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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 | Int2 PPA2-1 - Testing for Unsaturation |
| *Date of assessment* | 8th July 2022 |
| *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* |
| Bromine is corrosive to skin and eyes and very toxic if inhaled. | Technician preparing bromine water. | Wear goggles (BS EN166 3) and gloves. Work in a fume cupboard.  (or use an in situ method to generate it.) |  |  |  |
| 0.02 mol l-1 bromine solution is of no significant hazard. |  |  |  |  |  |
| Hexane is highly flammable, a skin/eye irritant, a reproductive toxin and a specific target organ toxin. | Pupils by fire splashes or inhalation while carrying out experiment. | Keep away from sources of ignition. Wear eye protection. Quantities are small so the risk is low but consider gloves. |  |  |  |
| Hex-1-ene is highly flammable. | Pupils by fire. | Keep away from sources of ignition. |  |  |  |
| Cyclohexane is highly flammable and a skin/eye irritant. | Pupils by fire or splashes carrying out experiment. | Keep away from sources of ignition. Wear eye protection. |  |  |  |
| Cyclohexene is extremely flammable, harmful if swallowed and toxic in contact with skin. | Pupils by fire or splashes carrying out experiment. | Keep away from sources of ignition. Wear eye protection and gloves |  |  |  |

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| **Description of activity:**  Drops of bromine water are added to small amounts of various hydrocarbons and shaken. Unsaturated compounds absorb the bromine which goes clear. |

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| **Additional comments:**  Hydrocarbons should be collected up and kept for disposal.  Dilute potassium manganate VII is an alternative to bromine water |