



Wolflabs

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Leica CM1850 UV Configuration Europe:

Leica CM1850 UV Configuration 230V/50 Hz
with Peltier cooling and specimen retraction
with AgProtect™ silver surface coating
with UVC disinfection system
with knife holder CE for low profile disposable blades
with pressure plate for high profile disposable blades



Instrument features:

AgProtect™ patented antibacterial silver coating of critical areas on outside surface of instrument. Silver coating provides extra level of security for operators and reduces the propagation of infectious agents without operator interaction. Freestanding cryostat on rollers with front-encapsulated microtome. Heated, removable sliding window. Spacious cryochamber with illumination. Removable storage shelves. Ozone free automatic UVC disinfection system. Corrosion-proof cryochamber for easy decontamination. Handwheel lock. Control panel with foil-protected buttons and locking function. Self-explanatory symbols for all essential functions and displays.

Microtome:

Low-maintenance microtome with cross roller guides. Single-screw locking system for direct fitting of specimen discs. Precision X/Y/Z 8° specimen orientation. Section thickness continuously adjustable from 1 to 60 μm. Specimen retraction: approx. 180 μm Total vertical stroke: approx. 60 mm Total horizontal specimen feed: approx. 25 mm Motorized coarse feed at two speed settings (0.2 mm/s/0.7 mm/s) Visual indication of specimen stop positions (front/home).

Cryochamber:

Cryochamber temperature setting between 0 and 35°C. Power saving insulating system. LED display indicates cryochamber temperature, real time, defrost time and activation of Peltier cooling being activated. Choice of two automatic disinfection cycles: 30 or 180 minutes. Indication of successfully completed disinfection cycle. Safety cutout when opening the sliding window. Manual defrosting function for chamber and freezing shelf with sound signal to avoid unintentional defrosting. Defrost cycle duration of 9 minutes. Overheating protection system. Automatic hotgas defrosting, programmable in 15minute increments (cryochamber only). Duration of defrost cycle regulated by actual cryochamber temperature. Actively cooled freezing shelf (-40°C) for 10 specimen discs. Manual hotgas defrosting of freezing shelf, time controlled. Peltier cooling system for fast specimen freezing maximum Peltier



cooling temperature of 55°C. Peltier system automatically switches off after 10 minutes. Collecting tank for condensation water.

Technical Data:

- Mains power supply: 230 V/50 Hz
- Admissions: CE, CCSAUS label
- Dimensions and weight:
- Dimensions (W x D x H): 730 x 730 x 1140 mm
- Dimensions (W x D x H): 28.74 x 28.74 x 44.88 inches
- Weight: 135 kg 297.36 lbs

All specifications related to temperature are valid for a room temperature of up to 22 °C and a relative air humidity of 60 %.

Note:

This configuration comes with knife holder CE for low profile disposable blades.

Standard delivery with Peltier cooling system and CEHolder:

- 1 Basic instrument, 230V/50Hz, with Peltier (14 0471 40228)
- 1 Handwheel with marking, antibacterial (14 0471 42558)
- 1 Heat extractor, stationary, (14 0471 30792)
- 1 Low temperature stabilizer for heat extractor, ("Parking station") (14 0471 30793)
- 1 Fixture for specimen clamp, orienting (14 0471 30936) (mounted to the instrument)
- 1 Knurled nut (14 0471 38471) (included in fixture for specimen clamp, orienting)
- 1 Set of specimen discs (14 0470 43550):
 - 4 Specimen discs, 25 mm (14 0416 19275)
 - 4 Specimen discs, 30 mm (14 0370 08587)
 - 1 Section waste tray (14 0471 30787)
 - 1 Storage shelf, right (14 0471 30789)
 - 1 Storage shelf, left (14 0471 42846)
 - 1 Brush shelf (14 0398 13088)
 - 1 Tool set (14 0436 43463):
 - 1 Brush, fine (14 0183 28642)
 - 1 Leicabrush with magnet (14 0183 40426)
 - 1 Allen key, size 1.5 (14 0222 10050)
 - 1 Allen key, size 2.5 (14 0222 04137)
 - 1 Allen key, size 3.0 (14 0222 04138)
 - 1 Allen key, size 4.0 (14 0222 04139)
 - 1 Allen key with spherical head, size 4.0 (14 0222 32131)
 - 1 Allen key, size 5.0 (14 0222 04140)
 - 1 Allen key with handle, size 5.0 (14 0194 04760)
 - 1 Allen key, size 6.0 (14 0222 04141)
 - 1 Single-head wrench, size 13 (14 0330 33149)
 - 1 Single-head wrench, size 16 (14 0330 18595)
 - 1 Bottle of cryostat oil, type 407, 50 ml (14 0336 06098)
 - 1 Tissue freezing medium for



