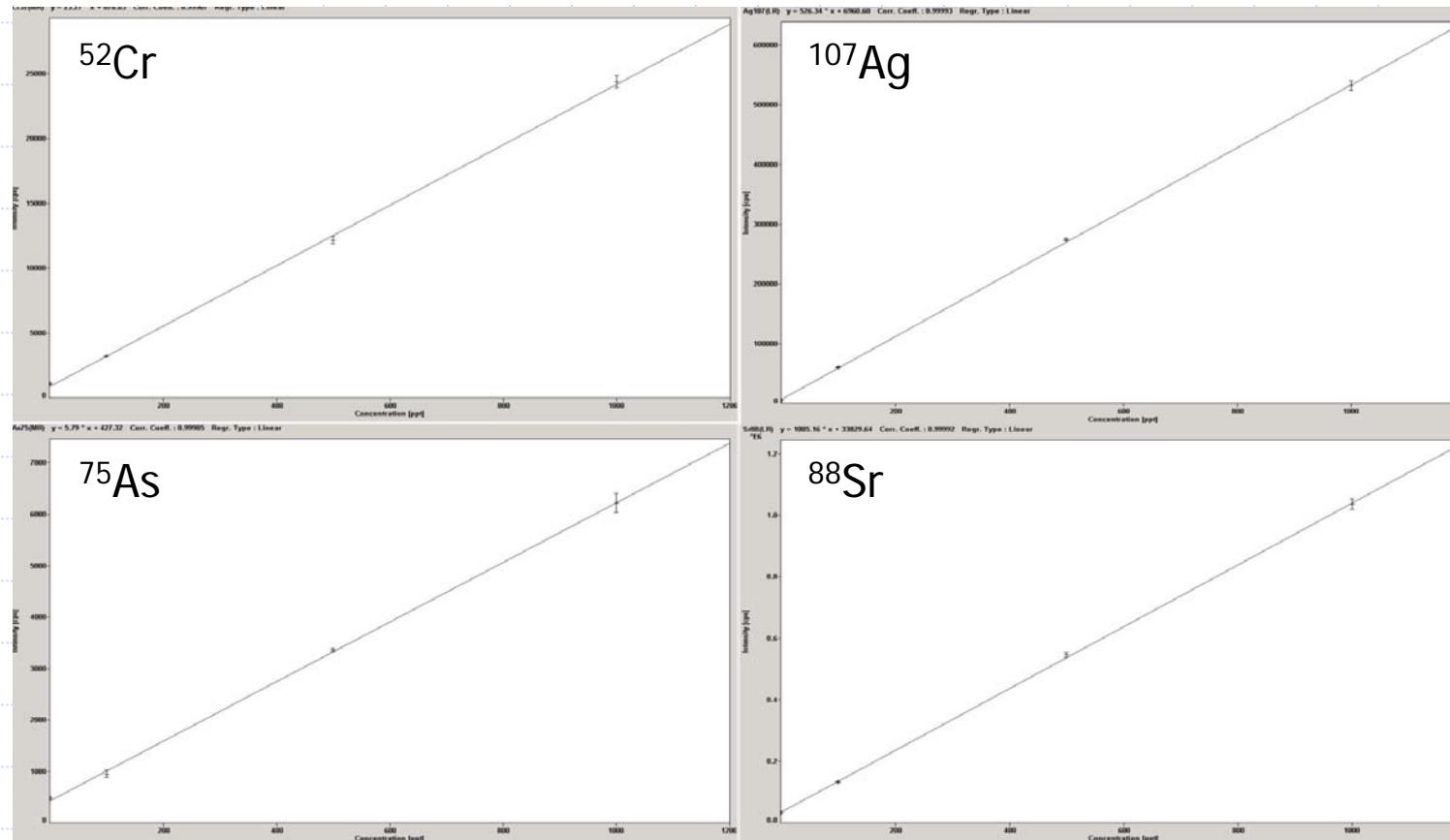
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100ppt  $^{56}\text{Fe}$  in 3%  $\text{HNO}_3$



