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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 PPA2-3 – Hydrolysis of Starch |
| *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* |
| Benedict’s reagent is harmful if swallowed and an eye irritant | Pupils by splashes | Wear eye protection. |  |  |  |
| Amylase is a respiratory sensitiser  The 1% solution is of no significant hazard. | Technicians by inhalation while preparing solution. | Avoid raising dust. |  |  |  |
| Hydrochloric acid is corrosive and gives off corrosive fumes. | Technician by splashes or inhalation while preparing solutions | Work in a fume cupboard or in a well-ventilated laboratory. Wear goggles (BS EN166 3) and gloves |  |  |  |
| 2.0 mol l-1 hydrochloric acid is of no significant hazard. |  |  |  |  |  |
| Sodium hydrogencarbonate is of no significant hazard |  |  |  |  |  |

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| **Description of activity:**  Starch solution is hydrolysed either by amylase solution or by heating with hydrochloric acid. The solutions are then tested with Beneduicts solution. |

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| **Additional comments:**  It may be safer (for technicians) (and educationally preferable) for pupils to use saliva as a source of amylase.  Fehling’s reagent is more alkaline and corrosive. Sandell’s reagent is also irritant. If these are used, this risk assessment should be amended.  For preparing the Benedict’s reagent in house, a separate risk assessment is needed. |