


HAZARD MANAGEMENT – SAFE OPERATING PROCEDURE (SOP)

Only to be completed where required as a control measure under a Risk Assessment

NAME OF THE TASK/ACTIVITY	NWR213 SOLID STATE LASER	DATE: 17/02/2020
LOCATION	ADELAIDE MICROSCOPY, ISOTOPE LABORATORY, HELEN MAYO NORTH, NB45	Insert photo (Optional)
RISK ASSESSMENT (RA) NAME		
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 Exposure of eyes to the laser beam. Exposure to non-ionising radiation (UV light)	

DESCRIBE, IN SEQUENCE, STEPS TO COMPLETE THE ACTIVITY SAFELY
<p>Pre-operational checks</p> <p>YOU MUST NOT USE THIS MACHINE UNTIL YOU HAVE HAD APPROPRIATE TRAINING BY TRAINED ADELAIDE MICROSCOPY STAFF. Unauthorised use may result in damage to the instrument.</p> <p>Operational checks/steps to complete the activity from start to finish (including transport and waste disposal where relevant)</p> <p>General</p> <p>The NWR213 solid state laser is a laser ablation instrument used as a sampling device for ICP-MS analysis. The instrument contains a Class4 Nd:YAG solid state 213nm laser. The instrument uses argon and helium gases. Only trained Adelaide Microscopy staff are to adjust or replace gas supplies in accordance with the appropriate SOP.</p> <p>Hazards</p> <p>Potential for electric shock if a user were to remove panels from the microscope. Exposure of eyes to the Laser beam can cause blindness. Exposure of eyes to UV light can cause eye damage.</p> <p>Risk Control Measures</p> <p><u>Engineering controls:</u></p> <p>The user operable parts on the NWR213nm solid state laser are all accessible from the front of the instrument, and include the sample chamber and the computer (mouse and keyboard). There is no risk involved in the operation of these parts. However, misuse of these parts can result in damage to the instrument. Users of the instrument should not remove any fixture or panel from the microscope or access the rear of the instrument.</p> <p>The laser beam path is entirely enclosed within the paneling of the instrument. There is a UV shield around the sample chamber to prevent any exposure to UV light during operation. Under normal operating conditions with panels and safety interlocks in place, the instrument is a Class1 laser.</p> <p><u>Procedural controls:</u></p> <p>Only trained users to operate the instrument. All new users are to be given practical training in instrument operation by a member or Adelaide Microscopy staff. Users must also follow guidelines in the manual and safe operating procedures for operation of the laser ablation instrument.</p> <p>Handling of biological material may present hazards; the safe operating procedures for handling biological material must be followed. The handling of other laboratory items (for example, sharps, clearing agents and chemicals) must follow the relevant safe operating procedures.</p>

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.			

General Procedures:			
Users should operate the instrument in accordance with the manufacturer supplied operating instructions under the instruction of a member of Adelaide Microscopy staff.			
On completion of work – steps to make safe (including clean up, any waste disposal & service/maintenance requirements)			
Follow the shutdown procedure in the manual.			
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 SOP	Sarah Gilbert Aoife McFadden		
Person authorising the SOP	Name:	Angus Netting	Signature 
	Position:	Director, Adelaide Microscopy	
This SOP must be reviewed after any incident/injury associated with this activity or when a Risk assessment is reviewed. File your completed SOP as instructed by the Supervisor/Person in control of the area/activity and retain the SOP in accordance with the State Records of SA, General disposal Schedule No. 30 issued under the State Records Act 1997. (Contact the University's Records Management Office for further assistance/information if required.)			