



**Wolflabs**

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## Leica CM1510 S Configuration 1

Leica CM1510 S Configuration 230V/50 Hz with knife holder base, Knife holder CE for low profile disposable blades and antiroll plate, 70 mm.



### Instrument features:

Opentop cryostat, space-saving design, with heated removable sliding window and cryochamber illumination. Counterbalanced handwheel, lockable in the top position. Cryochamber temperature selectable between 0°C and -30°C. Actively cooled freezing shelf for up to 10 specimen discs. Maximum freezing shelf temperature -45°C, depending on the selected cryochamber temperature (-20°C to -30°C). 8minute evaporator defrost cycle can be activated manually at any time and/or programmed to be carried out once per day.

Low maintenance microtome with cross roller guides. Slot cover. Single screw locking system for direct fitting of specimen discs. Precision X/Y/Z 8° specimen orientation. Microtome can be removed from the cryochamber.

Section thickness selectable from 1 to 60  $\mu$ m

adjustable in:

1  $\mu$ m increments from 1 to 10  $\mu$ m,

2  $\mu$ m increments from 10 to 20  $\mu$ m,

5  $\mu$ m increments from 20 to 60  $\mu$ m.

Total horizontal specimen feed: approx. 25 mm

Total vertical stroke: approx. 60 mm

2 Motorized coarse feed speeds: 0.3 mm/s and 0.65 mm/s



**Technical Data:**

- Mains power supply: 230 V/50 Hz
- Admissions: CE, UL, cUL, VDE
- Dimensions (W x H x D): 680 x 1180 x 680 mm
- Dimensions (W x H x D): 26.77 x 46.46 x 26.77 inches
- Weight: 135 kg 297.36 lbs, including microtome

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

**Standard delivery includes:**

- 1 Basic instrument (14 0436 38459)
- 1 Stationary heat extractor (14 0369 11197)
- 1 Handwheel with marking, antibacterial (14 0471 42558)
- 1 Fixture for specimen clamp, orienting (14 0471 30936)  
(mounted to the instrument)
- 1 Knurled nut (140471 38471)(included in fixture for specimen clamp, orienti 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 Adapter for Miles Tissue Tek specimen discs (14 0436 26747) 1 Section waste tray (14 0471 30787) 1 Storage shelf, right (14 047130789) 1 Storage shelf, left (14 0436 38503) 1 Brush shelf (140398 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 (140336 06098) 1 Tissue freezing medium for cryosectioning, 125 ml (14 0201 08926) 1 Knife holder base (14 0419 26140) 1 Knife holder CE for low profile disp. blades (14 0419 33990) 1 Antirroll plate 70 mm (14 0419 37258) 1 EC Declaration of Conformity (14 0436 80011) 1 Instructions for use Leica CM1510 S (14 0436 80001)

**No : 1491510C001**



# 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.

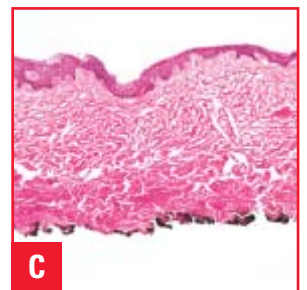
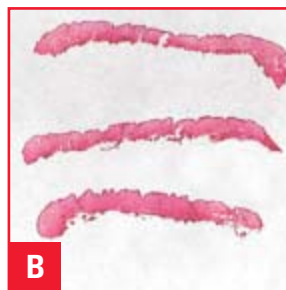
## Technique

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



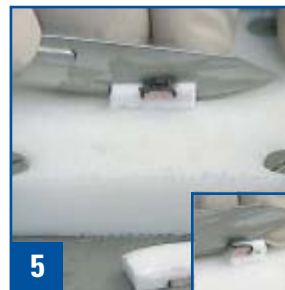
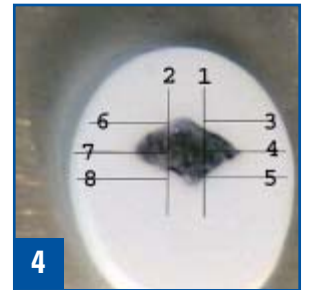
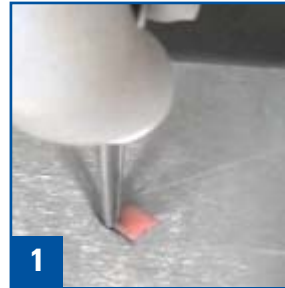
# Frozen Block Cryoembedding

## 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.

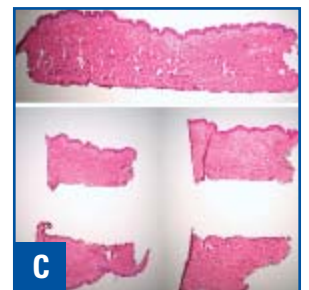
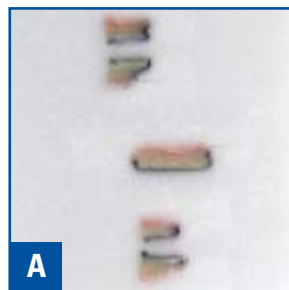
## Technique

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)



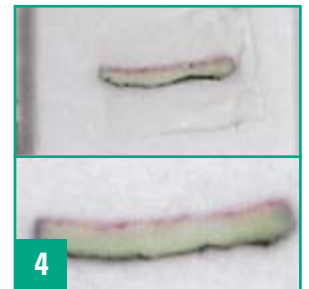
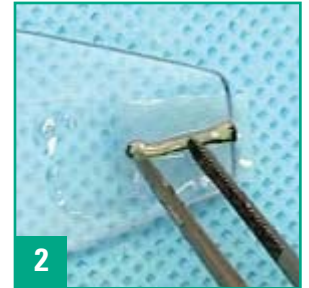
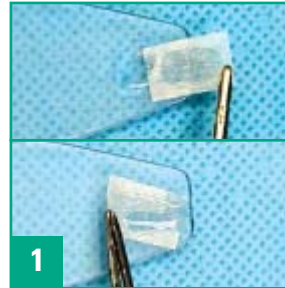
# Paper Cryoembedding

## 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

