

Document N	Number:	SASoM/EQUIP/107.v1
Title:	Leica EG116	60 Paraffin Embedding Centre
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Author:	In Hwa Um	

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SOP History		
Number	Date	Reason for Change

Original

01/11/2021

1.0 Purpose –

v1

The purpose of this SOP is to outline the principles of the routine use of the Leica EG1160 Paraffin Embedding Centre in Laboratory 248 at the St Andrews School of Medicine (SASoM).

2.0 Scope -

This SOP applies to routine use and maintenance of the Leica EG1160 Paraffin Embedding Centre within the SASoM.

3.0 Responsibilities -

It is the responsibility of all users of the Leica EG1160 Paraffin Embedding Centre within the SASoM to comply with this SOP.



4.0 Procedure –

The Leica EG 1160 is a compact bench-top unit used when embedding formalin fixed and processed tissue samples.

4.1 Temperature control

The paraffin reservoir, mould warmer, cassette bath, work area, forceps holder, and the paraffin dispenser pump (Figure 1) should remain **ALWAYS ON** position and be kept between 45-70°C. The cold plate is the only one kept at -5°C, which can be switched off on the completion of embedding tissue samples.



Figure 1 Overview of paraffin embedding centre





4.2 ACT Mode (Operation)

Normal operation of the Leica EG 1160 takes place in the ACT mode. In this mode, all display readings are actual values.

Starting from the default reading (PAR TANK +XX°C), each step of the 5- step menu of the temperature controllable functional units can be displayed to review the actual temperature by scrolling the menu with the MENU button: The status line always is the same (Figure 2). All display readings both in the ACT and SET (programming) mode automatically return to the ACT default reading after approximately 10 seconds:



Figure 2 Control panel default reading under ACT mode

4.2.1 The ILLUMINATION of the work area is switched ON/OFF with the LAMP button.

4.2.2 The PARAFFIN FLOW RATE is individually adjustable and can be preselected in the ACT mode with the ARROW buttons in 10% increments.

4.2.3 Adjustment of the FLOW QUANTITY The flow quantity for the lowest flow rate (10%) can be adjusted as required. All other flow rate increments will then be recalculated on this basic adjustment and stored automatically.

4.2.4 The paraffin flow rate is selectable in 10% increments: 10% to 100%.



4.2.5 Switching on or off cold plate: Press 'SET' and navigate to cold plate using

'Menu' 💭 button. When it's selected 'SET TEMPERATURE, COLD PLATE---' Then press ON/OFF button.

4.3 SET Mode (Programming)

The SET mode is activated by pushing the SET/ACT button. The SET mode is used for programming only. The programmable parameters are as follows:

- Paraffin reservoir temperature Cold plate temperature
- Cassette bath temperature
- Mould warmer temperature
- Work area temperature
- Actual day
- Actual time
- Planned start time
- Planned finishing time
- Workdays

The instrument is programmed to have all functional units ready to operate at the preselected time on the preselected workdays, i.e. all heated and refrigerated components are turned on automatically so that they will have reached the preselected temperatures when the operator starts working.

4.4 Cleaning, maintenance, service

Regular cleaning and maintenance will keep your Leica EG 1160 in good operating condition for many years.

<u>4.4.1. General instructions</u>: Paraffin - Paraffin is flammable and therefore must be handled with care. Avoid spillage of liquid paraffin.

- All Leica EG 1160 components that come into contact with paraffin and the interior of the instrument are carefully sealed to prevent wax from entering. Nevertheless, if paraffin is spilled, it should always be removed carefully.

- The paraffin reservoir and cassette bath, if required, should be filled with care. Avoid overfilling!

- The wax in the cassette bath and heated recessed area must be exchanged every day to avoid contamination.

Solid wax particles on the surface of the work area must not be removed with sharp tools, as this could damage the finish. A soft plastic spatula is ideal for wax removal. Alternatively, solid paraffin can be lifted off easily by lightly warming it.
The surfaces of the work area of the Leica EG 1160 are made of aluminium with polyester epoxy finish. The control board is covered with a PE film. The base of the housing is a polyester epoxy coated steel plate. All seams are sealed with a specific fungicidal silicone. All materials are easy to clean with common laboratory detergents, which are appropriate for paraffin removal. Do not allow organic solvents to react for a longer period. Apply varnish protection occasionally.

- XYLENE MUST NOT BE USED FOR CLEANING! RISK OF FIRE!



4.4.2. Cleaning of paraffin reservoir, filter and dispenser outlet

The grid separating solid from liquid wax and the filter can be removed from the paraffin reservoir for cleaning. The reservoir is cleaned inside with a paper tissue. Care should be taken that the reservoir is contaminated. Any dirt inside should be removed prior to removing the grid and the filter.

4.4.3. Cleaning the forceps holder

The forceps holder, in particular, is frequently a source of contamination and is susceptible to dirt. Therefore, it should be cleaned thoroughly. *Caution: The forceps holder is heated separately and thus very hot (approx. 70°C or 80°C) during operation*.

<u>4.4.4. The paraffin drained to the paraffin collection tray</u> should be emptied regularly to ensure that excess paraffin can drain to the tray and prevent the removable tray from sticking to guide.

4.4.5. Illumination of the dispenser outlet

Prior to exchanging the light bulb, the Leica EG 1160 must be turned off with the green main switch on the back. Remove the cap at the front end of the dispenser. The light bulb can be removed pulling it toward the user. The replacement bulb is inserted by lightly pushing it between the contacts.

4.4.6. Fuses

See "Technical data". Replacement fuses must meet the specifications of the manufacturer. Otherwise, this could invalidate the warranty!

4.5 Troubleshooting

Whenever a malfunction occurs, please ensure that it is not the result of an operating mistake. Most frequent error and action can be seen below linked manual of EG1160.

https://drp8p5tqcb2p5.cloudfront.net/fileadmin/downloads_lbs/Leica%20EG1160/Us er%20Manuals/Leica_EG1160_Manual_EN.pdf

5.0 Personal protection -

Howie coat must be worn at all times.

6.0 Training –

All users have to be trained by a designated person before using the Instrument.

7.0 Related documents -

- 7.1 CHARM_RA24744_ Use of the Leica EG1160 Paraffin Embedding Centre.
- 7.2 Instrument Manual online (see link above).



8.0 Approval and sign off -

Author:						
Name: In Hwa Um						
Position: Post Doc						
Signature:	THE	Date: 03/11/21				
Management Appr	oval:					
Name:	Peter Mullen					
Position:	SOP Administrator					
Signature:	Peter Muller	Date: 03/11/2021				
QA release by:						
Name:	Claire Sneddon					
Position:	QA Manager					
Signature:	Graddon	Date:03/11/2021				



STANDARD OPERATING PROCEDURE

Please sign below to indicate you have read this S.O.P and understand the procedures involved.

NAME	POSITION HELD	SIGNATURE	DATE
	X		