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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 | Copper complexes |
| *Date of assessment* | 03/12/2019 |
| *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* |
| Copper sulphate is harmful and causes eye damage  The solution is of low hazard | Technician (or teacher) preparing solution | Wear gloves and eye protection if required. Avoid raising dust. |  |  |  |
| Sodium 2-hydroxybenzoate is harmful and irritant to skin/eyes.  The solution is of no significant hazard. | Technician (or teacher) preparing solution | Wear eye protection (and perhaps gloves). Avoid raising dust. |  |  |  |
| Sodium nitrate III is toxic (Cat 3) if swallowed and irritating to eyes.  The solution is of no significant hazard | Technician (or teacher) preparing solution | Wear eye protection and gloves. Avoid raising dust. |  |  |  |
| Ammonia is corrosive and toxic by inhalation  The 2M solution is corrosive to eyes and irritant to skin. | Technician (or teacher) preparing 2M solution.  Demonstrator by splashing | Wear goggles (BS EN 1663 (and gloves). Work in a fume cupboard  Wear goggles (BS EN166 3 (and gloves if required). |  |  |  |
| Sodium EDTA is harmful and irritating to skin eyes and respiratory system  The solution is of no significant hazard | Technician (or teacher) preparing solution | Wear eye protection (and perhaps gloves). Avoid raising dust. |  |  |  |
| 1,2-dihydroxybenzene is harmful and irritating to skin eyes and respiratory system.  The solution is irritant due to being made up in 0.1 M sodium hydroxide. | Technician (or teacher) preparing solution | Wear eye protection (and perhaps gloves). Avoid raising dust. |  |  |  |
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| **Description of activity:**  A dilute solution (0.05M) solution of copper sulphate is prepared and different ligands are added one after the other.  Each one displaces the previous one from the complex causing a series of colour changes. |

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| **Additional comments:**  As the solution is very dilute, it can be washed to waste with plenty of water. |