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cryosectioning, 125 ml (14 0201 08926) 1 Knife holder base (14 0419 26140) 1 Knife holder CE for low profile disposable blades (14 0419 33990) 1 Antiroll plate 70 mm, 50 m spacer (14 0419 37258) 1 EC Declaration of Conformity (14 0471 80012) 1 Instructions for use Leica CM1850 UV (14 0471 80002)

No : 1491850UVEL



Precision Cryoembedding System

Frozen Sections Become a Work of Art!

Leica
MICROSYSTEMS

Precision Cryoembedding System

Easily achieve proper specimen orientation and perfect embedding with the unique Precision Cryoembedding System. The Precision System was developed by American pathologist, Dr. Stephen Peters, to expedite and improve frozen sections and shorten the learning process for pathology residents. The system's individual components can be used in a variety of embedding procedures to perfectly embed and properly orient almost any type of specimen. The process is comfortably performed inside the cryostat using stainless steel well bars, chucks, and freezing blocks. Since the Precision Cryoembedding System's components are stored at cold temperatures, most specimens freeze in 20 to 60 seconds, depending upon their size and the selected freezing technique. This significantly reduces turn-around time. And, your well-oriented, flat specimens will be conserved during the trimming process! What else could you ask for?

The Precision Cryoembedding System consists of:

- 3 well bars in 3 sizes (18, 24 and 30 mm)
- 6 small stages (chucks)
- 4 large stages (chucks)
- 4 over-stage heat extractors
- 1 storage bin for stages
- 16 dispensing slides
- 1 cutting board/freezing griddle
- 1 elevated heat extractor
- 1 pair of angled embedding forceps and accessories



Cryoembedding components in the Leica CM1850 cryochamber



Precision cryoembedding accessories



Face Down Cryoembedding

Perfect, Flat Orientation

Any specimen, whether it is single or multiple pieces; large or minute; solid or liquid, can be embedded flat and in a single plane.

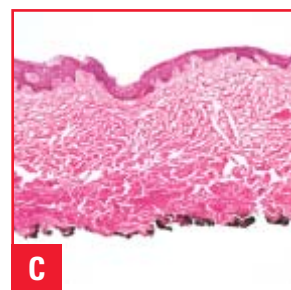
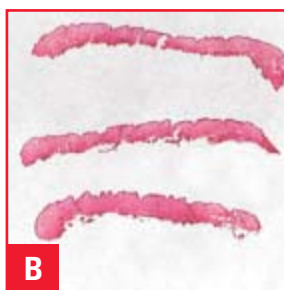
Technique

1. Precisely orient the specimen(s), face down, on a thin plastic dispensing slide.
2. Touch the edge of a specimen to the cold base of the embedding well and gently withdraw the dispensing slide while positioning the specimen. Repeat as necessary.
3. Slightly overfill the well with embedding medium.
4. Place a chuck over the well.
5. Place an over-chuck freezing block over the stem of the chuck.
6. Remove freezing block and tap the chuck stem when freezing is complete (usually 20 to 60 seconds) to remove the embedded block from the embedding well.



