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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 | Int2 PPA1-2 - Effect of Temperature on Reaction Rate |
| *Date of assessment* | 8th July 2022 |
| *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* |
| Hydrochloric acid is corrosive and gives off corrosive fumes. | Technician by splashes or inhalation while preparing solutions | Work in a fume cupboard or in a well-ventilated laboratory. Wear goggles (BS EN166 3) and gloves |  |  |  |
| 1.0 mol l-1 hydrochloric acid is of no significant hazard. |  |  |  |  |  |
| Sodium thiosulphate is of no significant hazard. |  |  |  |  |  |
| The reaction produces fumes of toxic sulphur dioxide. | Pupils (and others) by inhalation during the experiment. | Work in a well-ventilated laboratory. Reduce quantities as far as possible.Consider alternative methods especially if there are asthma sufferers in the class. |  |  |  |

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| **Description of activity:**The classic experiment. The beaker/flask is placed on paper with a cross drawn on it and the time taken for the cross to be obscured by the developing colloidal sulphur when viewed from above. |

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| **Additional comments:****A much safer alternative is to carry out the experiment on a microscale – see the procedure in the microscale section of the SSERC website.****Safer still would be to use the Rhubarb, Rhubarb activity which looks at potassium manganate VII being decolourised by oxalic acid in rhubarb.** |