

4.2 PROTOCOL FOR STORAGE AND SHIPMENT OF SAMPLES

Overview

Field samples should be stored at 4°C in a mobile laboratory refrigerator, portable refrigerator, or a cooler containing ice packs in the summer months. In below freezing temperatures, place the samples in a cooler containing collapsible warm water jugs. Store the sample as necessary, until they can be transferred to a temporary holding refrigerator or refrigeration facility. This will make sure that they are preserved properly and that there is no loss of sample quality. If refrigeration is not available, field activities and transportation of samples must be planned so that samples are sent immediately to the laboratory.

Sources

EMAN-N (2005), Environment Canada (1999 Draft)

At a glance

*ship
samples
asap*

1 Samples should be shipped as soon as possible after collection. Ship samples in coolers containing enough ice packs or collapsible water jugs with warm water, to keep the samples at approximately 4°C for the length of the trip. Whenever possible, send samples to the laboratory the same day they were collected.

2 Each shipping container should contain only bottles that are to be analyzed or cleaned by the receiving laboratory. All samples must be well sealed and packed using foam chips or bubble wrap to prevent spillage or breakage. The laboratory will re-wash all empty bottles. Any dirty bottles that are returned should have their lids on. Rinse old reagent bottles well before returning them.

*protect
forms to be
included
with
samples*

3 Be sure to include a copy of the sample field sheet and/or submission form with each shipment. A chain of custody form for the samples, if required, must also be contained in each shipping container. These forms should be placed inside a sealed plastic bag in the shipping container to protect them in case of leakage or breakage of samples.

*proper
labeling of
shipping
containers*

4 Label all shipping containers with the address of the destination and the sender. The address labels should be taped over with clear tape to protect against scuffing or marking. Label the top of all shipping containers with “OVER 16 KG”, “THIS END UP” or “FRAGILE”, as applicable. “DO NOT FREEZE” labels are also useful. Make sure containers are free of misleading address and warning labels. Multiple containers should be numbered in a series out of a total number (for example “3 of 6”).

5 If a cooler is being used to ship the samples, make sure the spigot is taped over to prevent leakage. At least one piece of tape should be used over the closure clasp. Coolers should also have secure handles. Any broken handles or sharp projections should be removed.

6 Proper documentation or handling receipts from the transportation/shipping company should be kept on file so that lost or damaged shipments can be traced.

*be aware
and follow
all
Transport of
Dangerous
Goods
regulations* **7** It is very important to follow all *Transport of Dangerous Goods* regulations for packaging, labeling, and documenting sample boxes. Normally, preserved samples are not considered to be dangerous goods because of the much diluted amount of preservative. However, the shipper is responsible for the goods. Consider becoming a certified shipper of dangerous goods in order to protect yourself and personnel who may be transporting the samples as well as those receiving them. If you have doubts about any aspect of the regulations, contact your area Transport of Dangerous Goods Trainer or Transport Canada.

Other sources

BC WLAP (2003), ISO (2008 a) , Environment Canada Undated (a), Environment Canada (2008 draft), Ontario Ministry of the Environment (2006), Newfoundland and Labrador Environment and Conservation (1999), NB 2000, Saskatchewan (Undated), Environment Canada (2009), Nova Scotia Department of Environment and Labour 1996, Environment Canada (2003 a)