Cyclonic spray chamber with PFA-100

# Multi-element calibrations in 98% Methanol



0 – 1000ppt Calibrations Element2

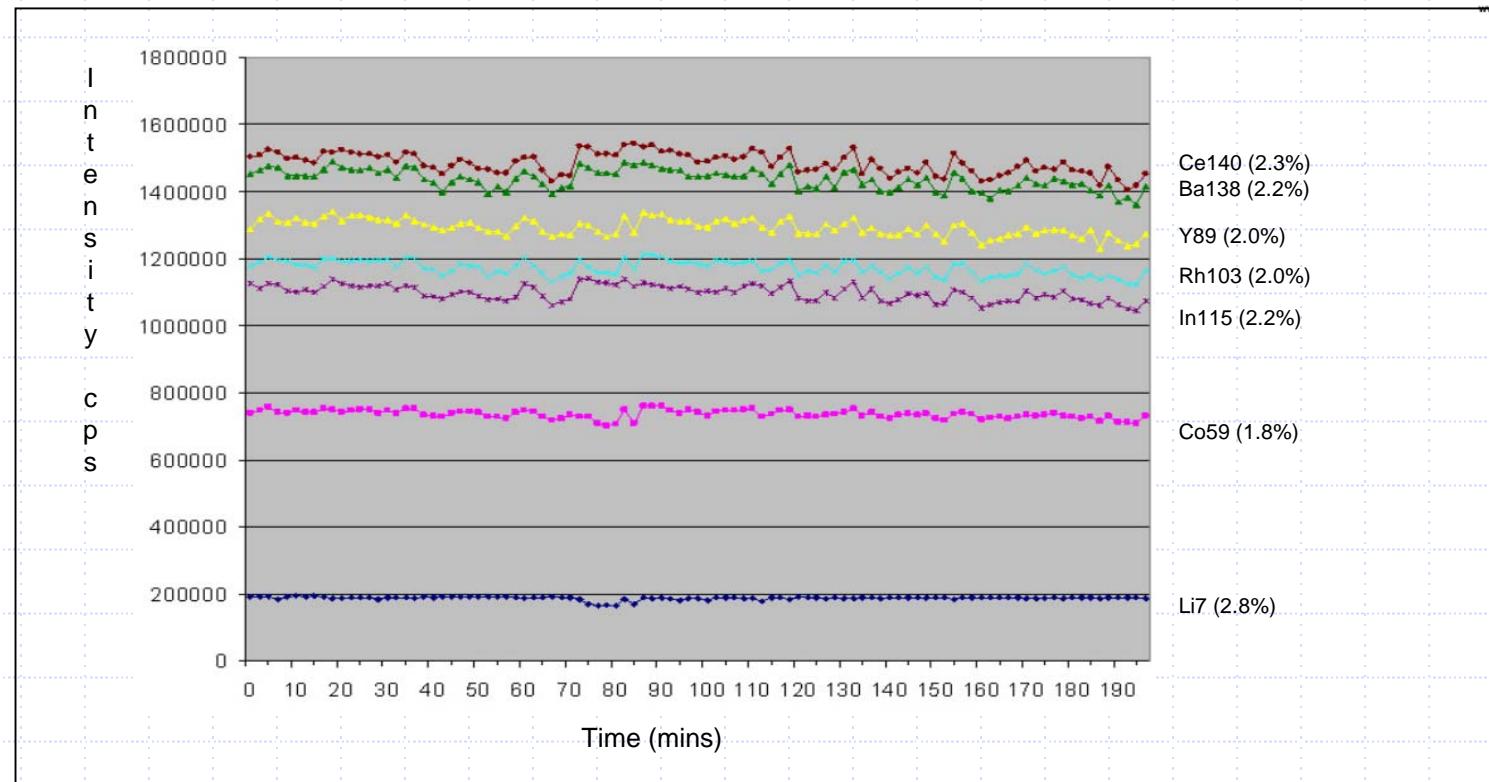
PFA-100 Cyclonic spray chamber with Spiro



