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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** | | | | |
| |  |  | | --- | --- | | Faculty/School/Service | Earth and Environment | | Team | Cohen |  |  |  | | --- | --- | | 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 Activity  Preparation, 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) REF  Noise REF  Other REF | | | | | | | | |  |  | | --- | --- | | **LIKELIHOOD (L)** | | | 5 | Inevitable | | 4 | Highly Likely | | 3 | Possible | | 2 | Unlikely | | 1 | Remote Possibility | | | | | |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | |  |  | **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 | | | | | |
| |  |  | | --- | --- | | **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** | | | | |
| |  | | --- | | PERSONS AT RISK | | Employees | | Students | | Clients | | Contractors | | Members of the public | | Work Experience students | | Other Persons | | | | | |
| |  |  | | --- | --- | | **REVIEW DATES** | | |  |  | |  |  | |  |  | | | | | | | | | |  |  | | --- | --- | | 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** | | | | | | | | | |
| **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. | | |  |
| Possible  Spillage 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** |  |