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## **Araldite 502 Embedding Kit Instructions**

Catalog Number: 21200

### **Introduction**

The weight per epoxide equivalent (WPE) of epoxy resins can vary from batch to batch. This variation is a possible cause of poor sectioning characteristics of a block and of non-reproducible embedments. To obtain reproducible blocks for sectioning, we recommend that formulations be made on a weight basis using epoxy resins analyzed for WPE and anhydrides analyzed for purity. When an anhydride contains as little as 5% free acid and/or water, resultant embedding blocks will be soft, have holes and exhibit generally poor cutting characteristics. For the best results we recommend using an anhydride equivalent to epoxy resin equivalent of 0.7.

### **Preparation of Resin Mixture**

The following table should be followed to obtain the proper amount of epoxy and anhydride to mix to achieve a ratio of 0.7.

<b>Araldite 502 WPE</b>	<b>Wt (g) of Araldite</b>	<b>Wt (g) of DDSA</b>	<b>Total weight</b>
232-234	100	80	180
235-237	100	79	179
238-240	100	78	178
241-243	100	77	177
244-246	100	76	176
247-249	100	75	175
250	100	74	174

To prepare complete resin add 0.14ml of DMP-30 to each 10g of resin mixture. Thorough mixing is imperative to prevent production of defective blocks.

### **Storage**

It is possible to store the resin/anhydride mixture for up to 6 months under a head of inert gas (argon) or nitrogen in the refrigerator. However, we highly recommend preparing fresh embedding media. If you must store the mixture in the refrigerator, you should thoroughly warm it at least to room temperature before adding the catalyst.

**Fixation:**

A wide range of fixatives can be used, however, the most commonly used is glutaraldehyde followed by osmium tetroxide.

**Dehydration**

Many dehydration schedules can be used according to the tissue size and type being embedded. A typical dehydration schedule is as follows:

- 70% ethanol for 10 minutes
- 100% ethanol for 10 minutes
- 100% ethanol for 15 minutes
- 100% propylene oxide for 15 minutes
- 100% propylene oxide for 15 minutes
- \*Adjust time as appropriate for your sample

**Infiltration**

- Replace last volume of propylene with a mixture of 1:1 propylene oxide: complete medium and allow to stand at least 1 hour at room temperature.
- Remove the mixture and replace it with 100% embedding medium and allow to stand for 6 to 12 hours at room temperature.

**Embedding**

This may be accomplished in BEEM capsules (Ladd Catalog Number 21602) or in Ladd Flat Embedding Molds (Ladd Catalog Number 21775). Transfer each sample to a dry capsule or mold and fill the mold with embedding medium. Cure the medium overnight in an oven at 60°C. Better sectioning properties of certain samples may be achieved if a time of 24-48 hours in the oven is used.

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