

FREEZE SUBSTITUTION UNIT (AFS)

This device is used to freeze substitute vitrified biological samples. Freeze substitution is a process in which the water molecules within the samples are exchanged with a solvent (usually acetone or methanol), and then replaced with a resin (Epoxy, LR White or Lowicryl). Polymerization of the resin is performed outside when using Epoxy resin or inside the machine when using Lowicryl. This latter resin is polymerized under a UV lamp, starting at -45°C , then gradually moving up to room temperature (case with Lowicryl HM20). At the end of the process hard plastic blocks are generated ready to be cut by an ultramicrotome.

Modell/type: Leica EM AFS

Acquired in 2004 (1 unit)

Embedding system: Capsules and flat block.
Equipped with LED UV lamp unit for polymerization.
With a temperature range from $+70^{\circ}\text{C}$ to -140°C .