# Apex Q with Spiro Desolvation

# Spiro desolvation

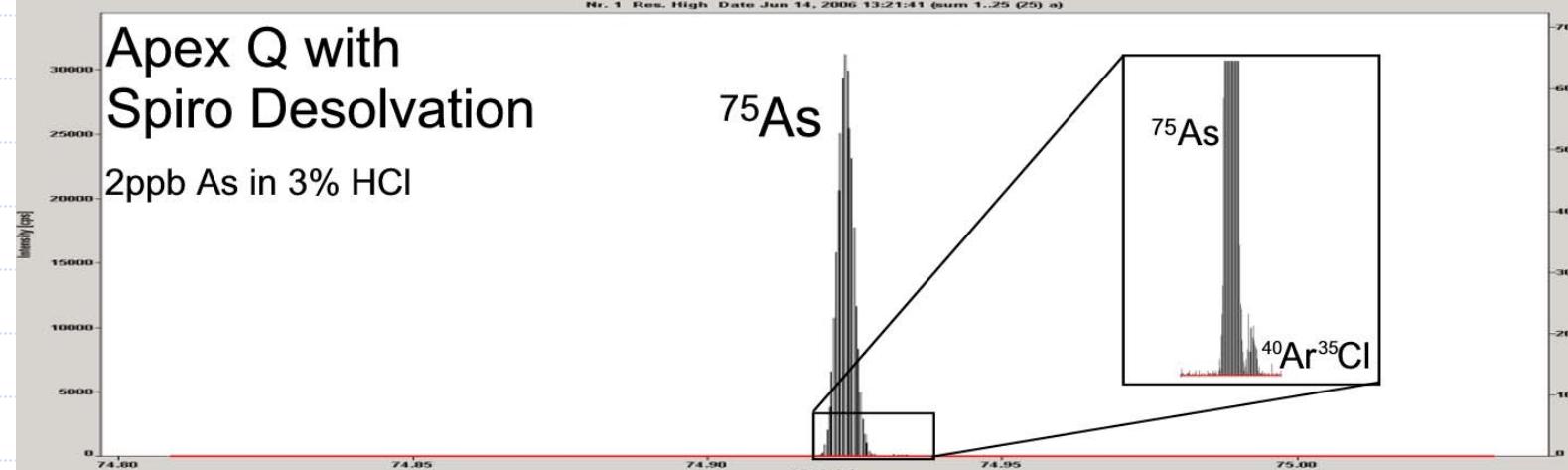
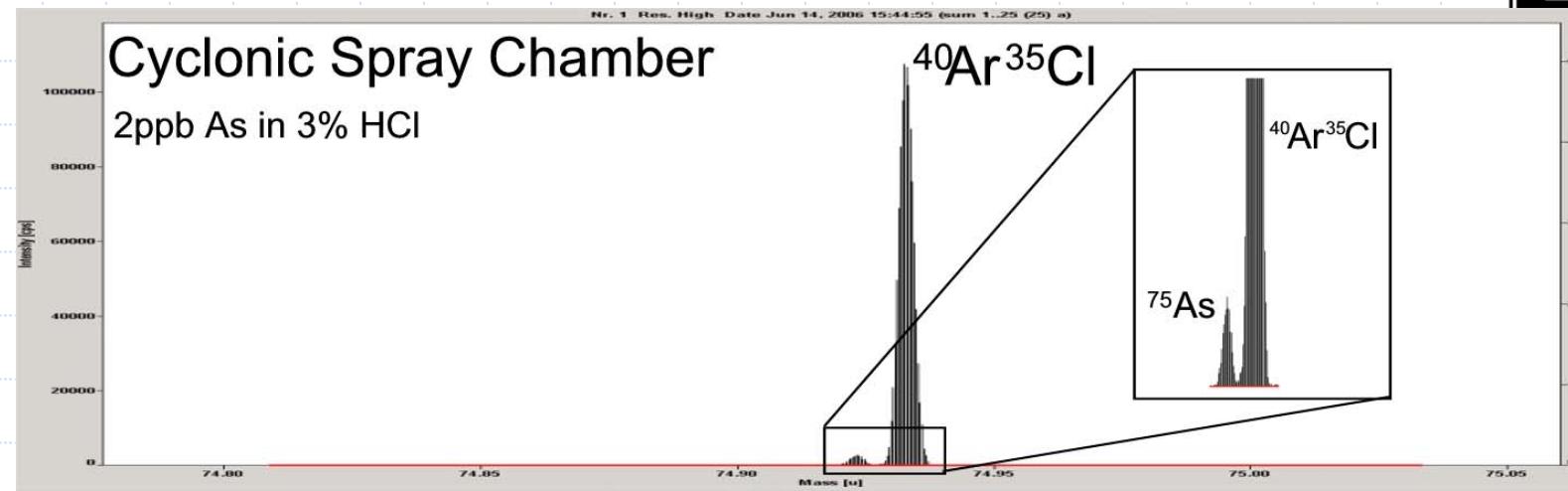
- organic solvents



