

# Risk Assessment Form

(This is an active document and must be maintained)

Materials Science and Metallurgy

Date: 15<sup>th</sup> September 2017

Supervisor of Room/Area: **Prof. Serena Best & Prof. Ruth Cameron**

Room or area: **2\_014 (CCMM main lab)**  
(Describe location)

Name of Assessor(s): **Wayne Skelton-Hough**

Title of Activity / Experiment / Work Area:

**Use of the Lambda 25 UV-Vis spectrometer**

Description of Activity / Experiment / Work Area:

Using the Lambda 25 UV-Vis spectrometer to analyse liquid samples held in Curvett cells.

**SECTION 1:** Identify all significant hazards, who or what may be affected by each individual hazard and controls in place to reduce risk to a minimum.

| Hazard Description    | Hazard to whom or what | Controls in place to reduce risk to a minimum   |
|-----------------------|------------------------|---|
| Electrocution         | Operator               | <ul style="list-style-type: none"><li>Inspect all electrical equipment and power cables before use and do not use any equipment that shows any signs of damage.</li><li>Ensure electrical equipment carries an up to date PAT label before using it.</li><li>Access to the spectrometer electrical system shall only be by competent trained personnel only.</li><li>DO NOT switch on any electrical equipment that gets wet.</li></ul> |
| UV radiation          | Operator               | <ul style="list-style-type: none"><li><b>DO NOT</b> open bulb compartment without first switching off the spectrometer and disconnecting the power lead.</li></ul>  |
| Exposure to chemicals | Operator               | <p><b>ALL CHEMICALS USED IN THE UV-Vis spectrometer must be covered by an up to date COSHH assessment</b></p> <ul style="list-style-type: none"><li>Ensure samples are handled with care and any spills are cleaned up immediately.</li></ul>   |

|                                  |          |   |
|----------------------------------|----------|---|
| Sharp edges and broken glassware | Operator | <ul style="list-style-type: none"> <li>• Handle quartz cuvettes with care</li> <li>• Any breakages should be carefully collected up and disposed of in the broken glass container</li> </ul>                |
| Hot bulbs                        | Operator | <ul style="list-style-type: none"> <li>• Deuterium and halogen bulbs to only be changed by competent personnel.</li> <li>• Allow bulb to cool to room temperature before attempting replacement.</li> </ul> |

**SECTION 2: Emergency Procedures**

In the event of evacuation, the UV-Vis spectrometer may safely be left unattended. In order to shut down, switch off at the mains.

In case of sustaining a burn, the affected area should be run under cold water for at least 15 mins until pain subsides. If symptoms continue, if the burn area is greater than 1% of the body surface (an area the size of the palm of the hand) or if the burn affects the face, hands, feet or genital area, medical attention must be sought.

If the operator sustains a cut, it should be cleaned and medical attention sought if necessary.

Clean up all spills immediately, solid or liquid.

|                                 |                    |                       |
|---------------------------------|--------------------|-----------------------|
| <b>Signature of Assessor(s)</b> | <i>Wayne Kelly</i> | <b>Date:</b> 15/09/17 |
| <b>Signature of Supervisor</b>  | <i>Ken ...</i>     | <b>Date:</b> 19/9/17  |

**SECTION 3: Review** - This assessment must be reviewed every 12 months or earlier if the basis of the original assessment is altered.

| Review Date | Reviewed by (Signature) |
|-------------|-------------------------|
|             |                         |
|             |                         |
|             |                         |

| Review Date | Reviewed by (Signature) |
|-------------|-------------------------|
|             |                         |
|             |                         |
|             |                         |

## Change log

| Change | Date       | Updated by       | Description      |
|--------|------------|------------------|------------------|
| 1      | 15/09/2017 | W. Skelton-Hough | Document issued. |