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| **(1) In case of Emergency:** | | | | | | | | | | | | | | | | | | | | **(2) Fire Fighting medium** | | | | | | | **Carbon Monoxide (Black)** | | | | | |
| **The following services are being used:** | | | | | | | **Electricity** | | | | **Water** | | **Gases: (specify)** | | | | | | | **Other:** | | | | | | | | | | | | |
|  | | | |  | | Click here to enter text. | | | | | | | Click here to enter text. | | | | | | | | | | | | |
| **Action in case of Fire:** | **Secure experiment if safe to do so:** Turn power off, bring equipment to a safe position, close lab doors.  **If needed**: sound the alarm and evacuate. Call Campus Security on 0161 306 9966 immediately. Report to Supervisor and Safety Advisor | | | | | | | | **Spillage or release measures:** | | | | | **Remove all sources of ignition.**  **Small spills:** Stop leak if without risk and move adjacent containers from spill area. Dilute with water and mop if water-soluble. Clean fluids using gloves and robust lab tissue (inert, clean, dry) and dispose to chemicals waste container. Decontaminate area.  **Large spills:** Stop leak if without risk and move adjacent containers from spill area. Use hazardous spill kit in the lab to absorb liquid. Use appropriate tools to put the spilled content in a convenient container for disposal. Decontaminate area.  **For significantly large spills:** cordon off affected area. Notify colleagues and Supervisor. Evacuate if necessary.  **Incident Reporting:** All incidents must be reported to Safety Advisor and Supervisor.  **Additional information specific to this task, not covered by the above:** | | | | | | | | | | | | | | | | | | |
| **First aid requirements**: | | | Call a First Aider and take provisions from the 1st aid station in the lab. If needed call medical help and show safety data sheet.  **Protection of First Aider:** No action shall be taken involving any personal risk or without suitable training. In cases where it may be dangerous to give mouth-to-mouth resuscitation, carry out chest compressions only. Wash contaminated clothing thoroughly with water before removing it, or wear appropriate gloves.  **Accident Reporting:** Accidents or near misses should be reported to Safety Advisor and Supervisor.  **Inhalation:** Move exposed person to fresh air. Keep person warm and at rest. If unconscious, place in recovery position and seek medical attention immediately. Loosen tight clothing such as collar, tie, belt, or waistband. Get medical help if the person’s condition worsens.  **Ingestion:** Wash out mouth with water. Move the exposed person to fresh air. Keep person warm and at rest. If vomiting occurs, the head should be kept low so that the vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and obtain medical attention immediately. Maintain an open airway. Loosen any clothing such as collar, tie, belt or waistband. Seek medical help.  **Skin contact:** Flush with running water for at least 20 mins. For corrosives substances apply Diphoterine spray to neutralise the chemical burn. Wear gloves to remove contaminated clothing and shoes. Use emergency shower if there is one nearby and the burn is significant. Seek medical help if symptoms persist.  **Eye contact:** Flush eyes with sterile eyewash for at least 20 mins, lifting upper and lower eyelids. Remove contact lenses if present and easy to do so. For corrosives substances apply Diphoterine spray to neutralise the chemical burn. Keep rinsing. Seek medical help if symptoms persist.  **Additional information specific to this task, not covered by the above:** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **This is a chemical risk assessment only and other assessments may be required. All associated assessment forms must be displayed close to the procedure.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(3) Risk Assessment Number/Code:** | | | | xxxx | | | | **(4) Name and status of researcher e.g. Phd.**. | | | | | | | | Joe Blogs PhD | | | | | **(5) Emergency contact details:** | | | | | Academic supervisor or PDRA for the lab – mobile number, office extension | | | | | | |
| **(6) Assessment Date:** | | 01/08/2018 | | | | **(7) Review/Expiry Date:** | | | | | | 01/08/2019 | | | | | **(8) Building and office Number:** | | Schuster, XXX | | | **(9) Lab Number:** | | | XXX | | | **(10) People Affected:** | | | User and others in the laboratory | |
| **(11) Title of procedure:** | | **Electrochemical measurements for steel and zinc samples in sodium hydroxide solution** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(12) Details of procedure and where applicable reaction scheme** (Including starting materials, products/by-products and pressure): | | | | | | | | | | | | | | | | | | | | | | | | **(14) Associated Assessments and Ref** | | | | | | | | |
| **Make up a 0.5 M solution of sodium hydroxide from 10 M stock solution. Place steel in solution and apply voltage for 2 hours.**  **Atmospheric pressure** | | | | | | | | | | | | | | | | | | | | | | | | General risk assessment for experiment | | | | | |  | | |
| Equip/Exp overnight running | | | | | |  | | |
| General lab activities | | | | | |  | | |
| Ionizing radiation | | | | | |  | | |
| Non-Ionizing radiation | | | | | |  | | |
| Laser Safety | | | | | |  | | |
| Biological/Bio-COSHH | | | | | |  | | |
| Radiological | | | | | |  | | |
| **(13) Duration, Frequency and Temperature Range:** | | | | | | | | | | | | | | | | | | | | | | | | RA/P&M Sheets/SOP/Other (include ref): | | | | | | | | |
| Once a day for 2 weeks, room temp | | | | | | | | | | | | | | | | | | | | | | | | See generic risk assessment for labs | | | | | | | | |
