SHIPPING DIAGNOSTIC SPECIMENS

GOAL: Prevent freezing that may destroy or decrease the diagnostic quality of the sample

THREE ITEMS TO CONSIDER:

TIME | TEMPERATURE | EXPOSURE

TIME

1. Ship overnight
2. Prolonged delivery times keep samples in the colder environment longer and increase the likelihood of freezing
3. Do not ship over the weekend or holidays

TEMPERATURE

1. Frozen gel packs: do not use when the outside temperature is below freezing
   - Frozen gel packs combined with freezing temperatures will increase the likelihood of your sample freezing
2. Room Temperature Gel Packs
   - Use with samples that do not need to be chilled (i.e. biopsy samples in formalin)
   - Energy from the cold weather will be divided in the box between chilling your sample and the gel packs to delay the freezing effect
3. Chilled/Soft Gel Packs
   - Use with samples that need to be chilled (i.e. fresh tissues for culture or PCR)
   - The same principle applies as with the room temperature samples: the environment inside the box will start off chilled, and the gel pack will prolong the time it takes the sample to freeze

EXPOSURE

1. Provide protection to the samples by layering
2. Use an insulated shipping container – cardboard box with Styrofoam box inside
3. Fill dead space in the box with bulk material to provide additional insulation
4. Keep the samples centered in the box to avoid the colder sides

ADDITIONAL ITEMS

Adding alcohol to formalin at a rate of 1 part to 9 parts formalin can lower the freezing point of the formalin to help prevent freeze artifact. Please do not add more than this amount as it may affect the fixation process.

PURDUE UNIVERSITY | Animal Disease Diagnostic Laboratory

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