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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 | Tomato Chromatography |
| *Date of assessment* | 8th December 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* |
| Ammonia is corrosive and toxic by inhalation | Technician (or teacher) preparing 2M solution | Wear goggles (BS EN 1663 (and gloves). Work in a fume cupboard |  |  |  |
| Petroleum ethers are highly flammable, aspiration toxins and can cause other respiratory problems | Technician (or teacher) preparing extraction solvent. | Wear eye protection (and perhaps gloves). Work in a well-ventilated area or fume cupboard |  |  |  |
| Hexane is very flammable, an aspiration toxin and can cause other respiratory and nervous problems | Pupil carrying out chromatography | Use as small an amount as possible. Work in a well-ventilated area. |  |  |  |
| The propanone:Petroleum ether mixture is highly flammable, aspiration toxins and can cause other respiratory problems | Pupil carrying out extraction | Use no more than the stated amount. Keep container covered where possible. Work in a well-ventilated area. |  |  |  |

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| **Description of activity:**  3cm3 of a 50:50 miture of petroleum ether and propanone is added to a few g of tomato paste. This is stoppered and shaken then left for a few minutes to settle.  The supernatant is spotted onto chromatography paper and the chromatogram run using hexane as a solvent. The reaction mixture is titrated against 1M NaOH using thymol blue indicator |

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| **Additional comments:** |