



SMU EHS Standard Operating Procedure for use of

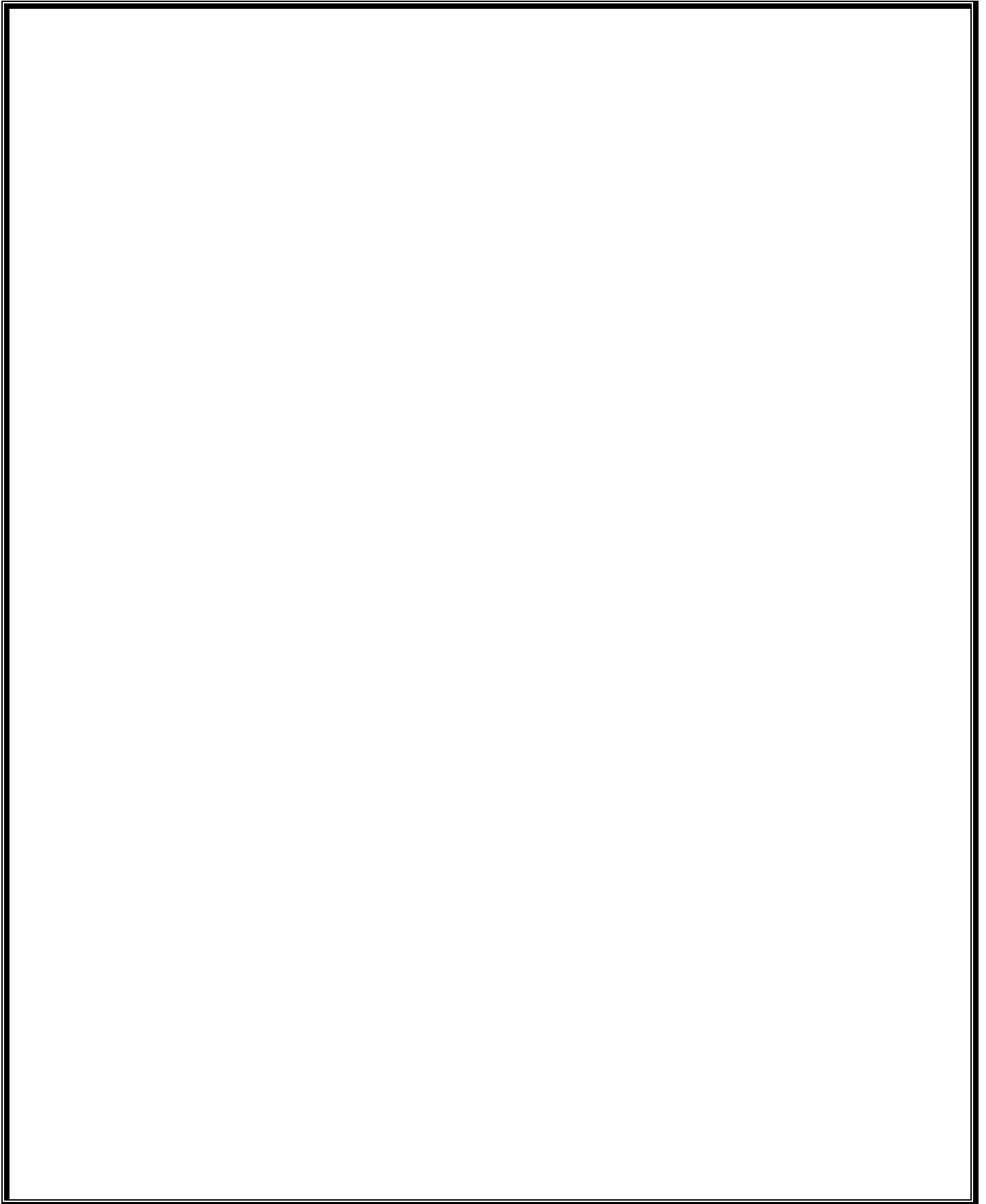
CRYOGENS



Examples: dry ice, liquid nitrogen, liquid argon,
liquid helium, liquid oxygen

HAZARDS	Potential Hazards	<ul style="list-style-type: none"> • Tissue damage (frostbite) • Potential explosion due to pressure buildup • Oxygen deficiency through displacement of oxygen • See Safety Data Sheet (SDS) for specific hazard information. 			
	Storage and Transportation	<ul style="list-style-type: none"> • Never store cryogenic liquids or dry ice in a walk-in cold room. • Never store cryogenic liquids or dry ice in areas of poor ventilation. • Store and transport cryogenic materials ONLY in Dewars or cryogenic liquid cylinders designed specifically for that cryogen. • Inspect storage containers daily to ensure that no air or ice plugs exist in the openings. 			
HAZARD CONTROLS	Engineering Controls	<ul style="list-style-type: none"> • Each part of a cryogenic system must have its own pressure relief system. • Use and store cryogenes in large, well-ventilated areas. • Contact EHS to determine if an oxygen deficiency sensor is needed. 			
	Work Practice Controls	<ul style="list-style-type: none"> • Do not put your head inside a liquid nitrogen freezer, dry ice chest, or other enclosed space containing a cryogen. • Check the liquid levels regularly. If the liquid evaporates more rapidly than normal, the container may be losing its vacuum. 			
	Personal Protective Equipment (PPE)	<table border="0"> <tr> <td>Minimum PPE:</td> <td>If working with an open container, add:</td> </tr> <tr> <td> <ul style="list-style-type: none"> • Safety glasses • Lab coat • Cryogenic gloves </td> <td> <ul style="list-style-type: none"> • Safety goggles • Face shield • Cryogenic apron </td> </tr> </table>	Minimum PPE:	If working with an open container, add:	<ul style="list-style-type: none"> • Safety glasses • Lab coat • Cryogenic gloves
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OTHER	Waste	Return cylinders and unused gas to vendor. Do not dump cryogenes in the sink.			
	Training	Sign Laboratory Specific Training document to indicate understanding of this SOP.			
	Questions	Contact Environmental Health and Safety at 214-768-2430.			
	Additional Guidelines	Please complete page 2 for additional laboratory-specific guidelines			

Laboratory-specific gases and procedures:

A large, empty rectangular box with a black border, occupying most of the page below the text. It is intended for the user to list laboratory-specific gases and procedures.

