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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine



SAFETY AND LABORATORY COOMMITTEE, C.O.M, K.F.U.

Prepared by

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Document History

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of EM Ultra Microtome UC6 (Leica)		

1. OBJECTIVE

The document describes the operation of EM Ultra Microtome UC6 (Leica)

SCOPE

EM Ultra Microtome UC6 (Leica) :

- ☐ Fully automated software system. This is an ultra- sectioning microtome for TEM specimens embedded in plastic resin blocks ,specimen thickness ranges from 50 to 1000 nanometers , cutting speed 0.05 -100 mm./seconds ,
- ☐ thickness settings with ultrathin sectioning feed from 1nm. to 2.5 μ m. and semithin sectioning from 2.5 μ m. to 15 μ m.
- ☐ The microtome is equipped with an antivibration table system.
- ☐ A stereo microscope with built-in camera with its software (Lecica MZ 6 camera) to show sectioning.
- ☐ A sensitive touch panel to controle the speed of sectioning and the thickness of sections.
- ☐ A stage for mounting diamond Knives.
- ☐ Segmental arc to fix the the plastic embeded specimen blocks.
- ☐ Peristaltic pump.
- ☐ Control unit (electrical connection)

2. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in the lab to train staff and students on this procedure and to ensure adherence to this procedure under supervision.
- ☐ It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.

3. REFERENCES

Leica EM UC6 operating manual.

4. DEFINITIONS

- ☐ mm Diamond knife for cutting 50-100 nm. thin specimen sections.
- ☐ Copper Grids for mounting the ultra-thin sections before staining.



- ☐ Mount the plastic embedded specimen blocks.
- ☐ Mount the diamond knife and start the distilled water peristaltic pump.
- ☐ Adjust the knife- plastic embedded specimen block position.
- ☐ Start the motorized sectioning.

6.4. Turning off the Instrument

- ☐ Xx-Stop the motorised sectioning.
- ☐ -Turn off the software.
- ☐ -Turn off the control panel.
- ☐ -Turn off the computer.
- ☐ -Turn off the electric main power source.

6.5. Warning

Write any the warning in BOLD and RED FONT.

Safety and Laboratory Committee, COM, KFU