

NC Job Risk Assessment

Name(s) of Risk Team Members: L. Davis, R. Sabatini, E. Stach	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Electron Microscopy	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Number or Job Identifier: NC-JRA-001						
Job Description: Electron Microscopy	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Training Procedures List (Optional): Laboratory Standard Applicable Standard Operating Procedures See ESR for training requirements.	Likelihood (D)	Impossible	Unlikely	Possible	Probable	Multiple
Approved by: R. Sabatini Date: 5/16/2011 Rev. #1						
Stressors (if applicable, please list all)		Reason for Revision (if applicable): 3 yr cycle			Comments:	

Hazard	Activity	Control(s)	Before Additional Controls						Control(s) Added to Reduce Risk	After Additional Controls						% Risk Reduction
			Stressor	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD		Stressors	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	
Cryogenics	Filling supply dewar	PPE, Safety glasses, Face Shield, Thermal gloves, training & SOP NC-2007-OPS-Cryo-1	N	1	4	4	2	32								
	Filling cryostats	PPE, Safety Glasses Face Shield, Thermal gloves, training, Equipment Specific SOP's	N	1	4	1	3	12								

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Oxygen Deficient Atmosphere	Cryogen storage/use in areas with limited ventilation	<i>SBMS ODH analysis, training</i>	N	2	2	2	2	16							
	Compressed gases in areas with limited ventilation	<i>SBMS ODH, training</i>	N	1	4	2	2	16							
Fall Hazards	Stools, ladders, elevated work surfaces	Unobstructed access, proper steps and ladders, general housekeeping	N	1	4	2	2	16							
Material Handling	Cylinder Handling, lift lab equipment, handling large containers See Material Handling NC-JRA-009	Unobstructed access, general housekeeping, PPE, training, , pre job planning	N	1	4	3	2	24							
Electrical Hazard	Work on instruments with covers removed	Only voltages<50 V permitted, PPE, training	N	1	3	1	2	6							
Extreme temperatures	Handling very thermally hot samples, and equipment. See Working with Hi-Temp Equipment NC-JRA-002	PPE, training	N	1	2	2	2	6							
	Work in or near to Ovens, cooler, freezers	<i>SBMS Natural Hazards in the Environment</i> , PPE, training	N	1	3	2	2	12							

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Compressed Gases	Moving, connecting and plumbing gases See compressed gas NC-JRA-004	PPE, training	N	1	3	2	2	12							
Pressurized Vessels or systems	Charging systems with compressed gases See compressed gas NC-JRA-004	PPE, training, Independent safety committee review.	N	1	3	2	2	12							
Vacuum	Set up and operation of Pumps, lines, See working with vacuum systems NC-JRA—19	PPE, training, Independent safety committee review.	N	1	3	2	2	12							
Flammable Gas/liquid/solids	Storing and handling containers	PPE, training	N	1	3	1	3	9							
CHEMICALS															
Toxics (As, Ba, Be, Cd, Cr, Hg, Pb, Se, Ag)	Samples containing hazardous materials	SBMS <i>WWC, Beryllium; Lead</i> , PPE, training	N	1	4	1	2	8							
Oils	Waste oils from pumps	Secondary containment, PPE	N	1	1	1	3	3							
Laser Class II, IIIa, IIIb, IV	Possible exposure to eyes See Laser NC-JRA-007	SBMS <i>Lasers SOPs</i> , PPE, training	N	1	3	2	2	12							
Magnetic field	Exposure to static magnetic fields associated with lenses and ion pumps, superconducting coils. See Magnetic Fields & Non-ionizing Radiation NC-JRA-012	SBMS <i>SMF, surveys, shielding</i>	N	1	3	2	2	12							

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Transportation of chemicals/samples	Moving samples between labs and buildings	SBMS Transportation, PPE, training	N	1	3	2	2	12								

*Risk:	0 to 20	21 to 40	41-60	61 to 80	81 or greater
	Negligible	Acceptable	Moderate	Substantial	Intolerable