SCOPE & PURPOSE:
The purpose of this SOP is to show students, researchers and staff how to operate the hardness tester safely.

TRAINING REQUIREMENTS:
User will have completed Level 1 online and Level 2 materials labs inductions, and need to be trained by technical staff in a level 3 induction. Before using this equipment, required safety documentation must be completed and signed off by the technical staff and the user’s supervisor.

POTENTIAL HAZARDS/HEALTH EFFECTS:
Crushing, stabbing, and puncturing by coming into contact with moving parts.

MANDATORY CONTROLS:
✓ Safety Glasses  ✓ Enclosed Footwear  ✓ Training  ✓ Safety stop button
✓ Project Safety Assessment

Precaution Requirements:
DO NOT USE AFTERHOURS (OUTSIDE OF MON – FRI 8AM – 6PM) WITHOUT TECHNICIAN AUTHORISATION.
• Refrain from testing unknown materials. Refer to available standards and datasheets for choosing the correct hardness method and testing parameters.

INSTRUCTIONS:
Booking Procedure: must have a booking in the Outlook Calendar *G SEBE ENG Lab Eqpmt KE2.101 Rockwell Hardness Tester (even if free and available).

Pre-Start check:
• Check to see which indenter is installed. Seek technician assistance if indenter requires changing.
• Familiarise yourself with the control unit (figure 1).

Figure 1: Controls of the Rockwell/Brinell Depth Hardness Tester.
Standard Operating Procedure
Struers DuraJet Hardness Tester

Operation: For additional information on how to perform these tasks consult the manual.
• Turn power on at the wall and turn instrument power on using the button at the left rear of the instrument.
• Use the controls to move the indenter arm a safe distance to allow mounting of the sample.
• Place sample on the stage underneath the indenter.
• Clear the result history.
• Setup electronic saving of data if required (plug in your USB drive to the control unit).
• Select the specimen method.
• Select the test method.
• Go to the “Test” page and lower the stage until the sample is clamped – the indenter will automatically lower and indent your sample once it’s clamped and produce the result.
• Record the measured hardness value if you are not saving the data electronically via your USB drive.

After Use:
• Raise the indenter arm to the indicator and remove your sample.
• Remove your USB drive.
• Turn off the instrument.

GENERAL CARE & MAINTENANCE:
• Protect from dust and dirt.
• Ensure anvil is lubricated with oil.
• Use only special cleaning products to clean LCD screen.

REPAIRS & CERTIFICATION/VALIDATION SCHEDULE:
Reporting faults/concerns of equipment procedure: Technical Staff.
The instrument is serviced and calibrated by the supplier annually.

SPILLS/ACCIDENT REPORTING PROCEDURE:
Report spills/incidents to: Technical Staff.
In case of Emergency:
• Use safety stop button.
• Contact Technical Staff.
• If a serious injury has occurred call 000.
• Alert others if nearby.
• Evacuate to closest assembly area.