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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine



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Document History

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of Leica EG1160 Paraffin embedding center	22.11.2020	

1. OBJECTIVE

- ☐ The document describes the operation of Leica EG1160 Paraffin embedding center.
- ☐ The Leica EG1160 Paraffin embedding center is a modern tissue-embedding center for rapid and efficient embedding of tissue specimens with paraffin into molds that allow cutting on the microtome.

2. SCOPE

Leica EG1160 Paraffin embedding center:

- ☐ This embedding center is used to make paraffin tissue blocks for cutting.
- ☐ Embedding molds adjusted according to tissue size to make paraffin blocks
- ☐ Cold plate: can provide space for approximately 60 paraffin blocks

3. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in Research 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 EG1160 Paraffin embedding center operating manual.**

5. DEFINITIONS

-Paraffin reservoir: can hold up to 3 liters of paraffin. Temperature can be adjusted from 45-75°C

-Paraffin dispenser with illumination: dispenser with light provides optimal view of the embedding process

-Cassette bath: can hold 100 cassettes temperature adjusted from 45-75°C

-Mold warmer: to keep embedding molds ready for filling with paraffin

-Cold plate: Temperature -5°C and provides space for approximately 60 paraffin blocks

-Control panel with push buttons and two-line display

-Forceps holder

-Dispenser handle

-Heated area for cassettes

-Refrigeration spot: to cool molds filled with paraffin

-Work area with paraffin collecting tray: temperature adjustable (45-75°C)

6. SAFETY PRECAUTIONS

- Paraffin is flammable and it is heated for the process therefore, must be handled with care.
- Xylene must not be used for cleaning – risk of fire.
- When operating, the paraffin reservoir, mold warmer, cassette bath, work area and forceps holder are all hot. Caution: Risk of burning
- Overheating of the molten wax must be avoided as important components can be damaged resulting in damage to the sample.
- Xylene must not be used for cleaning. Although xylene is an ideal wax solvent, its flash point ranges between 27 and 32°C. Xylene vapours are heavier than air and can catch fire even

7. PROCEDURE FOR OPERATING THE Leica EG1160 Paraffin embedding center:

7.1. Turning on the instrument:

Turn on the main power supply.

- Switch on the instrument.
- SET Mode (Programming)
- Cold plate should be turned on 15 minutes before actual embedding
- Cassette bath can hold up to 100 cassettes

7.2. Software Operation.

7.3. Steps of the Procedure

- Take out 10 cassettes one by one and place on the heated area of cassettes
- Take one of the cassette and place the tissue on work area
- Take appropriate size mold and place under paraffin dispenser handle
- Inspect the tissue for correct embedding orientation
- Fill the mold 60% with molten paraffin
- Place the tissue into the mold
- Pick up mold and place it on refrigeration spot and hold until bottom has solidified.
- Fill the remaining mold and place it on cold plate for total solidification.

7.4. Turning off the Instrument

- Turn off the instrument
- Clear all forceps with paper towel
- Remove basket from cassette bath
- Clean work area and dry the cold plate
- Turn off the electrical main power.



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