The Results

- A:** Trimmed block
B: Stained section on slide
C: Photomicrograph



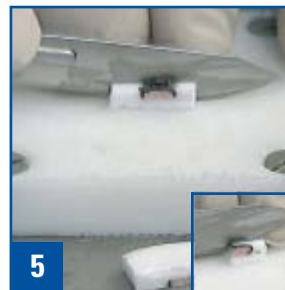
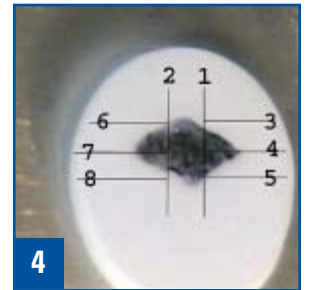
Frozen Block Cryoembedding

Precise, On-edge Orientation

Specimens are embedded and frozen in their entirety, then mapped and cut into firm, flat pieces. The still frozen, flat pieces are then embedded on edge. This technique is perfect for flimsy, tubular, curled, or angular specimens and it is particularly useful for margin resections.

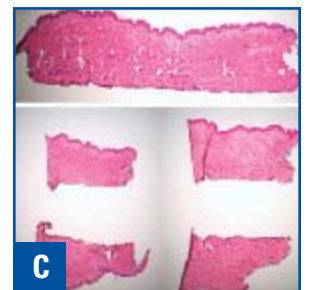
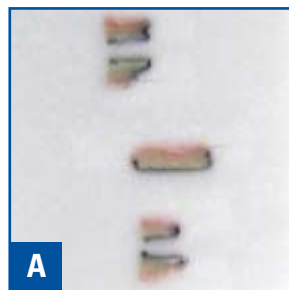
Technique

1. Place the specimen face down on the freezing griddle.
2. Cover the specimen with a layer of embedding medium.
3. Cover the specimen with the appropriate elevated freezing block.
4. When completely frozen, map the specimen.
5. Cut the embedded block into pieces on the cold cutting board, keeping pieces cold on the adjacent metal surface. (The main photo, #5 to the left, shows the central section while the inset shows a longitudinal margin.)
6. Place the cut pieces face down (pieces are face up in the inset photo #6) in the embedding well and freeze using the procedure described under Face Down Cryoembedding.



The Results

- A:** Trimmed block
B: Stained section on slide
C: Photomicrograph
(sections repositioned in photograph)



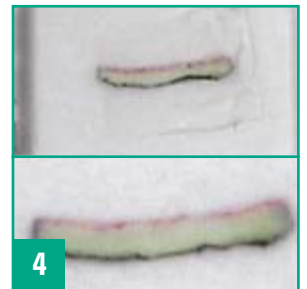
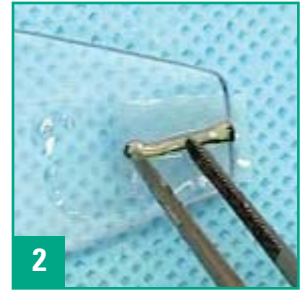
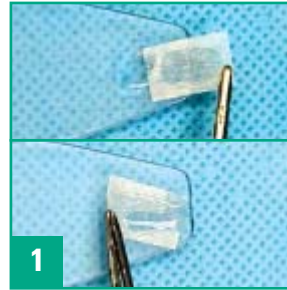
Paper Cryoembedding

Proper Positioning of Difficult Specimens

This technique is used to maintain the orientation of delicate or flimsy specimens or to arrange multiple specimens so they will remain in the same plane for sectioning.

Technique

1. Soak a small piece of lens paper in embedding medium and flatten it to the dispensing slide.
2. Place the specimen(s) on the lens paper and orient appropriately. Allow an end of the paper to overhang the edge of the dispensing slide.
3. Touch the lens paper to the cold floor of the embedding well and gently pull the dispensing slide away. The specimen will remain correctly positioned on the lens paper.
4. Trim through the paper on the trimming portion of the blade and then move to a clean, sharp portion to section the specimen. (Untrimmed block in upper portion of photo #4, trimmed block in lower portion.)



The Results

- A: Large undissected specimen, dispensing slide and lens paper
- B: Specimen dissected with inked border
- C: Embedded block
- D: Stained sections on slide

