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**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 | Conductivity – What’s the end point |
| *Date of assessment* | 8th May 2017 |
| *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* |
| Sodium hydroxide is corrosive. | Technician and teacher by inhalation and splashes. | Wear pvc gloves and indirect vent goggles. (BS EN 1663) |  |  |  |
| 0.1 M Sodium hydroxide is irritant. | Technician, teacher and pupils by splashes. | Wear indirect vent goggles.  (BS EN 1663)  If split on skin wash off with copious quantities of water. |  |  |  |
| Hydrochloric acid is corrosive. | Technician and teacher by inhalation and splashes. | Wear gloves and indirect vent goggles. (BS EN 1663) |  |  |  |
| 0.1 M hydrochloric acid is of no significant hazard |  |  |  |  |  |
| Indicator bromothymol blue is harmful.  BTB indicator solution is of no significant hazard | Technician and teacher by inhalation. | Avoid raising dust. |  |  |  |
| Sodium carbonate is irritant.  0.1 M sodium carbonate solution is of no significant hazard | Technician and teacher by inhalation and splashes. | Wear indirect vent goggles. (BS EN 1663).  Avoid raising dust. |  |  |  |

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| **Description of activity:**  Using conductivity flasks to determine the end of neutralisation reactions. Combinations of strong acid (hydrochloric)/ strong base (sodium hydroxide) and strong acid (hydrochloric) and weak base (sodium carbonate solution) are reacted together with a bromothymol blue indicator to help show the end point. |

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| **Additional comments:**  Use only a low tension (LT) supply and not to exceed 16 volts during the electrolysis practical.  After experiments ensure hands are thoroughly washed. |