

UVO Cleaner® Station



TEM Sample Preparation

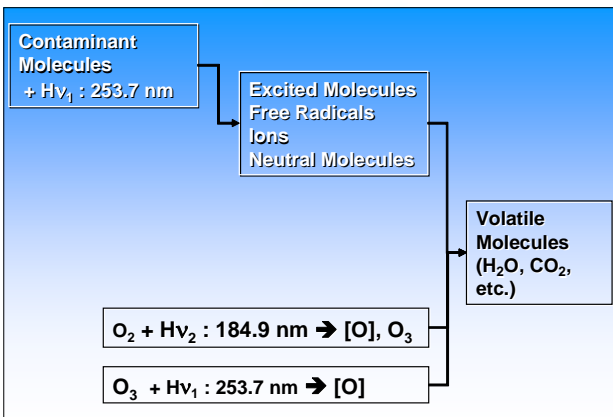


The UVO-CS UVO Cleaner® Station*

The UVO Cleaner® Station is designed to store multiple TEM specimen holders while periodically cleaning them using specially designed, spiral UV lamps using the UVO cleaning method. Each specimen holder is securely held in an adapter that is specific to its manufacturer's design. This adapter is mounted on the rear panel of a sliding drawer. When the drawer is closed, the rods are centered within the spiral lamps while keeping the rods in a dust-free container. The spiral lamps surround the rod within a few millimeters and completely bathe the rod in UV light when on.

Over time, clean specimen holders will absorb hydrocarbons and bacteria from the air and would

require cleaning. By periodically turning the UV lamp on for a short period, these hydrocarbons are eliminated. The UVO cleaning method is a photosensitized oxidation process in which the contaminant molecules are excited and/or dissociated by the absorption of short-wavelength UV radiation. Atomic oxygen



is simultaneously generated when molecular oxygen and ozone are dissociated by 184.9nm and 253.7nm, respectively. The 253.7nm radiation is absorbed by most hydrocarbons and also by ozone. The products of this excitation of contaminant molecules react with atomic oxygen to form simpler, volatile molecules that desorb from the surface and are swept away with the gas flow. When both wavelengths are present atomic oxygen is continuously generated, and ozone is continually formed and destroyed.

The UVO Cleaner® Station is a secure, less expensive, almost maintenance-free alternative method for storing valuable TEM specimen holders. There are two configurations, a 2-position and 4-position. The 4-position system can have two, three, or four high intensity, low pressure, mercury vapor lamps for optimum generation of atomic oxygen, ozone, and short-wavelength ultraviolet radiation for effective cleaning.

Available Models:

- UVO-CS2-2: Two position, two active lamps
- UVO-CS4-2: Four position, two active lamps
- UVO-CS4-3: Four position, three active lamps
- UVO-CS4-4: Four position, four active lamps



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