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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 | Burning sodium in air and chlorine |
| *Date of assessment* | 24th March 2014 |
| *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* |
| Sodium is a reactive metal and will react violently with water. | Demonstrator during preparation. Demonstrator or audience during demonstration by explosion of wetted sodium | Wear eye protection. Handle sodium with forceps or tongs. Keep well away from water or aqueous solutions. Replace lid on jar immediately after piece to be used has been extracted. Do not use too large a piece |  |  |  |
| Chlorine is toxic by inhalation. | Demonstrator during preparation.Demonstrator or audience during demonstration could be exposed to chlorine vapour. | Prepare chlorine by a suitable method working in a fume cupboard.Keep lid on gas jar of chlorine until the moment it is upended over the burning sodium.Once the burning is over, replace the lid on the gas jar as there may well be unused chlorine in it. |  |  |  |
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| **Description of activity:**A piece of sodium is placed on a fire brick and set alight using a Bunsen burner. (or ignited on a deflagrating spoon and lowered into a flask/gas jar of chlorine.A gas jar of chlorine is inverted over the burning sodium leading to a brighter flame and clouds of white smoke – sodium chloride. |

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| **Additional comments:**Make sure the fire-brick is properly dry. Do not bring one in from outside.Open the used gas jars in a fume cupboard to release any chlorine present.  |