

## Beamline Hazard Analysis - Beamline X27C

LS-BHA-X27C

Revision: 02

Effective: 10/18/11

Page 1 of 2

The following tasks are included in the beamline safety review. Any operations not listed here, or performed by others than those listed, need additional review by ES&H personnel and/or beamline personnel.

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\* Approval signatures on file with master copy

Tasks / Equipment	Performed by:		Controls
	Beamline Staff	Users	
Inert compressed gas	Y	Y	<ul style="list-style-type: none"> <li>Compressed gas training – TQ-COMPGAS1 or NSLS User training</li> <li>Transport cylinders using a cylinder cart</li> <li>Properly secure cylinders</li> <li>Wear safety glasses with side shields while connecting lines</li> <li>Leak check gas lines</li> </ul>
Solvents	Y	Y	<ul style="list-style-type: none"> <li>Limit quantities at beamline to &lt; 250 ml</li> <li>Use PPE - safety glasses, nitrile gloves</li> </ul>
Pouring cryogenics $\leq$ 5L	Y	Y	<ul style="list-style-type: none"> <li>Use goggles</li> <li>Long pants and sleeves - avoid clothing which can trap cryogenics (pockets, cuffs)</li> <li>Cryogen or heavy gloves</li> <li>Enclosed shoes</li> <li>Never pour from above chest level</li> </ul>
Using the LN2 Fill Station or pressurized transfer	Y	Y	<ul style="list-style-type: none"> <li>LS-PROC-LN2FILL-MANL training for fill station</li> <li>Use full face shield along with goggles or safety glasses</li> <li>Long pants and sleeves - avoid clothing which can trap cryogenics (pockets, cuffs)</li> <li>Cryogen or heavy gloves</li> <li>Enclosed shoes</li> </ul>
Class 2/3a laser	Y	N	<ul style="list-style-type: none"> <li>Laser registration, warning signs</li> </ul>
Ergonomics concerns – moving/lifting – detector has to be moved often (~ 40 lbs)	Y	Y	<ul style="list-style-type: none"> <li>Be aware of body posture,</li> <li>Ask for help in moving or lifting</li> </ul>
Ergonomics concerns – awkward postures – moving detector	Y	Y	<ul style="list-style-type: none"> <li>Be aware of body posture</li> <li>Take frequent breaks</li> </ul>
Soldering	Y	Y	<ul style="list-style-type: none"> <li>Use a designated area, periodically clean surfaces</li> </ul>
High temperature – heat stage	Y	Y	<ul style="list-style-type: none"> <li>BLOSA/ SAF Training</li> </ul>
Beryllium use	Y	Y	<ul style="list-style-type: none"> <li>Handle articles with gloves,</li> <li>Leave area and contact OpCo if damaged</li> </ul>

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Page 2 of 2

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Cutting/razor blades

Y

Y

- Be aware of hand positioning
- Use safety knife when possible
- Consider using cut resistant gloves for frequent cutting tasks