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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 | Dynamite soap |
| *Date of assessment* | 8th December 2019 |
| *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 very corrosive and repeated contact with skin can cause dermatitis. | Technician by splashes preparing 2M solution | Wear gloves and goggles (BS EN166 3) (or a face mask) |  |  |  |
| 2 mol l-1 sulphuric acid is corrosive | Technician/teacher by splashes during set-up or experiment | Consider wearing gloves and if spilled on skin, wash off immediately with copious amounts of water. |  |  |  |
| Possibility of uncontrolled hydrogen/oxygen explosion. | Demonstrator, (standing next to demo) Audience | Remove apparatus from source of ignition and switch off electrical supply before igniting bubbles. Do not use larger quantities than specified. |  |  |  |
| The mixture explodes with a very loud bang – risk of hearing damage. | Demonstrator, (standing next to demo) Audience | Advise audience to place fingers in their ears.  Modify scale of demonstration to the size of the room.  Demonstrator consider wearing ear defenders. |  |  |  |

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| **Description of activity:**  A raft of bubbles of hydrogen and oxygen is prepared by electrolysis of dilute H2SO4 (or preferably sodium sulphate solution) and then ignited. |

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| **Additional comments:**  The best way to carry th9s out is using the microscale Hoffman method – This results in no more than about 8 cm3 of gas – enough for a loud but not damaging bang. |