



SPI Supplies Wet Cell II



Liquid Probing System for
SEM/EDS, EPMA and TOF-SIMS systems
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The Wet Cell II is the next generation device for the examination of liquids in an EM environment. The self-contained high vacuum compatible device enables the analyst to characterize a fluid in its natural state. And as it is a self-contained device, there is no need for modification of the existing microscope. Once the liquid is loaded into the device platform, it is inserted into the microscope and is ready for analysis.

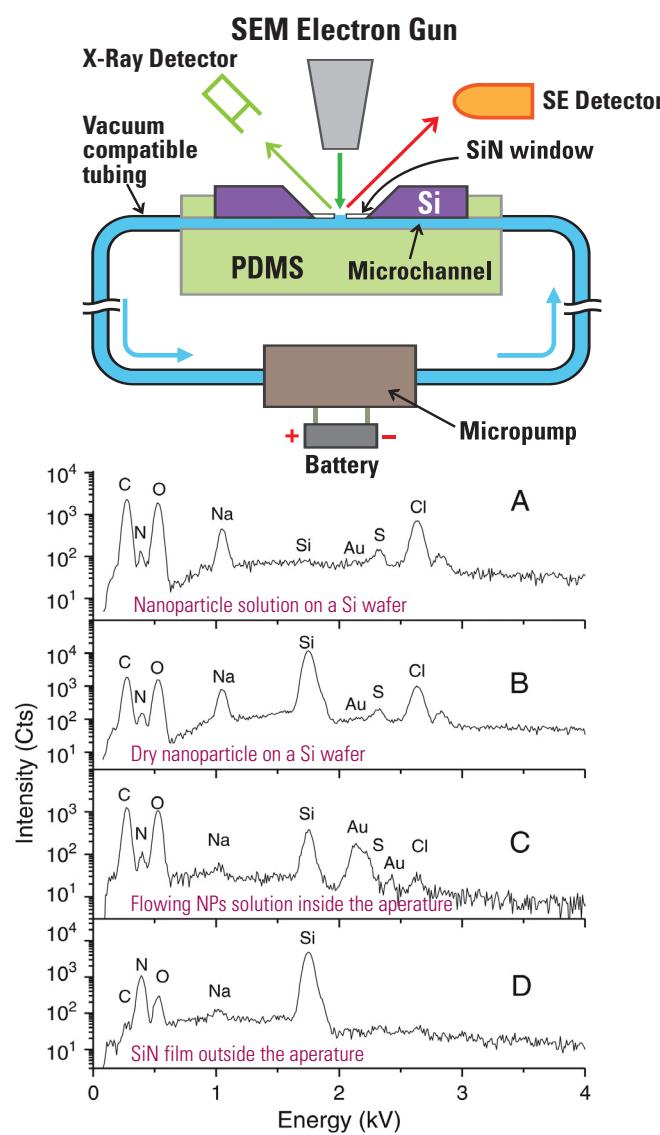
The device can be used for in-situ chemical probing or molecular imaging of a sample in

liquid. Potential application areas include liquid surface chemistry, microbiology, drug delivery & reaction.

Wet Cell II Specifications:

- Self-contained high vacuum compatible device
- Battery driven pump for up to 4 hours operation
- Microfluidic block for sample characterization
- Electron transparent SiN membrane
- $\sim 200 \mu\text{l}$ reservoir
- Flow rate $< 2 \mu\text{l}/\text{min}$
- Low cost replaceable components allow contaminant-free work.
- Platform size: $2.65'' \times 4''$ ($67.5 \times 100 \text{ mm}$), Height: 18 mm.

The $67.5 \times 100 \text{ mm}$ platform contains all the components needed to run your sample and is adaptable to most electron microscopes. A degassed fluid is loaded by the micropump on the device or a syringe pump into the reservoir. The main chamber is composed of PDMS with a SiN or SiO₂ window. This block is easily replaced, avoiding the need to try to clean it between runs. Vacuum compatible tubing connects the sample block to the pump, which operates at a flow rate $< 2 \mu\text{l}/\text{min}$.



References:

1. Yang, L., Zhu, Z., Yu, X. Y., Rodek, E., Saraf, L., Thevuthasan, T., & Cowin, J. P. (2014). In situ SEM and ToF-SIMS analysis of IgG conjugated gold nanoparticles at aqueous surfaces. *Surface and Interface Analysis*, 46(4), 224-228.

