

## Three Techniques for Retrieving Thin Sections

The retrieval of your perfect thin sections floating in the boat now requires you to get them onto the grid with no wrinkles, tears, or foul language. There are 3 basic techniques used to get these thin sections on grids for TEM observation: Top Down, Scoop, Perfect Loop. Each technique has its advantages and disadvantages.

**NOTE:** Either side of the grid can be used for picking up but be consistent with which side you use.

### EMS Catalog Supplies Used

Eyelash Manipulator	71182
Perfect Loop (handle + loop)	70944
200 mesh Cu grids	EMS200-Cu
Tweezers	
Straight Style 3, 120 mm	78518-3
Style 3 Self Closing, 120 mm	78318-3x
Style 3 Self Closing, 120 mm, extra fine tip	78319-4x
Style 7 curved, 115 mm	78522-7
Grid Storage Box, 100 capacity	71146-02

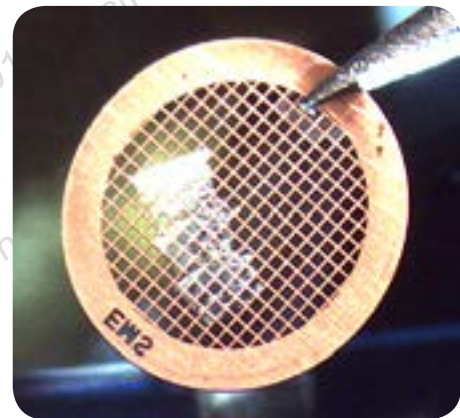
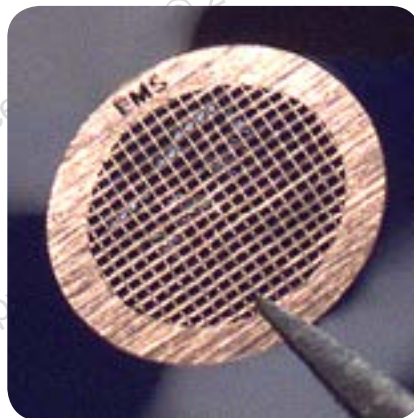
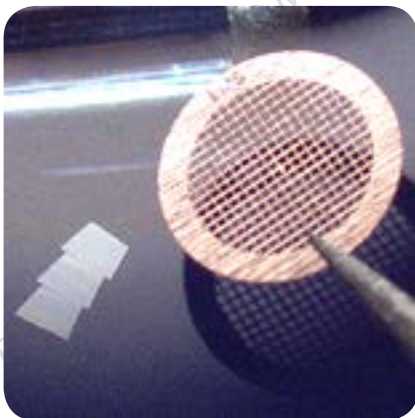
### Top Down

1. From the ribbon, using the eyelash, carefully dislodge about 3-4 sections from the back (end away from the knife edge) of the ribbon and float to the middle of the boat.
2. Take a grid in the tweezer and touch it down onto the floating sections and lift the grid up from the surface of the water.
3. Place back of grid down on a piece of filter paper to dry then place in grid storage box.

**Advantage:** Easy, with little technique required.

**Disadvantage:** Section placement on grid is random and may cause wrinkles or folds.

*Dislodge sections from ribbon ... place grid over sections and push down onto sections ... lift out of the water ...*

