

### Risk Assessment Form

Title of Risk Assessment

Date of assessment

Department

Date review due

Description of Task/Process

Assessment carried out by

### Additional information

The following may also need to be included dependent on circumstances:

- Ventilation (Local Exhaust Ventilation (LEV) specifics)
- Protection equipment
- Gases used (toxic, asphyxiation)
- Effect of samples
- Melting and degradation of samples/containers

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<u>Hazards and how they may cause harm</u>	<u>Who may be at Risk?</u>	<u>Existing Control Measures</u>	<u>Current Risk Level</u> (VL,L,M,H,VH)	<u>Where current risk is M, H or VH, what additional Control Measures are required?</u>	<u>Action required by whom &amp; by when?</u>	<u>Final Risk Level</u>
<b>Burns to hands</b> with contact with hot oven/furnace or heated material	User	Use of thermal gauntlets (BS EN 388:2003 and EN 407:2004)	Low			Low
<b>Injury to feet</b> from dropping hot samples onto feet.	User	Awareness of mass of sample. Protective footwear if mass > 5 kg (EN ISO 20345 or EN ISO 20346)	Low			Low
<b>Burns to face, skin, clothes.</b>		Use of face shield. Cover all other exposed skin. Wear chamois leather bib if required.	Low			Low
<b>Fire</b> –Fire could lead to death, other injury and loss of a space or building.	User, building,	Good housekeeping to remove combustible materials in the vicinity; Adequate supervision of materials when in the furnace; Automatic fire detection system in use in room Provision of fire-fighting equipment; Fire wardens and emergency evacuation arrangements in place	Medium	Users to be reminded to remove materials from the furnace room after use.	Research lead for space at the start of each term and more frequently if there are reports of poor housekeeping	Low
<b>Evolution of toxic gases</b> due to decomposition of samples within furnace which could be inhaled	Room occupiers	Room ventilation with extraction points located above furnaces in the ceiling. Regular maintenance and servicing of furnace/oven and LEV; Safe operating procedure (SOP or	Low	Use of gases to be subject to separate risk assessment or this document reviewed to incorporate this additional risk.	Furnace users to add the relevant hazards to the risk assessment for any gases introduced into	Low

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by room occupiers		Safe system of work (SSOW) in place for specific sample processing activity; (See also chemical contamination)  All samples to be recorded on furnace working sheet and on noticeboard at entrance.			the process prior to doing this type of work.	
<b>Overheating of worker</b> could lead to dehydration and exhaustion.	Room occupiers and User	Furnace / oven located in a well-ventilated space or area.  Use of regular breaks or shortened working time if prolonged use of ovens or furnaces;  Rehydration during breaks	Medium	Research Supervisor to consider length of time researchers will spend working in the furnace room prior to each activity being undertaken and to consider the risk at this time.	Research Supervisor (as additional control column)	Low
<b>Chemical contamination</b> - sample surface contamination or cross contamination from inside the furnace could liberate noxious fumes on heat up.	Users	Furnace users to identify whether there could be surface contamination on the sample and to remove this prior to heating in the furnace.  All users must clean the furnace after use if there is any evidence of contamination.	Low			Low
<b>Implosion of equipment</b>	Room occupier	Examine furnace tube (furnace number 1) for damage before applying a vacuum	Very Low			Very Low


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<b>Electrocution</b>	User	Examine cable to furnace and other electrical equipment before use. Ensure regular portable appliance test (PAT) is carried out. Check PAT label in date.	Low	Any electrical items out of their test date to be taken out of use.	User to notify Technical Services team if no PAT label or label is out of date	Low
<b>Gases</b>	User and any room occupier	Leak check before starting experiment. Use minimal gas flow. Record use of gas on notice board at entrance.	Low			Low

**Work should not be carried out until the assessment is completed and all required control measures are in place.**

<b>Overall Final Risk Rating</b> (Highest level in final column above)	<b>Low</b>
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<b>Additional Comments from Risk Assessor</b> (e.g. funding or practical implications)	
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Approved By	Martin Lees 
Date	05/02/2019

Position	Space Owner
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Please print a copy, sign it and keep for your records

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	Severity				
Likelihood	Superficial	Minor	Serious	Major	Extreme
Unlikely	Very low	Very low	Low	Low	Moderate
Possible	Very low	Low	Low	Moderate	High
Likely	Low	Low	Moderate	High	Very high
Very likely	Low	Moderate	High	Very high	Very high
Extremely likely	Moderate	High	Very high	Very high	Very high

Risk Level	
Very low	Acceptable risk - no action required
Low	Tolerable risk - further control measures not required, but status must be monitored
Moderate	Further control measures required to reduce risk as far as is reasonably practical
High	Urgent action required to allow activity to continue
Very high	Risk intolerable - activity must cease until the risk has been reduced

See '[Matrix for risk evaluation](#)' for further guidance.