

# Science Practical Risk Assessment

<b>School of Maths &amp; Science</b>	<b>Practical Activity Title</b> <b>Genes in a Bottle</b> (MAS_SP_0013_genes_in_a_bottle)	<b>Risk Assessment No.</b> MAS_RA_0013_genes_in_a_bottle	
Location	<b>Biology Lab. NB124</b>		
Assessment Performed By	<b>Phil Jones</b>	Signature:	Date: <b>16 May 2008</b>
Supported By	<b>Gareth John</b>	Signature:	Date: <b>16 May 2008</b>
Approved By	<b>Brian Harris (H.o.S.)</b>	Signature:	Date: <b>16 May 2008</b>
Date of Re-assessment (if necessary)	<b>Re-assess if any changes to procedure or equipment / chemicals are made.</b>		

HAZARDS TO BE CONSIDERED	WHO MIGHT BE HARMED?	IS THE RISK ADEQUATELY CONTROLLED?	WHAT FURTHER ACTION IS NECESSARY TO CONTROL THE RISK?
1. Slipping / Tripping	Staff		
2. Fire	Students		
3. Chemicals / drugs			
4. Moving parts of machinery			
5. Pressure systems		<i>Please complete overleaf</i>	<i>Please complete overleaf</i>
6. Electricity			
7. Dust			
8. Fumes			
9. Manual Handling			
10. Noise			
11. Lighting			
12. Computers			
13. Any other hazards			

**(Please refer to Risk Assessment Matrix to indicate how Severity and Likelihood combine to produce a Risk score)**  
**Likelihood x Severity = Risk Score, = Low, Medium or High risk**

Type & Source Of Hazard	Nature Of The Risk	Type Of Activity In Which Risks May Arise	Control Measures	Risk Rating			L M H	Any Further Control Measures Required
				L	S	R		
Bags & coats	Trip Hazard	Any activity which involves movement around the laboratory	Place all bags & coats etc in lockers provided	1	1	1	L	
Pathogenic micro-organisms including viruses	infection	Collection and handling of human DNA samples, e.g., from cheek cells	The sampling method is non-invasive and the procedure is explicitly designed to prevent cross infection. Students will only work with their own DNA samples therefore eliminating the risk of cross-infection.	1	1	1	L	
Lysis Buffer	Allergenic reactions	Adding buffer to DNA samples.	No hazard presented by the buffer solution. Spills should be rinsed with water and wiped up promptly. If in contact with skin wash with soap & water.	1	1	1	L	
Enzymes (Protease / salt sol'n)	Allergenic reactions	Proteases used when extracting DNA	Only very small quantities of enzymes are used, spills of proteases should be rinsed with water and wiped up promptly. If in contact with skin wash with soap & water.	2	1	2	L	
Ethanol (I.M.S.)	Toxicity	Precipitating DNA extracts	Very small quantities used. Keep off skin and avoid inhalation. Use suitable gloves and ensure laboratory is well ventilated. If in contact with skin wash with soap & water.	1	1	1	L	

Type & Source Of Hazard	Nature Of The Risk	Type Of Activity In Which Risks May Arise	Control Measures	Risk Rating			L M H	Any Further Control Measures Required
				L	S	R		
Glass Vial	Cuts	Inserting tops into glass vials	Correct technique required, students will be instructed not to push the top into glass vial too hard thus preventing breakage. Any breakages will be dealt with by the instructor and disposed into broken glass bin.	1	2	2	L	
Super glue	Strong adhesive properties	Gluing tops & caps to glass vials.	Very small quantities used under supervision of instructor, any glue in contact with skin should be washed off with solvent then skin should be washed with soap & water.	2	1	2	L	

INDICATE WHAT FIRST AID ARRANGEMENTS ARE IN PLACE

A science technician (qualified first aid at work) shall be present during all science practical lessons.  
First aid kit available in all science prep rooms (Physics NB232, Chemistry NB237B & Biology NB124A).

Assessment performed by : (Please Print Name)	<b>Phil Jones</b>	Position :	<b>Biology / Human Biology Lecturer</b>
Date of Assessment :	<b>16-May-2008</b>		
Signed :			

ACTION LIST RECOMMENDATIONS	Risk Rating			L M H	TO BE ACTIONED BY	DATE ACTION COMPLETED	SIGNATURE
	L	S	R				