

ACM membrane desolvation

Actively Cooled Membrane Desolvation for Apex Inlet System

The ACM is a cooled Nafion fluoropolymer membrane desolvation module that reduces the intensity of solvent derived polyatomic ion interferences in the ICP-MS mass spectrum. Solvent vapour from the sample aerosol stream permeates through the membrane and evaporates into an

external stream of dry sweep gas. The dried sample aerosol stream exits the ACM module through a fluoropolymer tube and is conducted to the ICP-MS injector. The microporous Nafion membrane does not allow the sweep gas to permeate into the sample aerosol stream, improving long-term flow and signal stability. The ACM membrane tolerates a variety of complicated sample matrices without plugging.

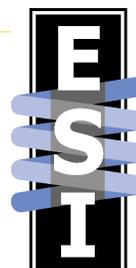
- Chemical resistance similar to Teflon
- Improves desolvation efficiency of Apex sample inlet system.
- Reduces oxides and other interferences
- Volatile analytes (e.g. Hg, B) carry on to ICP
- Easier optimisation than macroporous membranes
- Sweep gas does not enter sample aerosol stream.
- Resistant to clogging by organic compounds or salts.
- Fast wash-out
- Membrane contained within a cartridge for easy maintenance or replacement.

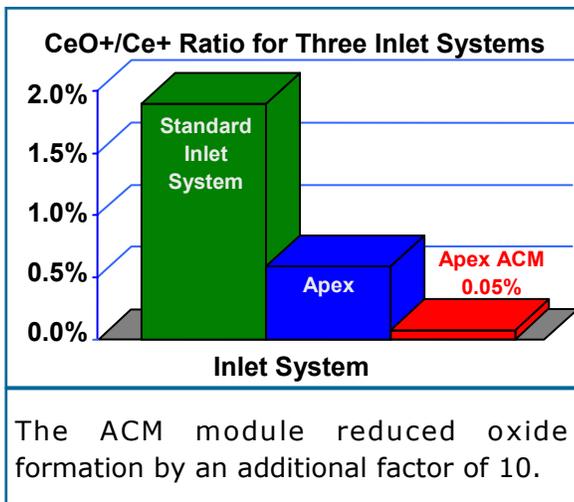


ACM Peltier cooled Nafion® membrane desolvation module for Apex inlet system

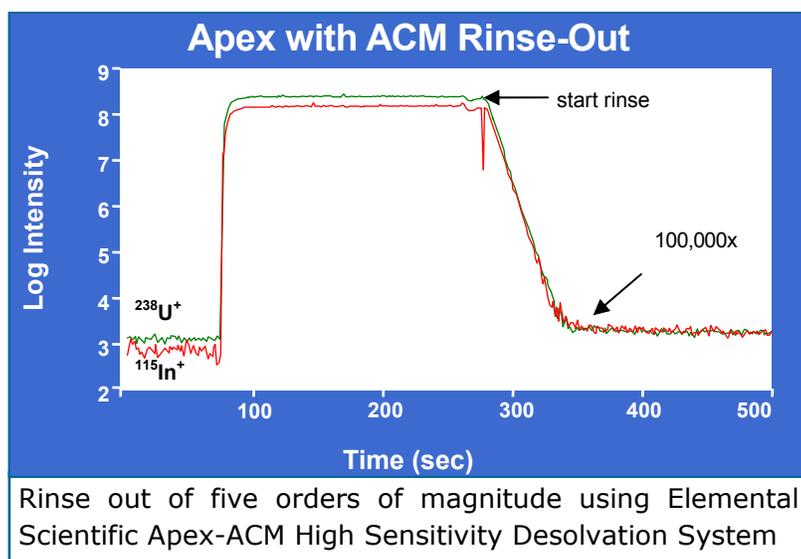
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The Apex sample inlet system reduces oxide levels ~5 fold compared to standard inlet systems using its Peltier cooled desolvation unit. The addition of the ACM membrane module further reduces oxide formation by 10 fold. The Apex-ACM combination reduces oxide levels approx. 50 fold compared to standard inlet systems giving a CeO⁺/Ce⁺ ratio of < 0.05%



The addition of the ACM membrane module does not affect the performance of the Apex sample inlet system adversely. Wash-out remains rapid and volatile analytes and species are not removed by the membrane but carry on through to the ICP.

Ordering Information

ACM Module

ES-4599-a000

a = electrical outlet configuration

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|-------|-------------------------|-------|-------------|
| a = 0 | Please specify | a = 4 | China |
| a = 1 | North America and Japan | a = 5 | India |
| a = 2 | Europe | a = 6 | Australia |
| a = 3 | UK | a = 7 | Switzerland |

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