# 

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

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

2 Pitreavie Court, South Pitreavie Business Park, Dunfermline KY11 8UU

tel : 01383 626070 e-mail : [enquiries@sserc.org.uk](mailto:enquiries@sserc.org.uk) web : [www.sserc.org.uk](http://www.sserc.org.uk)

# 

|  |  |
| --- | --- |
| Activity assessed | Balls of Fire |
| *Date of assessment* | 22nd May 2018 |
| *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* |
| Iron II ammonium sulphate is irritant to skin, eyes and respiratory system. | Technician/demonstrator preparing. | Avoid raising dust.  Wear eye protection and possibly gloves. |  |  |  |
| Sodium thiosulphate, starch and potassium iodide have no significant hazards. |  |  |  |  |  |
| Potassium dichromate is a mutagen, carcinogen and reproductive toxin, it is also toxic, corrosive and an oxidising agent. | Technician/demonstrator preparing. | Wear gloves and goggles (BS EN166 3)  Avoid raising dust. |  |  |  |
| Potassium dichromate solution (1%) is a mutagen, carcinogen and reproductive toxin, | Demonstrator/audience by splashes. | Avoid splashes.  Wear eye protection as appropriate and possibly gloves. |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |
| --- |
| **Description of activity:**  Iron II ammonium sulphate and sodium thiosulphate solutions are ‘hidden’ in beakers/flasks.  Dichromate solution is poured into a beaker and a flask. Beaker contains Iron II ammonium sulphate which causes oxidation of iodide to iodine, going black.  Some unchanged dichromate is poured into the other beaker – this also goes black.  Some of the black solution from the 2nd beaker is poured into the final flask. The thiosulphate reduces the iodine to iodide and it goes colourless again. |

|  |
| --- |
| **Additional comments:**  Potassium dichromate is harmful to the aquatic environment. Do not dispose of solutions down the drain. Keep for disposal by an authorised contractor. |