



Standard Operating Procedure

Struers CitoPress-10 Hot Mounter

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School:	Engineering	Campus:	Waurin 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 hot mounter safely to produce high quality mounted materials.

TRAINING REQUIREMENTS:

User will have completed Level 1 online and Level 2 materials labs inductions, and need to be trained in a level 3 induction by technical staff. 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:



Electrical due to water near equipment.
 Contact with objects at high temperatures.
 Slipping, tripping, and falling due to slippery surfaces.
 Injury due to other hazards – chemicals, dust (powder).

MANDATORY CONTROLS:

- | | | | |
|--------------------|-----------------------------|---------------------|----------------------------|
| ✓ Safety Glasses | ✓ Laboratory Coat | ✓ Enclosed Footwear | ✓ Nitrile Gloves |
| ✓ Respiratory mask | ✓ Training provided | ✓ SDS available | ✓ Risk Assessment required |
| ✓ Safety Shower | ✓ Project Safety Assessment | | |

Precaution Requirements:

- The water tap must be on for the cooling system to operate.
- Do not use samples (such as volatile, flammable or low-melting temperature materials) which will become unstable during the pressurising and heating stages of mounting.
- The piston must have anti-stick powder applied to prevent samples from sticking to the lower mounting piston (or ram).
- Do not operate the mounting press with a higher force/pressure than recommended for the actual cylinder diameter and resin in Struers Application Guide for Hot Mounting.
- Following a heating cycle, ensure the mounting cylinder is cooled for a minimum of two minutes before opening.
- During operation, always ensure that the top closure is tightly fastened.
- If the top closure is dropped, seek advice from technical staff.
- Do not touch the keypad with contaminated gloves/hands.
- Avoid inhaling the mounting powders and wearing a face mask, keep as much clear as possible while adding powder.



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INSTRUCTIONS:

Booking Procedure: must have a booking in the Outlook Calendar *G SEBE ENG Lab Eqpmt KE2.101.02 Hot-mounting Press (even if free and available).

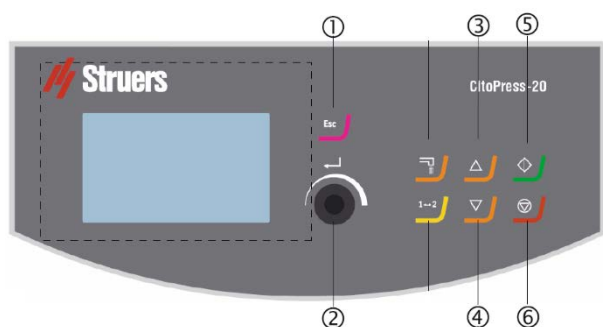
Pre-Start check:

- Check if water tap is 'ON' for water to flow in the cooling system, otherwise turn on.
- Before each mounting:
 - Check that there is no mounting residues are left on the flat surface of the rams from previous operations.
 - Clean the cylindrical surface of the upper ram. Cured resin can easily be removed without any damage to the surface of the rams using the scraper supplied.
- Ensure the top surface of the piston has 'anti-stick' powder, otherwise add adequate amount.
- Understand how to use the instrument controls (figure 1).

Operation:

- Turn instrument power on using the button at the right rear of the instrument.
- Place sample on the piston.
- Press  to lower the piston (it will stop automatically at the bottom).

Once the piston is lowered, add the mounting powder to the cylinder making sure the volume completely covers your sample and the resultant mount will be ~20mm – each full turn adds 5mL.



1. Esc Key;
 - Return to the previous menu.
 - Exit a selected item discarding any changes made.
2. Multi-function Knob;
 - Push to select a function.
 - Turn to adjust settings.
 - Push to store modifications.
3. Ram Up; brings the ram upward which automatically stops at the upper limit.
4. Ram Down; lowers the ram which automatically stops at the lower limit.
5. Start; begins the method cycle.
6. Stop; ceases the method cycle.

GENERAL CARE & MAINTENANCE:

- In the event of a hydraulic leak or any other form of failure, the instrument must be serviced immediately.
- Clean exterior surfaces with a damp cloth of water and household detergent.
- Remove powder/mounting residues from exposed surfaces, including the threads.
- Lubricate the threads if there is friction with a dry lubricant (Molybdenum Sulphite or graphite). Do not use oil or grease.
- Clean the lower ram after every 200 mounting cycles.

REPAIRS & CERTIFICATION/VALIDATION SCHEDULE:

Reporting faults/concerns of equipment procedure: Technical Staff.

Supplier service and maintenance is conducted annually.

SPILLS/ ACCIDENT REPORTING PROCEDURE:

Spills procedure (Chemical):

- Contact technical staff for assistance.
- Avoid discharge into drains.
- Avoid contact with skin and eyes and avoid breathing dust by wearing PPE.
- Collect spillage of powder with shovel, broom or the like and reuse, if possible.
- Dispose of into corrosive waste carboy.

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.