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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 atuomated em routine tissue processor (leica- em tp)		

1. OBJECTIVE

The document describes the operation of automated routine tissue processor (Leica- em tp).

2. SCOPE

- ☐ Full automated software processor system with integrated fume extraction.
- ☐ This is a tissue processor for preparing tissues for light microscope and electron microscopy small blocks of 1 mm of GA fixed tissue slices
- ☐ Post fixed with OsO₄, dehydrated by acetone, or ethanol .
- ☐ Embedded in plastic resins (e.g. Epon -Araldide).

3. 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.

4. REFERENCES

- ☐ Leica EM TP operating manual.

5. DEFINITIONS

- ☐ EM TP basic unit programming software
- ☐ Heater and cooler system (H/C unit) for EM OR . Heater and cooler system for LM (Temp must be between +4C and +60 C)
- ☐ Vial sealing system for EM vials.
- ☐ Sealing lid for EM Heater and cooler system (H/C unit)
- ☐ LM Heater and cooler system .
- ☐ Specimen record pad.
- ☐ Basket stem assembly and baskets (100 pcs: large ;3 divisions, small ;4 divisions and another small;8 divisions and basket lid.
- ☐ Loading plate.
- ☐ EM vials (20ml),100 pieces with vial caps 1100 pcs).
- ☐ LM vials (100 ml,50 pcs) ,LM cassettes holder (1pc) and LM cassettes (200 pcs).
- ☐ Steel tray to fit 24 processing vials
- ☐ Polypropylene vials clipped into carousel (24 for EM (volume 20 ml) and 12 for LM volume (100 ml) to hold the reagents

6. SAFETY PRECAUTIONS

- ☐ Use Fume hood for toxic fumes
- ☐ Use plastic Googles
- ☐ Use face Mask
- ☐ Use Gloves
- ☐ Handle reagents carefully under the fume hood (e.g. Osmic acid, buffers which contain Arsenic and Acetone).

6.1. PROCEDURE FOR OPERATING automated routine tissue processor (Leica- em tp).

6.2. Turning on the instrument:

- ☐ Insert plug in electric

6.3. Software Operation.

6.4. Steps of the Procedure

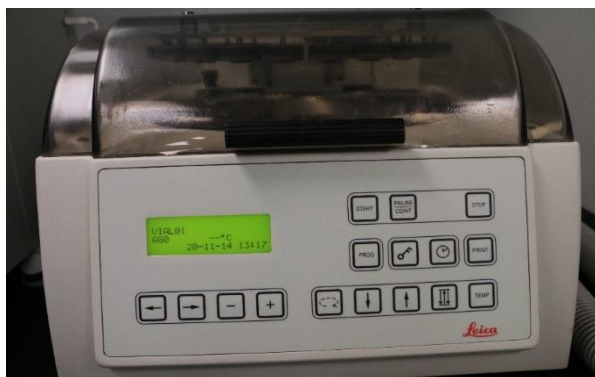
- ☐ Switch on the instrument (mains switch on the rear) .
- ☐ Instrument name and software version are displayed (Leica EM TP Version 2.02.01)
- ☐ Fit the vials to the reagents loaded carouse l (EM/LM)
- ☐ specimen Loading EM basket s / or LM cassette system.
- ☐ Control panel overview (Switch on)
- ☐ Setting the clock
- ☐ Manual operation programming for automated cycle.
- ☐ Choose the programme of choice.(e.g. Programme 1 or 2 etc.)
- ☐ Press start

6.5. Turning off the Instrument

- ☐ Unload the samples
- ☐ Unclip the stack of baskets from the specimen arm. and disassemble in the reverse of the loading procedure described.
- ☐ Embede specimens in the special moulds with liquid plastic resin.(Polymer)
- ☐ Polymerize in oven overnight (at 60C for 24 hours).
- ☐ Polymerised blocks are ready for sectioning.
- ☐ Turn off the software.
- ☐ Turn off the control panel..
- ☐ Turn off the electric main power source.

6.6. Warning

Prepare chemical solution.



Safety and Laboratory Committee, COM,