

HIGH RESOLUTION FIELD EMISSION
SCANNING ELECTRON MICROSCOPE: HITACHI S-4800

SPECIMEN LOADING PROCEDURE

1. Ensure EDX and annular backscatter detector fully retracted., and will go solid when it is complete.
3. Ensure Z to 8 mm and T to 0 degrees, on the microscope.
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SPECIMEN EXCHANGE PROCEDURE

1. Press HOME button at the top right corner of the software interface. The light next to it will flash green while stage goes to the home position, and then to solid green.
2. While the stage is moving to the home position (green light flashing), you can turn HV OFF at top left corner of software interface.
3. On the microscope body, set Z to 8 mm and T to 0 degrees.
4. Press OPEN to open the gate valve between sample exchange chamber and sample chamber. The OPEN button will flash orange, and go solid orange when the valve opens, followed by a beep.
5. Ensure the specimen rod is set to Unlock. Extend the specimen rod into the sample chamber until the rod connects with the sample holder. Turn the knob from Unlock to Lock. Retract the holder into the sample exchange chamber until it clicks.
6. Press CLOSE. It will flash green while the gate valve closes and go solid green when it is closed, followed by a beep.
7. Press AIR button on top of sample exchange chamber and wait until specimen exchange chamber falls open. The air button will flash orange while the chamber vents to air and will go solid orange when venting to air is complete, then beep.
8. Put on gloves.
9. Pull open sample exchange chamber and grab specimen holders. Adjust new specimen height so the highest point of the sample barely fits under the height gauge.
10. Hold sample exchange chamber closed and press EVAC button. Wait a few seconds before releasing the chamber. The EVAC button will flash green while evacuating the sample exchange chamber and will go solid green when complete, then beep.
11. Remove gloves.
12. Press OPEN to open the gate valve between sample exchange chamber and sample chamber. The OPEN button will flash orange, and go solid orange when the valve opens, followed by a beep.
13. Push the specimen holder into the chamber using one finger and mount the holder onto the stage. Twist the knob to unlock and retract the specimen holder rod until it clicks.
14. Press CLOSE. It will flash green while it closes and go solid green when it is closed, followed by a beep.