SAFETY INFORMATION

NAME OF THE TASK/ACTIVITY	FEI FOCUSED ION BEAM SCANNING ELECTRON MICROSCOPE (FIB-SEM) HELIOS NANOLAB	DATE: 10/02/2020
LOCATION	ADELAIDE MICROSCOPY, GEORGE ROGERS LABORATORY, HELEN MAYO NORTH, NB15	Insert photo (Optional)
Residual risk rating	☒ Low ☐ Medium ☐ High ☐ Very High	
Hazards	Contact with electricity or potential for electric shock	

This Safety information should be provided to new users for them to read before undertaking and tasks/activities on the microscope.

Pre-operational checks

YOU MUST NOT USE THIS MACHINE UNTIL YOU HAVE HAD APPROPRIATE TRAINING BY TRAINED ADELAIDE MICROSOCPY STAFF. Unauthorised use may result in damage to the instrument.

Operational checks/steps to complete the activity from start to finish (including transport and waste disposal where relevant)

The Helios Nanolab Dualbeam Focussed Ion Beam/Scanning Electron Microscope is a high-voltage, electron-beam instrument that is well-shielded against emission of hazardous radiation and as such poses no radiation safety problems to operators. X-ray emissions are monitored regularly and are well below the acceptable level.

- The only user operable parts on the Helios Nanolab Dualbeam Focussed Ion Beam/Scanning Electron Microscope are the specimen stage and chamber, the computer system (mouse and keyboard), stage movement controls and aperture alignment controls.
- There is no risk involved in the operation of these parts. However, misuse of these parts can result in damage to the instrument.
- The microscope uses liquid nitrogen as a coolant. Under NO circumstances are users able to touch or refill the liquid nitrogen vessel. Only trained Adelaide Microscopy staff are to refill the liquid nitrogen vessel.
- **All new users must have a practical demonstration of the operation of the machine from a member of Adelaide Microscopy staff.**
- **Users should operate the instrument in accordance with the manufacturer supplied operating instructions to avoid damage to the instrument.**
- **The user operable parts are all accessible from the operator's console; users of the instrument should not attempt to remove any fixture or panel from the microscope.**
- **Users should not access the rear of the instrument.**
- The safe handling of general laboratory items is detailed in the Adelaide Microscopy laboratory general safety procedures.

On completion of work – steps to make safe (including clean up, any waste disposal & service/maintenance requirements)

Remove all samples from the instrument and the laboratory after imaging.

Emergency and Spill Procedures, Transport or storage requirements (where relevant), First aid/Medical

In the event of an injury, please advise an Adelaide Microscopy staff member and first aid officer for treatment and the local HSW representative to report the incident.

Prepared by	
People involved in the drafting of this Safety Information	Animesh Basak Astrud Tuck Aoife McFadden

Person authorising the Safety Information	Name:	Angus Netting	Signature 
	Position:	Director, Adelaide Microscopy	