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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 | 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. |  |  |  |
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| **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. |

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| **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. |