

Laboratory Risk Assessment

Procedure	Preparation of Inorganic ash spheres
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Level of Risk	medium
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Hazard	Risk	Recommended Control
Hydrogen peroxide - oxidising agent	Personal injury - chemical burns, eye injury,	<p>?? Lab coat, safety glasses and gloves must be worn at all times.</p> <p>?? Hydrogen peroxide must be used in the fume cupboard with the window pulled down to the safe working height as indicated</p>
Hydrogen peroxide - oxidising agent	explosion/fire	<p>?? Spills on bench tops, floors etc. should be diluted with water before mopping up. Mopping up concentrated hydrogen peroxide with paper towel can cause fires.</p> <p>?? Samples with high organic content should be treated with cold peroxide first and left to stand for a short time prior to heating</p>
Unbalanced centrifuge	Damage to centrifuge rotor and risk of personal injury - <i>A broken rotor travelling at high speed is capable of breaking through the outer casing of the centrifuge.</i>	<p>?? Ensure that the sample buckets positioned opposite each other on the rotor weigh the same.</p> <p><i>The centrifuge does have a light to indicate whether it is properly balanced, but this will only come on once the speed of the rotor has reached 1000 rpm and this is often too late to prevent damage.</i></p>

Preparation of 0.3M Sodium Hydroxide Solution	Personal injury - chemical burns, eye injury	?? Lab coat, safety glasses and gloves must be worn at all times
Preparation of 0.3M Sodium Hydroxide Solution - Heat generated by dissolution of NaOH	Personal injury - burns, flawed glassware may crack	?? Ensure glassware is free from cracks or flaws. ?? Cool the exterior of the flask in a bowl of cold water ?? Do not handle the base of the flask until it has cooled
Preparation of 3M Hydrochloric Acid from Concentrated Acid	Personal injury - chemical burns, eye injury	?? Lab coat, safety glasses and gloves must be worn at all times ?? Conc. HCl must be used in the fume cupboard with the window pulled down to the safe working height as indicated ?? Always add acid to water.
Use of 3M HCl	Personal injury - chemical burns, eye injury, burns from hotplate.	?? Lab coat, safety glasses and gloves must be worn at all times ?? Allow beakers to cool before removing from the hotplate ?? Clear up any spillages immediately according to COSHH guidelines.

Assessment for C.O.S.H.H.

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Substance/Procedure	Risk of exposure * L/M/H	HSE Exposure Limits (mg/m ³)	Local controls used	Disposal	Emergency procedures
Hydrogen peroxide	L	1.5	F/C, PPE, DG,	A, B	1, 4, 6
Preparation of 3M Hydrochloric Acid from Concentrated Acid	L	7	F/C, PPE, DG,	B, G	1, 5, 6
Preparation of 0.3M Sodium Hydroxide	L	2	F/C, PPE, DG,	A, B	2, 4, 6
Sodium Polytungstate	L	1 (W)	PPE, DG	F	2, 6

* Risk of exposure providing local controls are used
For Key to symbols - see separate table