

COSHH Risk Assessment

Newcastle University OHSS: H&S Form 401.1a

This form should be completed electronically and signed by the Principal Investigator or responsible person. Guidance on completing this form is provided in the [COSHH Risk Assessment section of the OHSS website](#).










Section 1: Project Details

1.1. Title of project or activity	High Throughput Screening Facility robotic work		
1.2. Principal investigator/responsible person	Peter Banks		
1.3. School/Institute/Service	High Throughput Screening Facility		
1.4. Location of work building and room numbers	Catherine Cookson Building rooms M2025E, M2025G, M2025H and M2025J,		
1.5. Brief description of work activity	The High Throughput Screening Facility Robots carryout repetitive tasks on microbial colonies and cultures. They are sterilised using solutions of Ethanol.		
1.6. Date of assessment	28/10/2015	1.7. Revision date*	28/10/2017

Section 2: Emergency Quick Reference

The purpose of this section is to provide easy access to emergency information. A full assessment of risk will be provided in the next sections and **completing this section last is advisable.**

2.1. Emergency contacts One of these should be the PI/responsible person Security can be contacted on extension 6666	Name:	Peter Banks	Adrian Blackburn
	Position:	ESO	Senior Technician
	Telephone number:	07541238957	0191 2084963

2.2. Hazard pictograms – select all that apply to the work activity.								
								
Health hazard	Toxic	Corrosive	Harmful/Irritant	Flammable	Oxidising	Explosive	Compressed gas	Danger for the environment
			X	X				X

2.3. Name of hazard	2.4. Properties of hazard Briefly describe how the chemical is hazardous e.g. toxic, flammable, carcinogen	2.5. Emergency procedures	
		Include, as appropriate, procedures for: <ul style="list-style-type: none"> • Contained Spill • Small uncontained spill, • Large uncontained spill • First aid • Fire 	
Ethanol	Highly flammable and Irritating to the eyes	<ul style="list-style-type: none"> • In the event of someone dropping a Winchester bottle of ethanol spilling a large amount on the laboratory floor. Evacuate the laboratory immediately. Extinguish all laboratory flames from Bunsen burners. • Contact the safety officer immediately for advice on whether to evacuate the building. (William.saint@ncl.ac.uk) • Do not activate the fire alarm as this might ignite fumes. • In case of eye contact the affected area should be washed in water for 15 minutes before consulting a doctor • If swallowed see medical advice immediately 	

2.3. Name of hazard	2.4. Properties of hazard Briefly describe how the chemical is hazardous e.g. toxic, flammable, carcinogen	2.5. Emergency procedures
		Include, as appropriate, procedures for: <ul style="list-style-type: none"> • Contained Spill • Small uncontained spill, • Large uncontained spill • First aid • Fire
		<ul style="list-style-type: none"> • If Ethanol comes into contact with hands wash hands immediately with soap and plenty of water
70% Ethanol	Highly flammable and Irritating to the eyes	<ul style="list-style-type: none"> • The maximum anticipated size of spillage is 2L. Should this occur all liquid should be mopped up with blue roll and placed in a large waste bin to be incinerated. • In case of eye contact the affected area should be washed in water for 15 minutes before consulting a doctor • If swallowed see medical advice immediately • If Ethanol comes into contact with hands wash hands immediately with soap and plenty of water

Additional rows can be added to this table as required

Section 3: The Risk Assessment

Additional rows can be added to this table as required

3.1. Name of hazard including substances and by-products produced during or as a result of the activity.	3.2. Properties of hazard Provide details of how the substance could cause harm. Useful sources of information are the safety data sheet for the substance, Hazard (H) statements (give the whole phrase not just the code), and the workplace exposure limit .	3.3. Physical form e.g. powder, dust, granular, pellet, liquid, solution, gas.	3.4. Quantity and concentration (give units)	3.5. Frequency of use e.g. daily, weekly, monthly, one-off.	3.6. Route of exposure e.g. ingestion, inhalation, skin/eye contact, skin absorption, injection/sharps injury.
Ethanol	Irritable to eyes; Flammable	Liquid	100ml	Daily	Ingestion, skin/eye contact
70% Ethanol Solution	Irritable to eyes; Flammable	Liquid	2L	Daily	Ingestion, skin/eye contact

