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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 sensitiserThe 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. |