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Araldite 6005 Embedding Kit Instructions

Catalog Number: 21205

Introduction

Araldite 6005 resin is very viscous, therefore heating it gently will help reduce its viscosity. Tissues embedded in Araldite 6005 can be dehydrated with most commonly used organic solvents. However, the application of a transitional solvent, such as propylene oxide, is advisable because epoxy resins are more soluble in propylene oxide.

Due to its slow penetration, Araldite 6005 should only be used when the samples being embedded are very hard and penetration into the specimen is not needed.

Recommended Procedure

Fixation: Tissues can be fixed in a wide range of fixatives. The most commonly used fixative is glutaraldehyde (Catalog Numbers 20100-20150) followed by osmium tetroxide (Catalog Numbers: 20275, 20280, 55090-55092).

Dehydration: There are many different dehydration schedules that can be followed. A typical schedule follows:

70% ethanol	10 minutes
100% ethanol	10 minutes
100% ethanol	15 minutes
100% propylene oxide	15 minutes
100% propylene oxide	15 minutes

Mixing Instructions: A recipe for the complete resin mixture follows:

Araldite 6005	10g
DDSA	10g
BDMA	0.5g
Dibutyl phthalate	0-3ml

For larger batches increase each component proportionally

Prior to measuring and mixing, the resin and the anhydride should each be warmed to about 60°C to reduce their viscosities. 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°C it is highly recommended that freshly prepared embedding medium be used. If you choose to store the mixture, you should warm it thoroughly prior to adding the accelerator.

Embedding: It is recommended that a rotator be used for all the infiltration steps. Drain the tissue of most of the propylene oxide, leaving a little so the tissue does not dry out. Replace the solvent with a 1:1 solution of propylene oxide:embedding medium and allow it to stand for at least 1 hour at room temperature. Remove the mixture and replace it with 100% embedding medium and leave for 6-12 hours at room temperature.

Remove the sample and place into either embedding capsules (Catalog Number 21602) or flat embedding molds (Catalog Number: 21775) and fill the mold with embedding medium. Cure the medium in an oven at 60°C for at least 16 hours. 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.