3.7 Carcinogens All carcinogens and users of carcinogens should be notified to OHSS using the following link

<http://www.ncl.ac.uk/ohss/chemical/carcinogens.htm>

3.8. Dangerous Substances and Explosive Atmospheres (DSEAR)	Yes	No
Are you carrying out an activity/chemical reaction that is at risk of thermal runaway or explosion?		x
Will the activity involve handling or storage of pyrophoric or unstable substances such as peroxide?		x
Will flammable vapours, solid particles, fibrous particles etc. capable of forming an explosive atmosphere be present in the working atmosphere?		x
If the answer to any of the above questions is yes, you will need to complete a short 'add-on' DSEAR risk assessment		

3.9. Who might be at risk? (tick all that apply)	Staff	Postgraduates	Undergraduates	New or expectant mothers (Contact Occupational Health)	Contractors	Public including visitors and children
	x	X	X			

3.10. Assessment of inherent risk to human health prior to the use of controls (please use the risk assessment matrix at the end of this form)	High	Medium	Medium/low	Low
			x	

Section 4: Controls

Specify for each hazard identified in section 3. Precautionary (P) statements are a useful source of information.	
4.1. Physical or Engineering Controls. LEV, fume hood, glove box, total containment etc. Specify at which point in the work activity they are to be used.	The solutions should be stored in their original containers or made up in a labelled Duran bottle. The bottles should be sealed at all times when not in use. The bottles of solutions when not in use should be stored in a locked and labelled alcohol container. When transferring bottles between rooms a Winchester holder for bottles should be used to avoid the risk of dropping the bottles and creating a spillage.
4.2. Administrative controls Training requirements, access control, signage.	New Staff and Students should be trained how to handle Ethanol safely
4.3 Personal Protective Equipment. Respirators, safety specs, face mask, lab coat, gloves etc. Specify which type and when they are to be worn.	Nitrile rubber Gloves, a lab coat, a face mask and safety glasses should be used for measuring out the Ethanol solutions.
4.4. Storage requirements Include a description of how hazardous substances including flammable materials will be stored. Describe how incompatible materials will be segregated.	The bottles of solutions when not in use should be stored in a locked and labelled alcohol container.
4.5. Transport of the hazardous substance Describe how you will transport substances between laboratories or different university sites.	Ethanol solutions should be transported in their original container or a sealed Duran bottle. When transferring bottles between rooms a Winchester holder for bottles should be used to avoid the risk of dropping the bottles and creating a spillage.
4.6. Disposal procedures Carefully consider the safest means of disposal and identify when waste should be disposed of by a chemical waste contractor	Tissues and gloves are sent for autoclaving.

	Yes	No	Describe the findings of exposure monitoring or health surveillance
4.7. Is exposure monitoring required? For example if you suspect that exposure to a chemical exceeds the workplace exposure limit. Contact OHSS for further advice		x	
4.8. Is health surveillance required? See Occupational Health surveillance policy and programme . Contact Occupational Health for further advice		x	

4.9. Assessment of residual risk to human health after the application of controls (please use the risk assessment matrix at the end of this form)	High	Medium	Medium/low	Low
				x

Section 5: Approval

I confirm that this is a suitable and sufficient risk assessment for the above described work activity	Name	Signature	Date
Assessor This is the person who has completed this form			
Principal Investigator/responsible person	Peter Banks		24/11/2015

Risk estimation matrix Use this to complete sections 2.10 and 3.10

Severity of Harm	Likelihood of harm		
	High	Medium	Low
Severe	High	High	Medium
Moderate	High	Medium	Medium/low
Minor	Medium/low	Low	Low

Please keep a record of this risk assessment

***Review of assessment**

This assessment should be reviewed every 2 years and immediately if there is reason to believe that it is no longer valid (e.g. after an accident/incident), if there is a significant change in the work activity to which it relates or if the results of monitoring or health surveillance indicate it to be necessary.