# SSERC logo

**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 | Orange Oxidation |
| *Date of assessment* | 30th June 2020 |
| *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* |
| Potassium manganate VII is harmful and a powerful oxidizing agent | Technician (or teacher) preparing 0.01M solution. | Wear eye protection (and perhaps gloves to prevent staining of skin) Avoid raising dust. |  |  | |  | |
| 0.01M potassium manganate VII solution has no significant hazards |  |  |  |  | |  | |

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| **Description of activity:**  3cm3 of 0.01 M potassium manganate VII is added to a series of test tubes and increasing amounts of orange juice are added.  The β-carotene is oxidized by the manganate VII and becomes colourless. The series of tubes gives a range from purple (the manganate VII) through browns to white. |
| **Additional comments:**  Excess manganate should be reduced (perhaps with more orange juice) and the solutions can then be run to waste with copious quantities of running water. |