3 Hour Signal Stability 98% Methanol Apex-Spiro TMD  
HRICPMS

# Spiro desolvation

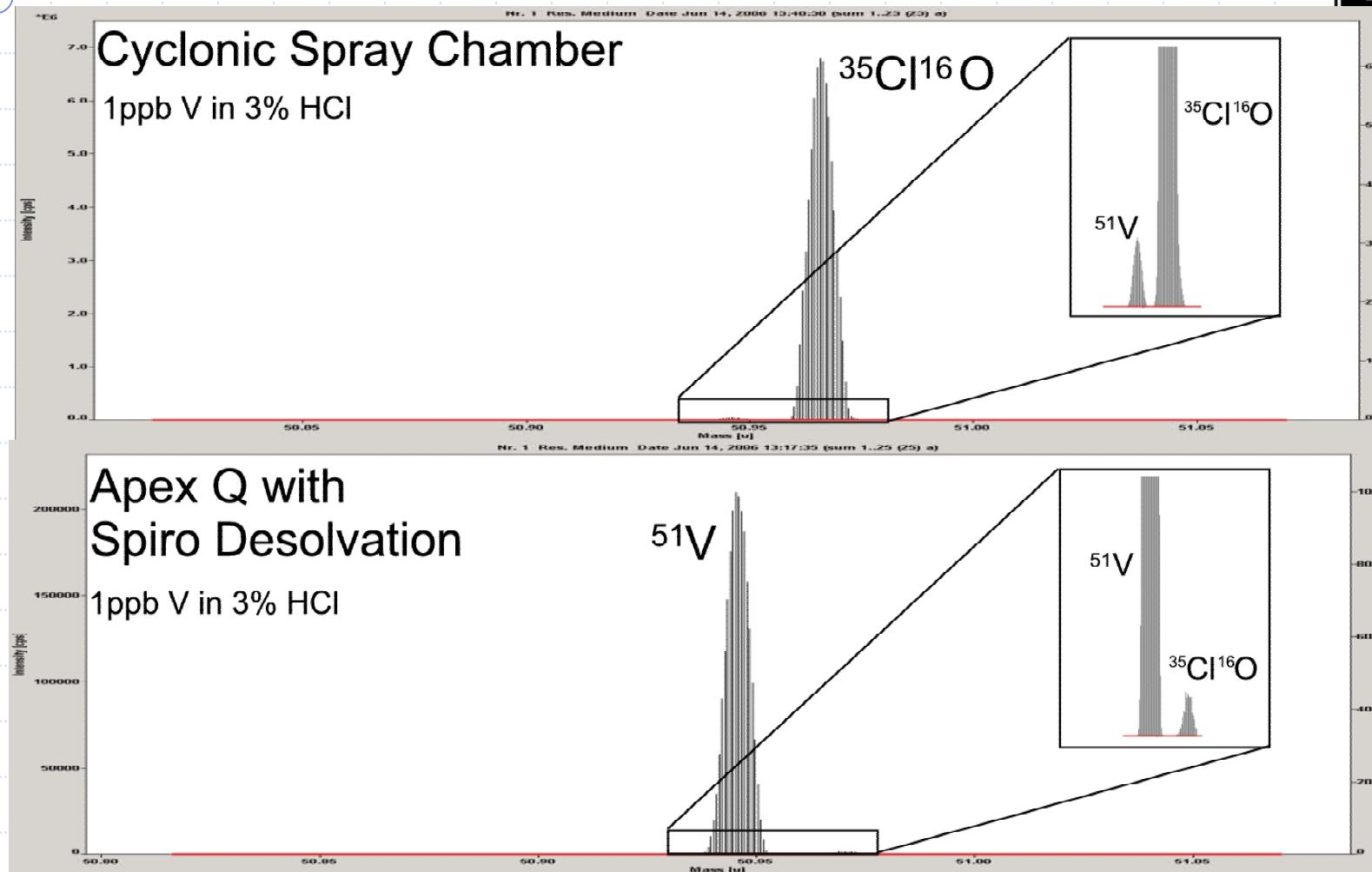
- acid matrix



Enhanced Sensitivity of As; Reduction of Cl interferences

# Spiro desolvation

- acid matrix



Enhanced Sensitivity of V; Reduction of Cl interferences



# Summary

- ◆ Can be used to de-solvate sample aerosol from simple cyclonic spray chamber introduction systems
- ◆ Enhance both analyte sensitivity and desolvation in combination with the Apex
- ◆ Removes both aqueous and organic solvent interferences
- ◆ Ideal for common HPLC solvents