

SNAP FREEZER

STAND-ALONE GENTLE JANE SNAP FREEZER

The Stand-Alone Gentle Jane Snap Freezer is portable and enables the user to snap-freeze tissue in 8-10 seconds.



- The best freezing occurs at low temperatures with good thermal exchange. The Gentle Jane system is designed to optimize rapid freezing and minimize ice crystal artifact.
- The Gentle Jane method utilizes a heat extractor chilled to -196°C .
- Gentle Jane snap-freezing minimizes ice crystal artifact while preserving morphology.
- Frozen blocks can be stored inside the SAGJ chamber for up to 2 hours.

Stand-Alone Gentle Jane Snap Freezer Catalogue number: SAGJ

In the conventional freezing method the tissue is typically frozen at about -30°C on the cryostat freeze-bar. During this relatively slow freezing process the ice crystals that form are usually large compared to cellular dimensions. These crystals can cause considerable displacement and structural damage to the tissue. The extent of such displacement and damage is largely masked when the sections are melted to mount them on glass slides, and is therefore not generally appreciated.

Snap-Freezing tissue is the best way to insure the smallest ice crystal size and will result in minimal damage to the tissue. Liquid nitrogen, with a freezing temperature of -196°C , is highly recommended for use with the Gentle Jane method. It is safe, non-flammable, non-explosive and non-ozone depleting. Other low temperature refrigerants can also be employed.

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SNAP-FREEZING: STEP-BY-STEP

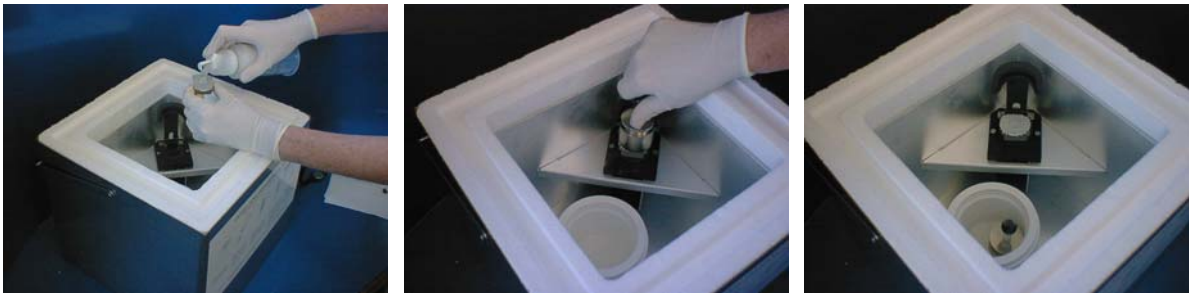
Step 1: COOL THE HEAT EXTRACTOR

A Heat Extractor is chilled to -196°C in a plastic thermos containing Liquid Nitrogen.



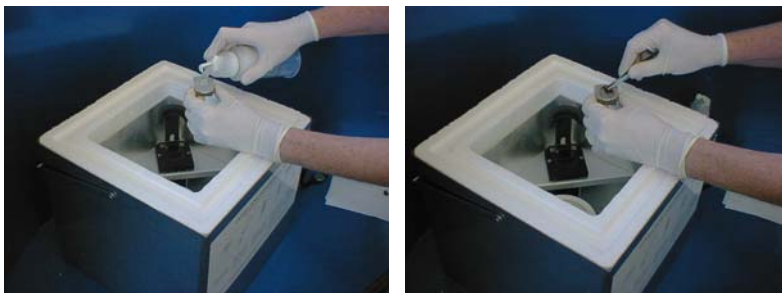
Step 2: FORM A BASE LAYER

A small amount of Cryo-Gel or other mounting media is dispensed onto a Blockholder. The Heat Extractor is placed on the Gentle Jane device and falls at a controlled rate forming a frozen base layer in 8 -10 seconds.



Step 3: ORIENT THE SPECIMEN

Additional Cryo-Gel or other mounting media is dispensed onto the base layer. The specimen is oriented on the mounting media.



Step 4: FREEZE THE SPECIMEN

The Heat Extractor is once again placed on the Gentle Jane device. The specimen and mounting medium are snap-frozen in 8 -10 seconds. The Heat Extractor is returned to the plastic thermos. The specimen is now ready to be sectioned.

