

## Hard Plus Resin 812 Kit

#E14115

Once you have selected the hardness of your Premix Kit then it can be adapted to fit almost any existing protocol. The following is only a guide and will be dependent on the density and hardness of the tissue to be embedded. For example Hard Plus which has been formulated for tissues of extreme hardness such as cartilage and bone will require longer dehydration and infiltration times than most soft tissues.

### Fixation

Tissues can be fixed in a wide range of fixatives including the commonly used process of glutaraldehyde followed by osmium tetroxide.

### Dehydration

Dehydration schedules will depend largely on the type and size of specimen that is being processed but a typical one is as follows:

- 70% Ethanol for 10 minutes
- 100% Ethanol for 10 minutes
- 100% Ethanol for 15 minutes
- 100% Propylene Oxide (or acetone) for 15 minutes
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For many specimens, the propylene oxide stage may be omitted although infiltration using ethanol/resin mixtures instead of propylene oxide/resin mixtures takes longer. Traces of propylene oxide are able to cross-link into the final resin block (at least in moderation) giving greater tolerance of traces of solvent left in the block. Traces of ethanol can more readily affect the consistency of the final block.

It is recommended that freshly prepared embedding medium is always used but pre-mixed embedding resin can be stored at -20°C for many months although it will thicken slowly even at this low temperature. If you choose to store the mixture at low temperature, you should warm it thoroughly before use to avoid water vapour condensing into the resin. This could affect the final hardness of the block.

## **Infiltration**

It is recommended that for all of the infiltration steps an EMS specimen rotator be used.

- 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: EMS Premix and allow it to stand for at least 1 hour at room temperature.

A second change of 2:1 EMS Premix to propylene oxide at room temperature overnight is recommended.