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Product Information

Osteo-Bed Bone Embedding Kit & Osteo-Bed Plus Embedding Kit

Catalog Number	Product Name
17734	Osteo-Bed Bone Embedding Kit
24889	Osteo-Bed Plus Embedding Kit

Product Description

The Osteo-Bed Bone Embedding Kit & Osteo-Bed Plus Embedding Kit are methyl methacrylate (MMA) resin formulations for embedding undecalcified bone. Undecalcified bone sections provide material for investigation of metabolic bone diseases, particularly osteomelacias. Osteo-Bed Embedding Kits can also be used for trephines and other undecalcified bone tissues.

The Osteo-Bed Plus Embedding Kit produces blocks with greater hardness than the original Osteo-Bed Embedding Kit.

Components & Storage

Original #	Osteo-Bed Plus #	Component	Quantity	Storage Temperature
17734A	24889A	Osteo-Bed Resin Solution	900mL	2 - 30°C
17734C	24232	Osteo-Bed Bone Embedding Catalyst	2 x 12g	2 - 8°C

Precautions and Disclaimer

This product is for R&D use only. Consult the Safety Data Sheet (SDS) for information regarding hazards and safe handling practices.

Procedure

Preparation

1. **Tissue Preparation** – Bone samples should be fixed and dehydrated according to appropriate processing schedules for the specimen size and type. Xylene may be used to defat sample. 100% ethanol should be used to remove xylene.

2. **Infiltration Solution** – In plastic container with tight-fitting lid, dissolve 1.4g Catalyst per 100mL Resin Solution and stir for 4 hours with magnetic stir bar. Solution will become cloudy. Promptly store solution at 2-8°C. Solution can be stored for 4 weeks.
3. **Embedding Solution** – In plastic container with tight-fitting lid, dissolve 3.5g Catalyst per 100mL Resin Solution and stir for 4 hours with magnetic stir bar. Solution will become cloudy. Promptly store solution at 2-8°C. Solution can be stored for 4 weeks.

Infiltration

All infiltration liquids should be 10 equivalent volumes of the specimen. Infiltration steps should be completed under a fume hood with limited exposure to direct light.

1. Infiltrate small specimens with at least 2 charges of **Resin Solution** (not **Infiltration Solution**) over 12 hours and large specimens with at least 2 charges over 36 hours. Exact timings should be optimized for specimen size.
2. Infiltrate specimen for at least 6 hours using **Infiltration Solution**.

Embedding

1. If desired, a pre-polymerized resin layer can be created in embedding container by adding layer of **Embedding Solution** and heating in water bath at 50°C for up to two hours to create a viscous solution capable of supporting specimen.
2. Place infiltrated specimen in container with or without a pre-polymerized resin layer.
3. Add **Embedding Solution** to container until specimen is fully submerged.
4. Let container sit overnight at room temperature in fume hood to further infiltrate specimen.
5. Place container in water bath at 55.0 ± 5.0°C for at least 24 hours. Larger volumes may require longer polymerization times. Do not disturb container.

   > It may be necessary to degas the embedding solution or use a lower polymerization temperature for longer periods of time to prevent bubble formation. For best results, these parameters will have to be optimized for each procedure depending on the nature of the specimen.

6. Unpolymerized resin at top of block can be removed by scraping.

Deplasticizing

Osteo-Bed **Solvent Solution** (#17734B) may be used to remove polymerized resin.

1. Preheat water bath to 32°C ± 5.0°C.
2. Soak section in three changes of **Solvent Solution** with 15 minutes between changes. Larger specimens may require additional changes for longer periods.
3. Soak section in a final change of acetone before hydration.