

SAFETY INFORMATION

NAME OF THE TASK/ACTIVITY	FEI TITAN THEMIS TEM	DATE: 12/02/2020
LOCATION	ADELAIDE MICROSOCPY, GEORGE ROGERS LABORATORY, HELEN MAYO NORTH, NB26	Insert photo (Optional)
Residual risk rating on the RA	<input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Very High	
Hazards identified on the RA	Contact with electricity or potential for electric shock Contact with chemicals, fumes or gas Radiation hazards	

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 TEM Titan Themis uses liquid nitrogen to cool the X-Ray detectors and prevent contamination of the instrument by hydrocarbons.
- Only trained Adelaide Microscopy staff or experienced and approved users are to refill the liquid nitrogen vessel, in accordance with the appropriate SOP.
- Users must not access the liquid nitrogen vessel when using the instrument.
- SF6 gas is present in the microscope gun and HT tank, users are not to access these vessels.
- Radiation is generated inside the microscope. The system is never open and is shielded and interlocked such that no emission outside of the microscope occurs, the operation of these control measures is regularly tested.
- Severe structural damage to the microscope, which could potentially compromise these controls, must be reported to staff immediately.
- The user operable parts are all accessible from the operator’s console: users of the instrument should not access the rear of the instrument. Nor should they attempt to remove any fixture or panel from the microscope.
- **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.**
- **User should not access the rear of the microscope.**
- The safe handling of general laboratory items is detailed in the Adelaide Microscopy laboratory general safety procedures.
- Low stocks of consumable items (gloves, paper towel etc.) should be reported to a member of AM staff.

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.

In the event of a leak (either LN2 or SF6) indicated visually or by alarms from gas sensors in the room, users are to vacate immediately and notify staff.

Prepared by

HSW Handbook	Hazard Management	Effective Date:	17 December 2019	Version 3.0
Authorised by	Chief Operating Officer (University Operations)	Review Date:	17 December 2022	Page 1 of 2
Warning	This process is uncontrolled when printed. The current version of this document is available on the HSW Website.			

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