

# SPI Supplies UV Prep™ for SEM



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**SPI Supplies** Division of **STRUCTURE PROBE, Inc.**

P.O. Box 656 • West Chester, PA 19381-0656 USA  
Phone: 1-610-436-5400 • 1-800-2424-SPI (USA and Canada) • Fax: 1-610-436-5755 • [2spi.com](http://2spi.com) • E-mail: [sales@2spi.com](mailto:sales@2spi.com)





## SPI Supplies UV Prep for SEM

All SEM sample surfaces are typically coated with a thin hydrocarbon contamination due to sample preparation or storage. When imaging or analyzing at low kV, this contamination contributes significantly to the results obtained. By eliminating surface contaminants, images and data of the true sample surface can be obtained, and finer surface details become visible.

The UV Prep uses a customized UV source to effectively attack and break up hydrocarbon bonds. At the same time, reactive species of oxygen react with these hydrocarbon bonds forming molecules such as H<sub>2</sub>O, CO and CO<sub>2</sub>, which are pumped out of the chamber. The result is a surface free of hydrocarbon contamination.

Easy to use, just load the samples into the system, and set the microprocessor for the operation. A single, or multiple samples can be run at the same time. A small diaphragm pump is used to obtain the a slight vacuum in the chamber and pump off the reactive species. Typical run-time is 5 to 15 minutes.

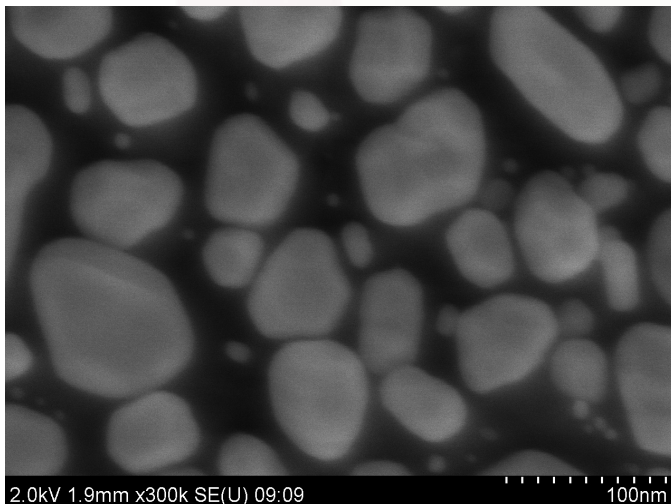
### Features:

- Removes hydrocarbons from sample surfaces
- Non-destructive to samples
- Microprocessor controller
- Storage of recipes for reproducible runs
- Dry diaphragm pump for clean operation
- Safe for use on a variety of sample materials:
  - Metals
  - Metal oxides
  - Ceramics
  - Semiconductors
  - Cathode materials for Li batteries
  - Polymers
- Carbon nanotubes
- Graphene
- Carbon Fiber
- Anti-reflective Coatings
- Biological samples

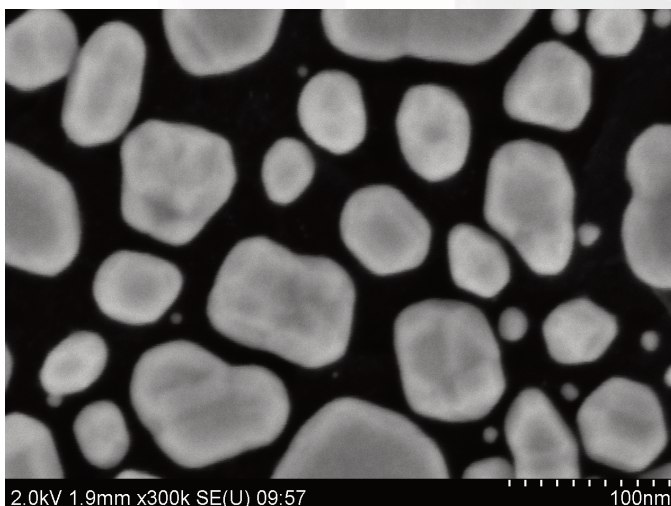
### UV Prep Specifications:

- Microprocessor Controlled
- Vacuum Clean/ Storage Modes
- Cleaning Times: 0 to 30 minutes (1 minute steps)
- Vacuum System: Dry Pumping System
- Vacuum Level: Pump down in under 120 seconds
- Dimensions: 360mm x 390mm x 480mm
- Weight: 17 kg
- Input: Single Phase 100 to 240V (50/ 60 Hz)

### Enhanced resolution:

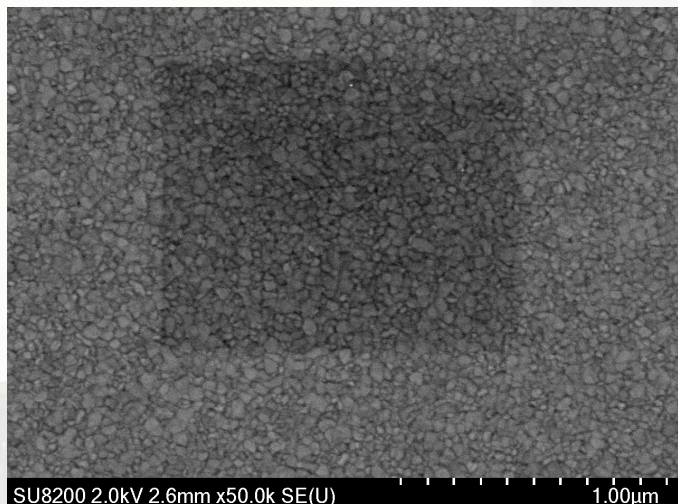


Gold on Carbon sample – before UV cleaning

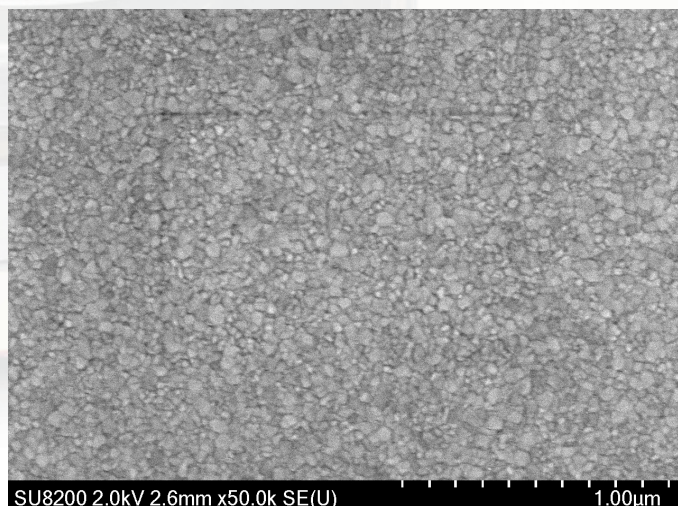


Gold on Carbon sample – After UV cleaning

### Reduction of “Black Box” effect:



Silicon substrate – before UV cleaning



Silicon substrate – after 8 minues UV cleaning



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