



SMART Grids™

USAGE and HANDLING GUIDE

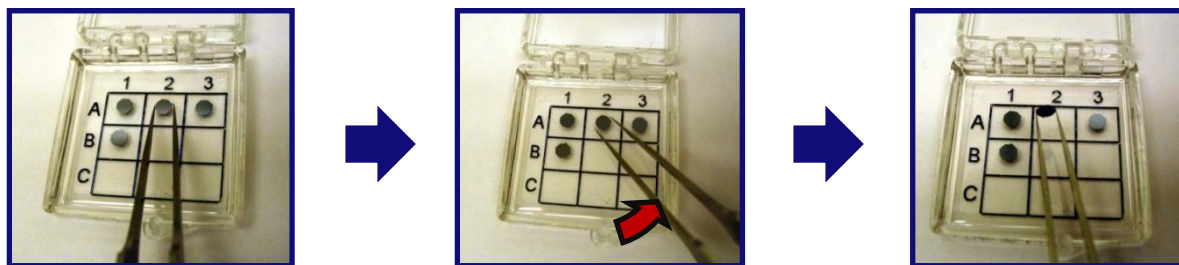
Be sure to also check out our demonstration video on the web at http://www.dunesciences.com/usage_video.html

The samples accompanying this document are a new type of analysis platform for transmission electron microscopy that are designed to provide the highest combination of resolution, chemical compatibility, and chemical functionality of any available grid.

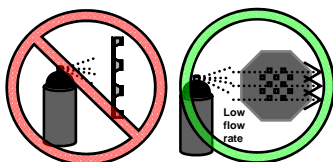
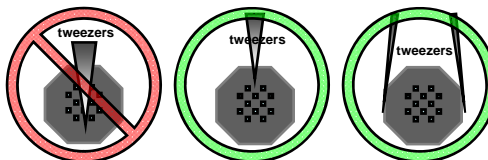
This document outlines usage and handling guidelines for SMART grids that will enable you to produce the highest quality images for your samples.

Care should be taken when handling grids to preserve the integrity of the SiO₂ membrane windows. The membrane windows range in size from 50 μm squares to 100 micron x 2000micron slits. The SiO₂ membrane windows have been functionalized to enhance sample quality and to simplify sample preparation. Generally, samples are deposited on the membrane side of the grids.

Removing Smart Grids from sample holder box: firmly grip the sides of the grid with high precision tweezers and twist as shown below. The grids will release with minimal effort. Attempting to pry or pull up the grid may damage it and is not recommended.

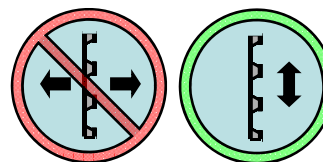


Clamping onto the region of grid without windows will ensure that none are damaged. The preferred methods are to clamp either the edge of the grids or the sides of the grids.



While not recommended, using a gas for removal of dust or other debris from surface of grid can be done at low velocity flow in the plane of the grid.

The grids can be washed, soaked or coated with a variety of aqueous and organic solvents with no damage to the grid surface. When submerging, try not to move the grids in any direction perpendicular to the plane of the windows, but rather in directions parallel to the plane of the windows. Sonication of SMART Grids is not recommended since this can damage the membranes.



For more information or to purchase additional grids, please contact Dune Sciences: smartgrids@dunesciences.com

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