# SSERC logo

**SSERC Risk Assessment** (revised version March 2018)

(based on HSE’s INDG 163 ‘Risk assessment - A brief guide to controlling risks in the workplace’)

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| Activity assessed | Microelectrolysis |
| *Date of assessment* | 30th June 2020 |
| *Date of review (****Step 5****)* |  |
| *School* |  |
| *Department* |  |

| Step 1 | Step 2 | Step 3 | Step 4 | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *List Significant hazards here:* | *Who might be harmed and how?* | *What are you already doing?*  *What further action is needed?* | *Actions* | | | | |
| *by whom?* | | *Due date* | | *Done* |
| Copper II chloride is harmful if swallowed (Cat 4) is a skin and respiratory irritant (Cat 2) and causes serious eye damage. | Technician by spillage while preparing solutions. | Wear gloves and goggles (EN 166 3). Avoid raising dust. |  |  | |  | |
| Potassium bromide and iodide are both eye irritants (Cat 2)  (both solutions are of low hazard) | Technician by spillage while preparing solutions. | Wear eye protection |  |  | |  | |
| Chlorine is produced in the reaction, which is toxic if inhaled (Cat 3) and a skin/eye/respiratory irritant (Cat 2) | Pupils if they inhale a large ‘whiff’ as the lid of the apparatus is removed.  Especially those with asthma. | Wear eye protection.  Ensure pupils do not lean over the apparatus as it is opened.  Be aware of those with respiratory conditions.  This procedure, being done on a micro scale, produces a very small amount of chlorine. It is safe to carry out in the open laboratory. |  |  | |  | |

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| **Description of activity:**  A few drops of copper II chloride are electrolysed in a petri-dish. This traps the fumes of chlorine, which in turn displaces bromine from potassium bromide and iodine from potassium iodide. It also bleaches blue litmus paper. |
| **Additional comments:**  As long as care is taken that pupils don’t take a deep breath of the fumes as they open their apparatus, the concentration of chlorine will be well below the WEL. |