

Laboratory Risk Assessment

Procedure	Preparing Carbonaceous Particles from sediments
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Level of Risk	Medium
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Hazard	Risk	Recommended Control
Preparation of 6M Hydrochloric Acid from Concentrated Acid	Personal injury - chemical burns, eye injury	<p>?? Lab coat, safety glasses and gloves must be worn at all times</p> <p>?? Conc. HCl must be used in the fume cupboard with the window pulled down to the safe working height as indicated</p> <p>?? Always add acid to water.</p>
Use of 6M HCl	Personal injury - chemical burns, eye injury, burns from hotplate.	<p>?? Lab coat, safety glasses and gloves must be worn at all times</p> <p>?? Allow beakers to cool before removing from the hotplate</p> <p>?? Clear up any spillages immediately according to COSHH guidelines.</p>
Use of concentrated Nitric Acid	Personal injury - chemical burns, eye injury	<p>?? Lab coat, safety glasses and gloves must be worn at all times</p> <p>?? Conc. Nitric must be used in the fume cupboard with the window pulled down to the safe working height as indicated</p> <p>?? Ensure that all disposable pipettes that have come into contact with the acid are rinsed immediately after use and before disposal.</p>
Use of Hydrofluoric acid	Personal injury - chemical burns, eye injury	<p>?? Lab coat, safety glasses/face shield, apron and thick gloves must be worn at all times - the thin disposable gloves are NOT adequate when using HF.</p> <p>?? HF must be used in the fume cupboard with the window pulled down to the safe working height as indicated.</p> <p>?? Measure out HF using the dispenser provided and always on the tray provided. The tray should be washed and dried before returning to the cupboard.</p> <p>?? Wipe down all surfaces in the fume cupboard after use to ensure there are no stray drips of acid.</p> <p>?? Wash down apron and gloves before removing and before handling anything</p>

		else. ?? Should HF come into contact with skin follow emergency first aid procedure outlined in the guidance leaflet (available from the Lab Supervisor).
Disposal of acid residues	Reaction with other waste materials	?? Acid must be neutralised before disposal using Sodium Carbonate. ?? Test with litmus/universal indicator paper to ensure neutrality.
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>	?? Ensure that the sample buckets positioned opposite each other on the rotor weigh the same. <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>
See Risk Assessment for Slide Preparation		??
Hot plate at 130 ^o C	Burns to hands and forearms	?? Use tweezers/forceps to place and remove slides on hotplate ?? If leaving the empty hotplate switched on and unattended (i.e. to warm up), place a sign indicating that it is hot on the fume cupboard window.

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

Procedure	Preparing Fly Ash particles from sediments
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Substance/Procedure	Risk of exposure * L/M/H	HSE Exposure Limits (mg/m ³)	Local controls used	Disposal	Emergency procedures
Hydrochloric Acid	L	7	F/C, PPE, DG,	B, G	1, 5, 6
Nitric Acid	L	5	F/C, PPE, DG,	B, G	1, 5, 6
Hydrofluoric acid	L	2.5 HF	F/C, PPE RG	B, G	1, 5, 6 #See notes on use of

					HF
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#Available from the Lab Supervisor

* Risk of exposure providing local controls are used

For Key to symbols - see separate table