| **(15) Substances used and produced** | | | **(16) Quantity used and handled** | | **(17) Duration of potential exposure** | | | | | **(18) Hazard Symbols** | | | | | **(19) Physical and health hazard statements Highlight primary hazard** | | | | | **(20) Workplace Exposure Limits** | | | **(21) Control Measures** | | | | | | **(22) Disposal Route** | | | **(23) Extremely or Highly Flammable?** |
| 1. Sodium hydroxide CAS 1310-73-2 | | | 0.5M  100mls | | 1 hour | | | | | Click Here  Click HereClick Here | | | | | H290 May be corrosive to metals.  H314 Causes severe skin burns and eye damage | | | | | TWA - NA  STEL - 2 mg/m3 | | | Engineering controls – Fume cupboard  Storage – Corrosive cabinet  PPE – Lab coat, safety specs EN166, 0.11mm nitrile gloves EN374  Incompatibilities – Strong oxidizing agents, Strong acids, Organic materials  Conditions to avoid – NA | | | | | | Hazardous liquid waste see Safety Advisor, small quantities can be diluted down and disposed of down the sink | | |  |
| 2. Click here to enter text. | | | Click here to enter text. | | Click here to enter text. | | | | | Click HereClick Here  Click HereClick Here | | | | | Click here to enter text. | | | | | Click here to enter text. | | | Click here to enter text. | | | | | | Click here to enter text. | | |  |
| 3. Click here to enter text. | | | Click here to enter text. | | Click here to enter text. | | | | | Click HereClick Here  Click HereClick Here | | | | | Click here to enter text. | | | | | Click here to enter text. | | | Click here to enter text. | | | | | | Click here to enter text. | | |  |
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| 5. Click here to enter text. | | | Click here to enter text. | | Click here to enter text. | | | | | Click HereClick Here  Click HereClick Here | | | | | Click here to enter text. | | | | | Click here to enter text. | | | Click here to enter text. | | | | | | Click here to enter text. | | |  |
| 6.Click here to enter text. | | | Click here to enter text. | | Click here to enter text. | | | | | Click HereClick Here  Click HereClick Here | | | | | Click here to enter text. | | | | | Click here to enter text. | | | Click here to enter text. | | | | | | Click here to enter text. | | |  |
| 7. Click here to enter text. | | | Click here to enter text. | | Click here to enter text. | | | | | Click HereClick Here  Click HereClick Here | | | | | Click here to enter text. | | | | | Click here to enter text. | | | Click here to enter text. | | | | | | Click here to enter text. | | |  |
| **(24) Operation is (mark as appropriate): Open**  **Closed**  **Pressurised**  **Pressure relief system**  **other**  Please specify here. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(25) Are you carrying out an activity/chemical reaction that is at risk of a thermal runaway or explosion? No**  **If yes, what additional controls are required?** Click here to enter text. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(26) Will the activity involve handling or storage of pyrophoric or unstable substances such as peroxide? No**  **If yes, what additional controls are required?** Click here to enter text. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(27) Will flammable vapours, solid particles, fibrous particles etc. capable of forming an explosive atmosphere be present?**   **No**  **If yes, what additional controls are required?** Click here to enter text. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(28) Can less hazardous substances be used? No** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(29) Procedure for checking effectiveness of control measures**  Ensure gloves, safety specs and lab coat are in good condition, free from defects  Ensure the fume cupboard is functioning correctly through checks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(30) If Carcinogens, mutagens or reproductive toxins (CMR), skin sensitisers, respiratory sensitisers, occupational asthmagens or nanoparticles are listed, is the fitness to work certificate for each individual still valid? No** | | | | | | | | | | | | | | | | | | **(31) If any of the Substances above are highly flammable and extremely flammable, What control measures are in place?** Click here to enter text. | | | | | | | | | | | | | | |
| **(32) Is lone working permitted for this procedure? Yes**  **If yes, what additional controls for lone working are required?**  Accompanied buddy – Jane Doe, PDRA  Remote buddy – Regular contact over email or telephone with Jane Doe, PDRA | | | | | | | | | | | | | | | | | | **(33) Is out of hours working permitted for this procedure? Yes**  **If yes, what additional controls for out of hours working are required?**  Buddy system in place  Carry a fully charged mobile phone  Contact Security for help on 0161 306 9966  Ensure no tailgating into building | | | | | | | | | | | | | | |
| **(34) Additional control measures or relevant information.** Click here to enter text. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(35) Risk rating of the experiment:** Low | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Signatories**  We have discussed this chemical risk assessment and understand the hazards and the associated control measures required. A copy of this form must be displayed close to the reaction. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **(36)** **Signature of Assessor:**  ………………………… Joe Bloggs………………………………  **(37) Signature of Approver:**  ……………………Academic supervisor…………………………  **(38) Signature of Verifier:**  ………………………………………………………………………  **(where necessary)** | | | | | | | | | | | | | | | | **Print Name:**  …………………………………………………………………………………  **Print Name:**  …………………………………………………………………………………  **Print Name:**  ………………………………………………………………………………… | | | | | | | | | | | **Date:**  ……………………………………………………………  **Date:**  ……………………………………………………………  **Date:**  …………………………………………………………… | | | | | |

