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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 | Ferric hydroxamate test – Risk Assessment |
| *Date of assessment* | September 2024 |
| *Date of review (****Step 5****)* |  |
| *School* |  |
| *Department* |  |

| Step 1 | Step 2 | Step 3 | Step 4 | | |
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| *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* |
| Ethanol (IMS) is highly flammable, harmful if swallowed and can cause damage to organs. | Learner or teacher by fire, ingestion or exposure to fumes | Keep well away from sources of ignition.  Work in a well-ventilated laboratory (or use a fume cupboard\_ |  |  |  |
| Iron III chloride is harmful if swallowed and corrosive to skin and eyes.  A 5% solution is corrosive to skin and eyes | Technician while making up solution.  Learner or teacher in use by splashes/spills. | Wear goggles (BS EN166 3). |  |  |  |
| Hydrochloric acid is corrosive to skin and eyes and gives off irritating fumes.  A 1 mol l-1 solution is of no significant hazard | Technician while preparing dilute solution by splashes or inhalation of fumes. | Wear goggles (BS EN166 3) and gloves. Work in a fume cupboard (or a well-ventilated laboratory if the duration is short) |  |  |  |
| Hydroxylamine hydrochloride is harmful if swallowed or in contact with skin, a skin/eye irritant and a skin sensitiser, a suspected carcinogen and a specific target organ toxin.  A 1.0 mol l-1 solution is a skin sensitiser and suspected carcinogen. | Technician by splashes while making up solution.  Learner or teacher by splashes | Wear eye protection (BS EN166) and gloves.  Wear gloves if there is any likelihood of spillage or splashing |  |  |  |
| Sodium hydroxide is highly corrosive to skin and eyes.  The 6.0 mol l-1 solution is the same. | Technician, teacher or learner by splashes of the solution. | Wear goggles (BS EN166 3) and gloves.  Caution: this is a **highly** corrosive solution. |  |  |  |

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| **Description of activity:**  2 drops of the unknown (or a few grains of solid) are dissolved in a small amount of a mixture of hydroxylamine hydrochloride in ethanol and 6.0 mol l-1 sodium hydroxide.  It is heated in a boiling water bath for a few minutes and then 1 drop of Iron III chloride solution is added.  A deep red colour is a positive result. |

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| **Additional comments:** |