# 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 | Photochemical Blue Bottle |
| *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* |
| Sulphuric acid is corrosive  The 0.1 M solution of low hazard | Demonstrator or technician, by splashes during preparation of the dilute solution | Wear goggles (EN166 3) or a face mask and nitrile gloves (consider an apron) |  |  | |  | |
| Iron II sulphate is harmful (Cat 4) if swallowed and a skin/eye irritant  The solution is of no significant hazard. | Demonstrator or technician, by splashes during preparation of dilute solution | Wear eye protection. |  |  | |  | |
| Methylene blue is a severe eye irritant and is harmful if swallowed.  The solution is of no significant hazard. | Demonstrator or technician, by splashes during preparation of dilute solution | Wear eye protection and gloves (for avoiding staining) Avoid raising dust. |  |  | |  | |

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| **Description of activity:**  Iron II sulphate (2g) is dissolved in 100 cm3 of 0.2M sulphuric acid. Then 1 (or 2) drops of methylene blue solution is added.  The solution is illuminated by a bright light. Within a few seconds the blue colour fades to leave a colourless solution, reappearing when the light is switched off. |
| **Additional comments:**  The light needs to be **bright**. An OHP just about works.  If you put too much dye in, it will not work.  The solution is can be disposed of by diluting with cold water and running to waste.  The reaction can also be carried out with thionin. |