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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 | Antioxidants |
| *Date of assessment* | 16th July 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* |
| **Preparation of solution A** |  |  |  |  |  |
| Potassium iodate is harmful, irritant & powerful oxidizing agent | Technician, teacher by inhalation and splashes | Avoid breathing in any dust. Wear indirect vent goggles (BS EN 1663). Wear gloves  Keep away from combustible materials |  |  |  |
| Concentrated sulphuric acid is very corrosive | Technician, teacher by inhalation and splashes | Wear indirect vent goggles (BS EN 1663) or a face shield Wear gloves |  |  |  |
| **Preparation of solution B** |  |  |  |  |  |
| Manganese sulphate is harmful | Technician, teacher by inhalation and splashes | Avoid breathing in any dust. Wear indirect vent goggles (BS EN 1663). |  |  |  |
| Starch (no significant hazard) |  |  |  |  |  |
| **Preparation of solution C** |  |  |  |  |  |
| Hydrogen peroxide 100 volume is a powerful oxidizing agent | Technician, teacher by inhalation and splashes | Keep away from combustible material. |  |  |  |
| Hydrogen peroxide 100 and 30 volume is corrosive | Technician, teacher & pupil by splashes | Wear indirect vent goggles (BS EN 1663) and gloves – particularly for the 100 volume. |  |  |  |
| **Activity** |  |  |  |  |  |
| Foods & drinks  No significant hazards but be aware of allergies |  |  |  |  |  |
| Solutions A & B are of no significant hazard |  |  |  |  |  |
| Solution C is corrosive | Teacher and pupil by splashes | Wear goggles EN 166 3.. |  |  |  |

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| **Description of activity:**  Preparing superfood solution samples by crushing and diluting with distilled water.  Determining levels of antioxidants by mixing solutions A, B & C, then adding sample solutions and recording the time interval between the colour cycle of colourless to amber to blue.  Waste is collected in the disposal bottle and then disposed of as described in the additional comments. |

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| **Additional comments:**  Preparing superfood solution samples by crushing and diluting with distilled water.  Determining levels of antioxidants by mixing solutions A, B & C, then adding sample solutions and recording the time interval between the colour cycle of colourless to amber to blue.  Waste is collected in the disposal bottle and then disposed of as described in the additional comments. |