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| --- | --- |
| Name and nature of activity | Diluting concentrated hydrochloric acid |
| Location and date of activity |       |
| Name of teacher/technician |       |
| Activity type | [x] Technician procedure [ ] Teacher demonstration [ ] Student activity – Student year group       |
| Physics and general equipment | Type of hazard | Controls and other measures |
| Magnetic stirrer (optional)Glassware | [ ]  Radiation  ionising  laser[x]  Electrical [ ]  Thermal[ ]  Projectiles[ ]  Sharps[ ]  Other –       | [ ]  Relevant signage[ ]  Perspex safety shield[ ]  Sharps container[x]  Glassware free from cracks or chips[ ]  Safety glasses[ ]  Thermally insulated gloves[ ]  Other –       |
| Chemicals used and produced | Type of hazard | Controls and other measures |
| Hydrochloric acid, concentratedHydrochloric acid, dilute solution | xploding bomb[ ]  Explosivelame[ ]  Flammablelame over circle[ ]  Oxidisingas cylinder[ ]  Gases under pressureorrosion[x]  Corrosive | kull and cross bones[ ]  Acute toxicityxclamation mark [x]  Health hazardsealth hazard[ ]  Chronic health hazards nvironment[ ]  Environmental[ ]  Other –       | [x]  Limit quantity/concentration[ ]  Perspex safety shield [ ]  Ventilation: natural/exhaust[x]  Fume cupboard[x]  Safety glasses[x]  Laboratory coat/apron [x]  Gloves: latex/nitrile/neoprene/PVC[x]  Safety shower[x]  Other – Ensure spill kit is available |
| Biological/geological materials used | Type of hazard | Controls and other measures |
| NA | [ ]  Biohazard [ ]  Dust/aerosols [ ]  Sharps[ ]  Manual handling [ ]  Other –       | [ ]  Steriliser[ ]  Disinfectant [ ]  Sharps container [ ]  Dust mask[ ]  Safety glasses[ ]  Gloves [ ]  Other –       |
| Waste produced | Waste disposal procedure |
| Unused concentrated hydrochloric acidResidual concentrated acid on glassware. | [x]  Pre-treatment of waste – If small quantity, neutralise first.[x]  Sink with water – If small quantity, and after neutralisation.[ ]  Regular waste –      [x]  Licenced hazardous waste company – if large quantity [x]  Other – Unused concentrated acid may be transferred to a suitable labelled container and stored for future use. Rinse contaminated glassware in fume cupboard before removal. |
| Standard Operating Procedures |
| [ ]  I have read the relevant Standard Operating Procedure. [ ]  I am experienced/trained in using all the equipment listed. [ ]  All chemicals used and produced are approved for use.[ ]  I have read the current SDSs for all hazardous chemicals used and produced.[ ]  I am aware of safety guidelines for using all chemicals, materials and equipment. [ ]  I will follow local guidelines for waste disposal (water authority, local council, EPA).[ ]  I am aware of first aid procedures if required. |
| Other comments: If storing the unused concentrated acid, it is best transferred to a separate container to avoid contamination of the stock bottle. |
| Conclusion:[ ]  Risks not significant now and not likely to increase.[ ]  Risks significant but effectively controlled at the moment.[ ]  Risks significant and not adequately controlled at the moment.[ ]  Uncertain about risks; more detailed assessment required. |
| Assessment carried out by:      | Signature: | Date:       |
| Assessment approved by:      | Signature: | Date:       |
| Next assessment due:       |
| **This Risk Assessment assumes that the activity will be conducted in a science teaching area with the following facilities: electricity, running water, emergency shut-offs for electricity, gas if applicable, and water, regular testing and tagging of portable appliances; emergency contingencies such as evacuation/emergency plans, appropriate fire extinguishers, spill kits, hand washing facilities, eyewash/safety shower and first aid supplies. It is also assumed that all the necessary licencing requirements and approvals are obtained prior to the activity.** |