

Core Handling & Preservation

Freezing Core with Dry Ice

- Second fastest way to freeze core and preserve fluid saturations
- “Best” for most applications
- Longer freeze time results in little alteration of core physical properties
- Used when fluid saturations and physical properties are of equal importance
 - Preserves volatile and semivolatile hydrocarbons
 - Keeps fluids from migrating in high-permeance materials



Core Handling & Preservation

Freezing Core with Dry Ice

1. Dry Ice is available at most industrial gas supply companies (some supermarkets).
2. Large marine ice chests are used to freeze and transport core.
 - a. Up to 72 quart coolers used for smaller core.
 - b. Large marine coolers (94 quarts and greater) used for core over two feet long.
3. Place approximately 50 to 75 pounds of dry ice in the bottom of the ice chest.
4. Label core, attach end caps, and place core in ice chest.
 - a. Close lid and core will freeze solid in 30 minutes.
 - b. Each ice chest freezes up to 22.5 feet of core using 50-75 pounds of dry ice.
5. Caution - Do not put dry ice in an unventilated or enclosed space due to risk of death by asphyxiation!



Core Handling & Preservation

- Place 50 to 75 pounds of dry ice in the bottom of the ice chest.
- Put core in ice chest and close lid. Core will freeze solid within 30 minutes.
- Continue adding core and dry ice as necessary.



Core Handling & Preservation

Transporting Frozen Core

1. Caution - Do not transport dry ice in passenger compartments due to risk of death by asphyxiation!
2. Large ice chests are used for transporting frozen core.
3. Place a layer of foam, bubble wrap, or “Styrofoam peanuts” in the bottom of ice chest to absorb shock during transport.
4. Place one layer of core on top of packing material.
5. Place a layer of dry ice over the core.
 - a. Dry ice pellets can be used as a “packing material” to secure the core and fill any voids between cores.
 - a. Block dry ice can also be used by breaking into smaller pieces and packing around core.
 - a. Bubble wrap or styrofoam peanuts can be added to the core layers to cushion the core during transport.



Core Handling & Preservation

Transporting Frozen Core

6. Continue alternating layers of core, packing materials and dry ice. Do not exceed three layers of core.
 1. Fill remaining space with dry ice.
 2. Put Chain of Custody in a zip lock bag and tape inside lid.
 3. Close lid and seal with tape to keep cold.
 4. Attach Dry Ice Placards to ice chest.
 5. Contact Overnight Courier for shipment to laboratory for next day delivery. Notify laboratory of shipment arrival time (tracking numbers).
 6. Arrange shipment so core does not sit in hot warehouse or truck for days.



Transporting Frozen Core

- Ice chest filled
- with cores, dry
- ice, and packing
- material for
- cushioning.



Core Handling & Preservation

Transporting Frozen Core

Dry Ice Placard:
Overnight couriers
can supply the
placard stickers.

Shipper's Declaration not Required.

Part B is required

Dry Ice amount must be in kilograms.

Note: 2 lbs. = 1 kg.

Airwaybills/airbills must have the following:

1. "Dangerous Goods - Shipper's Declaration not required".
2. Dry Ice; 9; UN 1845;
3. _____ X _____ Kg 904 III
(Number (wt)
pkgs)

Dry Ice
_____ kg.

UN 1845

Shipper's name and Address

Consignee Name and Address

9

Logos # 106426



Core Handling & Preservation

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Date _____ Sender's FedEx Account Number _____

Sender's Name _____ Phone (562) 907-3607

2 **LABORATORIES**

8100 SEC URA WAY

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Paper Shipping Label: FedEx is the easiest to ship with, they routinely handle dry ice shipments.



Core Handling & Preservation

FedEx Ship [Track](#) [iHistory](#) [Address Book](#) [Preferences](#) [Fast Ship](#) [Reports](#) [My Profile](#)

« [Log out](#) [HomeShip](#)

Special services

- Saturday pickup
- Saturday delivery
- Ⓢ COD (Collect on Delivery)
- Hold at FedEx location

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FedEx OD Delivery Signature Options

Signature type **Select signature type**

Shipping Options

Pickup/Drop-off

ti Will use scheduled pickup at my location

- Ⓢ Will drop off at FedEx location
- Will contact FedEx to request pickup

Find location

Schedule pickup

Get cot.irtesy rate

Please Note

- Click the **Continue** button **only once**. **Expect same delay due to transmission time**. **Do not** click Stop or Reload; it may cause a duplicate shipment transaction
- By clicking the Continue button, you agree to the FedEx Ship Manager al fedex.com Terms of Use and the FedEx terms of shipping in the applicable FeciFx Setire Guid Shipper's [TermsAndCondliions](#) for FedEx Express international shipments.

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Electronic Shipping: FedEx is the easiest to ship with, they routinely handle dry ice shipments.

