

Ladd Research
3 Ewing Place
Essex Junction, VT 05452
Tel: (802) 658-4961
Email: sales@laddresearch.com
Web: www.laddresearch.com



LX-112 / DER 736 Embedding Kit

Catalog Number: 21211

This embedding kit is based on the work of H. Kushida. Because DER 736 has a lower viscosity (30-60cP at 25°C) than DDSA (290cP at 25°C), the mixture is less viscous and penetrates tissue more rapidly.

Fixation

Use one of the wide range of fixatives, typically glutaraldehyde followed by osmium tetroxide.

Dehydration

There is a multitude of dehydration schedules available. A typical one follows.

1. 70% ethanol for 10 minutes
2. 100% ethanol for 10 minutes
3. 100% ethanol for 15 minutes
4. 100% propylene oxide for 15 minutes
5. 100% propylene oxide for 15 minutes

NOTE: You may need to adjust dehydration times depending on the size of your sample.

Mixing Instructions

LX 112	2ml
DER 736	8ml
NMA	8.9ml
DMP-30	0.28ml

(For larger batches, increase each component proportionally.)

Notes

- Slight variations of the accelerator will drastically affect the color and brittleness of the block.
- Prior to measuring and mixing, the resins and anhydride may be warmed to no higher than 60°C to reduce the viscosity. Thorough mixing is imperative to be able to achieve uniform blocks.
- Although the mixture (without accelerator) can be stored for up to 6 months at 4 to 8°C in a tightly closed container, we highly recommend that freshly prepared embedding

medium is used. If you choose to store the mixture, you should warm it thoroughly prior to adding the accelerator.

Infiltration:

It is recommended that for all infiltration steps, a specimen rotator should be used.

1. Drain the tissue of most of the propylene oxide, leaving a small amount so the tissue does not dry out.
2. Replace the solvent with a 1:1 solution of propylene oxide/embedding medium and allow it to rotate slowly for at least one hour at room temperature.
3. Remove the mixture and replace it with 100% embedding medium. Rotate slowly for 6-12 hours at room temperature.
4. Replace the old mixture with fresh embedding medium and allow it to rotate slowly for at least 2 hours at room temperature.

Embedding:

1. Transfer each sample into either dry Beem capsules (Catalog Number 21602) or dry flat embedding molds (Catalog Number 21775).
2. Fill the mold with embedding medium.
3. Cure the medium in an oven at 60°C for 12 hours or until it is completely hardened. Better sectioning properties of certain samples may be obtained if a time of 24 hours in the oven is used.

Blocks can be trimmed and sectioned after the blocks return to room temperature.

Reference

Kushida, H. (1967), *J. Electron Microscopy*, **16**:278.