Risk Assessment Form

(This is an active document and must be maintained)

UNIVERSITY OF CAMBRIDGE

Materials Science and Metallurgy

Date: 15th September 2017

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

Room or area: **2_014 (CCMM Labs)**
(Describe location)

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

Title of Activity / Experiment / Work Area:

Turbula T2F Blender

Description of Activity / Experiment / Work Area:

The turbula blender is used to blend powder samples at 46rpm.

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	Person carrying out the procedure	• Inspect all electrical equipment and power cables before use and do not use any equipment that shown any signs of damage. • Ensure electrical equipment carries an up to date PAT testing label before using it.
Failure of sample retaining straps (rubber)	Person carrying out the operation	• Do not exceed the maximum sample weight for the equipment, which is 10 kg. • Before using the blender, ensure that the correct retaining straps for the weight of sample are used (black straps up to 5 kg, red straps for 5 kg – 10 kg). • Wear safety glasses when replacing the securing straps. • Inspect the rubber straps thoroughly for any signs of wear or damage before and after securing sample container in rotor cage. Replace and worn or damaged straps immediately.
Mechanical failure of rotating parts	Person carrying out the operation.	• Before use the spinner-rotator cage and its lid must be examined for damage. Any damage must be reported to the group technician.

Hazard Description	Hazard to whom or what	Controls in place to reduce risk to a minimum
Entanglement in rotating parts	Person carrying out the operation.	• Tie back long hair when using the equipment and do not wear lose fitting clothing. • Take extreme care when manually rotating the blender cage, using only the red and black button handles to rotate the cage. Ensure that the cage is properly locked in place before carrying out any work on the cage or securing straps. • The equipment is fitted with an interlocked lid, which cannot be opened when the machine is moving. The equipment will not start unless the lid is fully closed. Any failure of this safety interlock shall be reported to group technician immediately and the equipment shall not be used until such time as any fault is fixed. • **DO NOT** attempt to bypass the safety interlock on this equipment.
Sample leaks	Person carrying out the operation and other lab users.	• Make sure that the container is closed tightly prior to blending and only open container in a fume cupboard. • Ensure that the container is securely fastened in the blender cage and that the correct rubber straps are used to secure the sample.
Foreign object damage	Person carrying out the operation and other lab users.	• Ensure that no tools, containers or extraneous material is left inside the equipment when the blender is in use.
Sprung tension wrench	Person carrying out the operation	• Only use the supplied tension wrench to tighten and loosen the cage securing collar. • Maintain a tight grip on the wrench when tightening or loosening the securing straps. • **Note:** The wrench can swing round with considerable force if not gripped properly.

SECTION 2: Emergency Procedures

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

If the operator sustains any sort crushing injury release the appendage if possible and hold the affected area under cold running water for 10 minutes then medical attention should be sought. If it is not possible to safely release the appendage, contact emergency services immediately.

If the operator or other laboratory user shows signs of exposure to fumes from a sample, the appropriate MSDS and/or COSHH assessment should be consulted for appropriate emergency action.

In order to shut the equipment down in case of an emergency, switch off at main plug.

Signature of Assessor(s)		**Date:** 15/09/17
Signature of Supervisor		**Date:** 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	15/09/2016	W. Skelton-Hough	Document issued.