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| Health and safety services |

Risk assessment form

Acid washing glassware

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| **RISK ASSESSMENT DETAILS** | **DEGREE OF RISK** | **RISK RATING MATRIX** |
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| Faculty/School/Service | Earth and Environment |
| Team | Cohen |

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| Risk Assessment Title | Acid washing of glassware |
| Risk Assessment Log Reference |  |
| Date | 10/01/2014 |
| Name of Assessors | Andy Connelly |
| Manager Responsible | Caroline Peacock |
| Location | Cohen lab suit (level 8 & 9) |
| Details of ActivityPreparation, handling and storage of 10% HCl, and 10% HNO3 bath for washing laboratory equipment. |

Other assessments which might also be required, ✓ if needed:Manual Handling ✓ REF COSHH ✓ REF Personal Protective Equipment (PPE) REFNoise REFOther REF |

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| **LIKELIHOOD (L)** |
| 5 | Inevitable |
| 4 | Highly Likely |
| 3 | Possible |
| 2 | Unlikely |
| 1 | Remote Possibility |

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|  |  | **SEVERITY** |
|  **LIKELIHOOD** |  | 1 | 2 | 3 | 4 | 5 |
| 1 | 1 | 2 | 3 | 4 | 5 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 5 | 5 | 10 | 15 | 20 | 25 |

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| **SEVERITY (S)** |
| 5 | Very High -Multiple Deaths |
| 4 | High - Death, serious injury, permanent disability |
| 3 | Moderate - RIDDOR over 3 days |
| 2 | Slight - First Aid treatment |
| 1 | Nil - Very Minor |

 | **PERSONS AT RISK** |
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| PERSONS AT RISK |
| Employees |
| Students |
| Clients |
| Contractors |
| Members of the public |
| Work Experience students |
| Other Persons |

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| **REVIEW DATES** |
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| RISK RATING SCORE | ACTION |
| 1 - 4 | Broadly Acceptable - No action required |
| 5 - 9 | Moderate - Reduce risks if reasonably practicable |
| 10 -15 | High Risk - Priority Action to be undertaken |
| **16 -25** | Unacceptable **-Action must be taken IMMEDIATELY** |

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| **HAZARD AND RELATED ACTIVITIES**e.g. trip, falling objects, fire, explosion, noise, violence etc. | **PERSONS** **AT RISK**e.g. Employees, Customers, Contractors, Members of the public | **POSSIBLE OUTCOME** | **RISK RATING BEFORE CONTROLS (LxS)** | **EXISTING CONTROLS**e.g. Guards, Safe Systems of Work, Training, Instruction, Authorised Users, Competent Persons, Personal Protective Equipment (PPE) | **RISK RATING AFTER CURRENT CONTROLS (LxS)** | **FURTHER CONTROLS REQUIRED?** | **RISK RATING AFTER ADDITIONAL CONTROLS (LxS)** |
| Handling Glassware. | Anyone working in the lab using the acid bath. | Cuts from broken glassware. | 3(l)x2(s)=6 | General laboratory practice. Training for persons using the equipment to be provided.Wear suitable protective clothing: Lab Coat, neoprene Gloves, and Protective glasses. | 2(l)x2(s)=4 | No obvious additional measures that could be taken. |  |
| Use of dilute corrosive solutions. | Anyone working in the lab using the acid bath. | Spillage / Splashing on to skin or into eyes.Inhalation of fumes. | 4(l)x2(s)=8 | General laboratory practice. Training for persons using the equipment to be provided.Wear suitable protective clothing: Lab Coat, chemical resistant glasses and gloves. SOP to be followed | 2(l)x2(s)=4 | No obvious additional measures that could be taken. |  |
| Handling concentrated corrosive materials | Individual using conc acid and other lab users  | Acid burns | 4(l)x3(s)=12 | Basic lab training and induction acid moved from store to fume cupboard in carrier. Only used in fume cupboard. | 2(l)x3(s)=6 | No |  |
| Moving acid bath during preparation or disposal. | Employees moving acid baths during preparation or disposal | Risk of spillage or manual handling injury | *4(l)x3(s)=12* | Only transport in a container with a sealed lid to avoid spillage.All users must have undergone manual handling training.The standard operating procedure sets out clear limits to avoid the need of manual handling risk assessments.  | 2(l)x3(s)=6 | No obvious additional measures that could be taken. |  |
| PossibleSpillage of acid bath  | Anyone working in the lab using the acid bath. | Inhalation of fumes. | 4(l)x2(s)=8 | Follow SOP and ensure the container and lid are both in good condition and the lid is firmly closed. | 2(l)x2(s)=4 | No obvious additional measures that could be taken. |  |
| Transfer of acid waste to 25L container for disposal | Person carryout out disposal | Inhalation of fumes and risk of spillage | 4(l)x2(s)=8 | Transfer carried out outside with appropriate PPE (white coat, gloves visor, and safety glasses). | 2(l)x2(s)=4 | No |  |
| **MANAGEMENT AGREED****ADDITIONAL CONTROL MEASURES REQUIRED** | **ACTIONED BY** | **ACTION COMPLETE** |
| **POSITION** | **NAME** | **DATE** | **MANAGER SIG** | **DATE** |
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| **COMMENTS AND INFORMATION**(Use this section to record any dynamic risk assessment comments and information) |
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| **Do additional controls adequately lower high risk activities to an acceptable level?** | **YES / ~~NO~~**If NO explain in comments box above | **SIGNATURE OF MANAGER**"The risks identified in this assessment are controlled so far as is reasonably practicable" |
| Signature:  | Date:  |

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| **DATE OF REASSESSMENT**(Every two years minimum) | **ARE THERE ANY CHANGES TO THE ACTIVITY SINCE THE LAST ASSESSMENT?** | **SIGNATURE OF MANAGER** |
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| **LOCATION OF CURRENT SIGNED RISK ASSESSMENT** |  |