

Technical Tip

Cryo-Protectants

Studies have shown that Glycerol and Dimethyl Sulfoxide give good structural preservation for cryo-protectants, but they also cause gross physical damage to cells, and they should not be used in microanalytical studies. For better results, high-molecular-weight nonpenetrating cryoprotectants such as polyvinylpyrrolidone (PVP) and hydroxyethyl starch (HES) can give good morphological preservation, and only cause minimal perturbation to the functional physiology of the tissue.

References:

Sauberman, A.J., Riley, W., and Echlin, p. 1977a SEM/1977/I,II T Research Institute, Chicago, Illinois, p.347