



Standard Operating Procedure

Olympus GX41 Inverted Optical Microscope

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School:	Engineering	Campus:	Waurm Ponds	Location:	KE2.101
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Category Rating:	Specific Training Required				

SCOPE & PURPOSE:

The purpose of this SOP is to show students, researchers and staff how to operate the microscope 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:



Contact with objects at high temperatures – the globe and other elements can become hot if used for prolonged times.
Ergonomic due to other factors – long periods of sitting.

MANDATORY CONTROLS:

✓ **Project Safety Assessment**

✓ **Training provided**

Precaution Requirements:

DO NOT USE AFTERHOURS (OUTSIDE OF MON – FRI 8AM – 6PM) WITHOUT TECHNICIAN AUTHORISATION.

- If you need a specific sample holder, consult with technical staff.

INSTRUCTIONS:

Booking Procedure: must have a booking in the Outlook Calendar *G SEBE ENG Lab Eqmpt KE2.101 Optical Microscope (even if free and available).

Pre-Start check:

- Check that/plug in the microscope computer to the shared monitor.
- Check that/turn the brightness dial to its minimum.
- Choose the correct specimen holder and mount on the stage.

Operation: For additional information on how to perform these tasks consult the appendix and/or manual.

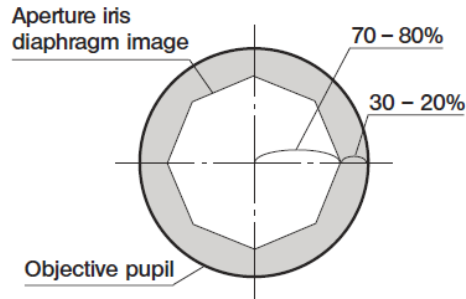
- Turn the microscope power on at front right.
- Place the specimen on the stage plate.
- Engage the lowest magnification objective using the revolving nosepiece.
- Adjust the illumination brightness.
- Focus on the sample by adjusting the coarse and then fine adjustment knobs.
- Adjust the interpupillary distance until the left and right fields of view coincide completely and so that the two index dots • ① are horizontal.
- Focus on the sample looking only through the right eyepiece, and then looking only through the left eyepiece adjust the diopter to focus on the sample.
- Engage the desired magnification objective using the revolving nosepiece.
- Focus on the sample using the coarse and then fine adjustment knobs.



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- Adjust the illumination brightness.
- Adjust the contrast, depth of focus and resolution to your requirements by removing the eyepiece, looking into the eyepiece sleeve and using the aperture iris diaphragm (70-80% of objective pupil) and adjusting the aperture iris diaphragm lever.



After Use:

- Return the magnification objective to the lowest setting.
- Return the brightness dial to its minimum.
- Turn off the microscope.
- Put on the microscope cover.

GENERAL CARE & MAINTENANCE:

- Always ensure the brightness is set to minimum before turning the power on the microscope.
- Do not leave the microscope power on when unattended and at completion of use.
- Check lenses for dust and debris.
- Blow with air and clean lenses with lens wipes. Seek assistance from technical staff if you are unsure how to do so.

REPAIRS & CERTIFICATION/VALIDATION SCHEDULE:

Reporting faults/concerns of equipment procedure: Technical staff.

SPILLS/ ACCIDENT REPORTING PROCEDURE:

Report incidents to: Technical staff.

In case of Emergency:

- Turn power off.
- Contact Technical Staff.
- If a serious injury has occurred call 000.
- Alert others if nearby.
- Evacuate to closest assembly area.