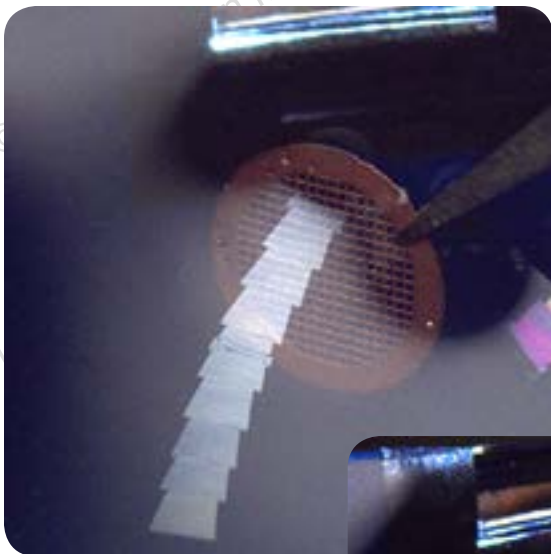


# Scoop

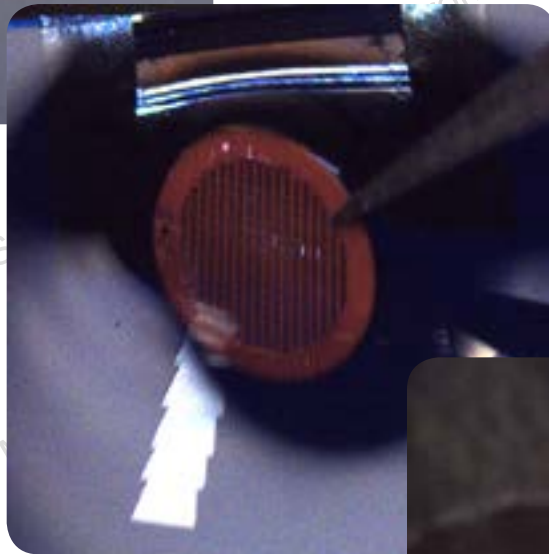
1. Dislodge about 3-4 sections from the end of ribbon farthest from the knife edge.
2. Taking a grid in the tweezer immerse it vertically into the middle of the boat.
3. Nudge the sections over to the immersed grid with eyelash manipulator..
4. Keeping the grid almost vertical raise the grid catching a small portion of the first section on the edge of the grid.
5. Lift out and placing a small wedge of filter paper next to the grid at the tip of the tweezer release it onto a piece of filter paper or directly into grid storage box.

**Advantage:** You have more control as to where the sections will be on the grid; fewer wrinkles than the Top Down method.

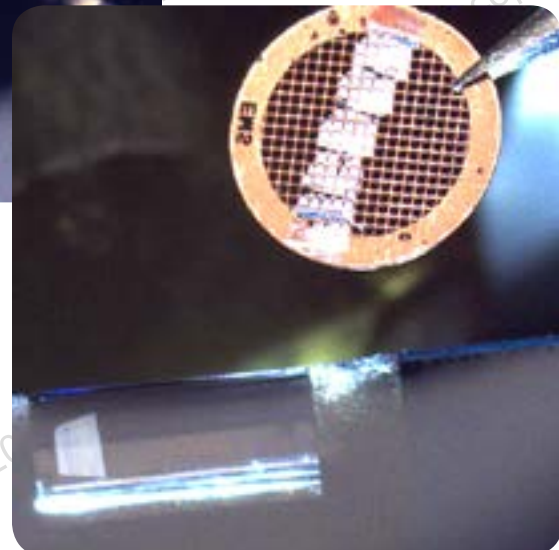
**Disadvantage:** Needs a very steady hand and practice for good technique.



*Immerse tweezer vertically in water ...*



*Nudge sections towards submerged grid ...*



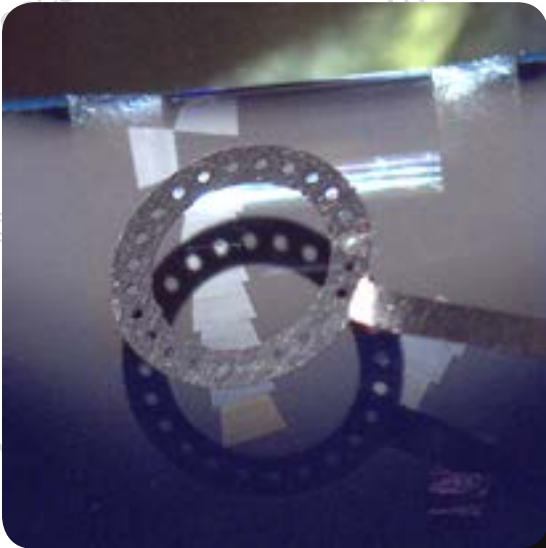
*Raise grid vertically out of water.*

# Perfect Loop

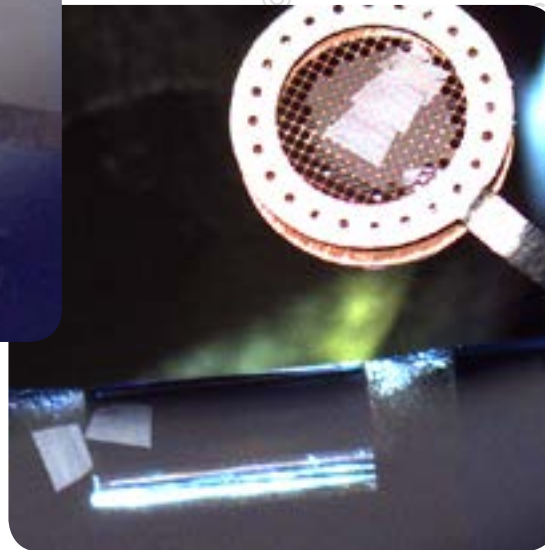
1. Dislodge about 3-4 sections from the end of ribbon farthest from the knife edge.
2. Center the Loop over the sections and lower it over the sections and touch the water.
3. The sections are now in the droplet of water in the loop.
4. Lower onto a grid sitting on filter paper. The filter paper absorbs the water and the sections adhere to the grid.
5. The grid may stick to the Loop, grab the grid with the tweezers and place in the grid storage box.

**Advantage:** Easy to do; fewer wrinkles.

**Disadvantage:** Position on grid variable.



*Center loop over sections ... lower over sections and touch the water ...*



*... lift out of water .. place over grid and touch ...*

*... let dry on filter paper ...*

*...store ...*

