The University of Sheffield

Risk Assessment Form

PERSONS AT RISK : ( ) Employees ( ) Contractors ( ) Public ( ) Visitors ( ) Others			**Reference No:**	
Risk: (H) High (M) Medium (L) Low (O) No Risk.			**Environment: Ground level laboratories with good access / egress**	
TASK or ACTIVITY: Operation and maintenance of 500 MHz & 600 MHZ NMR Spectrometers		**INITIAL RISK RATING**		**FINAL RISK RATING**
SIGNIFICANT HAZARD	**RISK**		**EXISTING CONTROL/PROPOSED CONTROL MEASURES**	
Accidental release of significant	Asphyxiation	M	1. Low level oxygen deficiency sensing & alarm system	]
volumes of liquid or gaseous			2. Emergency ventilation triggered by low oxygen levels - 100% fresh air	]
cryogen (Helium or Nitrogen)			3. Restricted access arrangements - authorised staff only.	]
			4. All oxygen deficiency sensors checked weekly, calibrated 6 monthly	] L
			and new sensor installed every 12-18 months.	]
			5. Emergency procedure for action in event of gas alarm implemented.	]
Contact with liquid cryogen	Cold burns to exposed skin	M	1. All operators must wear laboratory coat, suitable, dry leather gloves, eye	]
during refilling sequence			protection, suitable leg protection and stout shoes.	]
			2. Refilling operations accord with Safe Operating Procedure	] L
			3. All operators to be trained in all relevant Safe Operating Procedures	]
Strong magnetic field	Injury from moving ferromagnetic objects	M	1. All operators and visitors required to remove all ferromagnetic objects	]
	Pacemaker failure		prior to entry to laboratory.	] L
			2. Warning signs posted on access door to laboratory	]
Comments:			**Overall Risk:**	**L**
Oxygen deficiency sensing equipment checked weekly by introducing oxygen deficient source to test detection and warning systems.				
Additional References, Tasks etc				
Safe Operating Procedures for Refilling NMR unit with Liquid Helium and Liquid Nitrogen				
All users of NMR's to be familiar with the document "General Safety in the Use of Cryogenic Liquids" on the Safety Services web site.				
Undertaken By:				
Other Persons Consulted:				
Date:			**Revision Date:**	