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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 | Caffeine extraction from tablets |
| *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* |
| **Ethyl** Ethanoate is highly flammable an eye irritant and fumes can cause drowsiness. | Learner or teacher by fire, splashes or exposure to fumes | Keep well away from sources of ignition.  Wear eye protection.  Work in a well-ventilated laboratory (or use a fume cupboard\_ |  |  |  |
| Ethanol (IMS) is highly flammable, harmful if swallowed and can cause damage to organs. | Learner or teacher by fire, ingestion or exposure to fumes | Keep well away from sources of ignition.  Work in a well-ventilated laboratory (or use a fume cupboard\_ |  |  |  |
| Caffeine is harmful if swallowed | Learner by ingestion. | Observe good laboratory hygiene |  |  |  |
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| **Description of activity:**  Caffeine tablets are dissolved in hot water to extract the caffeine.  It is then filtered and extracted into ethyl ethanoate.  This is then dried with sodium sulphate and the solvent evaporated off to leave solid caffeine.  It can then, if desired, be recrystallised from ethanol |

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| **Additional comments:** |