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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 | TLC of plant pigments |
| *Date of assessment* | September 2024 |
| *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* |
| Propanone is highly flammable. The same is true of the 80% ethanol used in the extraction. | Technicians, teachers or pupils if solvent ignites. | Keep away from sources of ignition. |  |  |  |
| The chromatography solvent is flammable (and a health hazard) | Learners (and possibly teachers) by splashes or inhalation while carrying out TLC. | Work in a well-ventilated laboratory. Keep the lid off the bottle for as short a time as possible. Keep away from sources of ignition. |  |  |  |
| The ‘stretched’ capillary tubes can be sharp | Learners (and possibly teachers) could get ‘stabbed’ by careless handling | Handle glass with care and have a suitable container at each workstation for bits of glass and used capillaries. to be placed in. |  |  |  |
| The plant extracts are all of low hazard. |  |  |  |  |  |

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| **Description of activity:**  Plant materials is ground in a pestle and mortar with propanone  Drops are applied to a TLC plate which is then run with a mixture of 5 parts cyclohexane, 3 parts propanone and 2 parts petroleum ether (40-60°C boiling point range)  The plate is then run, allowed to dry and observed. |

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| **Additional comments:** |