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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 | Hess’s Law |
| *Date of assessment* | 7th December 2021 |
| *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* |
| Potassium hydroxide is corrosive to skin and eyes. | Technician weighing out solid or Pupils/teachers handling the solid. | Wear goggles (EN166 3) and gloves |  |  |  |
| The potassium hydroxide produce in Route B is 0.8 – 1 mol l-1 and is corrosive to skin and eyes. | Pupils and teachers by splashes during the experiment. | Wear goggles (EN166 3) and gloves |  |  |  |
| Hydrochloric acid is corrosive and gives off irritating fumes. | Technician by splashes or inhaling fumes while preparing dilute solution | Wear goggles (EN166 3) and gloves and work in a well-ventilated room or use a fume cupboard. |  |  |  |
| 1.0 mol l-1 hydrochloric acid is of no significant hazard. |  |  |  |  |  |
| The resultant potassium chloride solution is of no significant hazard. |  |  |  |  |  |
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| **Description of activity:**  Solid potassium hydroxide is added to 1 mol l-1 hydrochloric acid and the temperature of the reaction mixture measured.  Then  Solid potassium hydroxide is dissolved in water and the resulting solution is added to 1 mol l-1 hydrochloric acid and the temperature of both stages measured. |

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| **Additional comments:**  Disposal – check the pH of the mixtures and neutralise if necessary. Then the mixture can be washed to waste with plenty of cold running water. |