

Standard Operating Procedure for Shipping Filters to and from an Off-Site Laboratory

Environmental and Industrial Sciences Division
RTI International*
Research Triangle Park, North Carolina

Prepared by: Jim Houke

Date: 2/18/09

Reviewed by: Jan B Flanger

Date: 2/18/2009

Approved by: W. J. Dutknecht

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* RTI International is a trade name of Research Triangle Institute.

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Standard Operating Procedure for Shipping Filters to and from an Off-Site Laboratory

1.0 Purpose

This procedure describes the required process for storing, packaging, and shipping filters between RTI and off-site laboratories.

2.0 Scope

This procedure applies to all filters being shipped between an offsite laboratory and RTI.

3.0 Responsibility

This procedure is for RTI staff members who send filters to an off-site analytical laboratory and staff members at off-site analytical laboratories who handle and return the filters to RTI.

4.0 Procedure

4.1 Materials

- Blue Ice packs (2 $\frac{5}{8}$ " x 5 $\frac{1}{8}$ " x 1 $\frac{1}{4}$ ")
- Small cardboard boxes (7" x 3 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ ")
- Filters in Millipore petri slides, labeled with unique identification numbers
- Resealable bags (12" x 12")
- Small hand-held cooler
- Carton sealing tape.

4.2 Pre-Packaging Activities

1. Place Blue Ice packs in a freezer at -15 to -20 degrees Centigrade at least 48 hours prior to the shipping date
2. Assemble cardboard boxes to be used in packaging
3. From the freezer, retrieve the necessary number of filters contained in plastic Millipore petri slides labeled with unique identification numbers

4.3 Preparation of Laboratory Chain-of-Custody Forms (RTI only)

1. In the Speciation Database section "Find/Create Aliquot Batch to Lab," create the batch of filters to be sent to the off-site laboratory.

2. Generate a Laboratory Chain-of-Custody (LCOC) Form for the batch of filters.
3. Print the LCOC onto three-part carbonless copy paper. A sample LCOC is shown in **Figure 1**.
4. Sign and date the LCOC at the bottom of each page in the section entitled “RTI SHAL, Out.”
5. In the “RTI SHAL, Out” field, enter the date of shipment from RTI.
6. Remove the bottom copy of the multi-part form and retain it in the shipment records in the Sample Handling and Archiving Laboratory (SHAL) as a record of the shipment.
7. Send the top two copies of the LCOC with the filters to the off-site laboratory.

4.4 Packaging the Filters for Shipment

1. Place petri slides containing filters into a small cardboard box
2. Insert the small cardboard box into a resealable bag and seal the bag













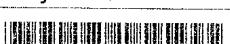


 H26176F		Page 1 of 2 RTI PM 2.5 Laboratory Chain of Custody Form (LCOF) DRI	
Bar Code	Identification Number	Filter Type	Analysis Requested
Delivery Order: 0019		RTI Task: 08858	
	A5152814	IMPROVE Quartz	IMPROVE_A
	A525043X	IMPROVE Quartz	IMPROVE_A
	A525044Y	IMPROVE Quartz	IMPROVE_A
	A5275990	IMPROVE Quartz	IMPROVE_A
Delivery Order: 0020		RTI Task: 08858	
	A5153500	IMPROVE Quartz	IMPROVE_A
	A5154718	IMPROVE Quartz	IMPROVE_A
	A5154729	IMPROVE Quartz	IMPROVE_A
	A515476D	IMPROVE Quartz	IMPROVE_A
	A515477E	IMPROVE Quartz	IMPROVE_A
	A515486F	IMPROVE Quartz	IMPROVE_A
	A523649D	IMPROVE Quartz	IMPROVE_A
Delivery Order: 0021		RTI Task: 08858	
	A5236448	IMPROVE Quartz	IMPROVE_A
	A5236459	IMPROVE Quartz	IMPROVE_A
Delivery Order: 0022		RTI Task: 08858	
	A5153453	IMPROVE Quartz	IMPROVE_A
Custody Record (Name, Date)			
1. RTI SHAL, Out	<i>Jim Rowke</i>	<i>5/17/07</i>	Laboratory, In
2. Laboratory, Out			RTI SHAL, In
Comments			

Figure 1. Sample Laboratory Chain-of-Custody Form.

4. Place one or more sealed bags that contain boxes of filters, into a small insulated cooler
5. Place the previously frozen Blue Ice packs around the boxes of filters inside the cooler. Fill the cooler completely with the Blue Ice packs so that the contents are maintained at or below 4 degrees Centigrade during transit.
6. Put the top two pages of the LCOC Form for the filters in a separate resealable bag along with a cover letter for the shipment. The cover letter must specify:
 - a. The numbers of filters in the shipment.
 - b. The expected date analytical results should be received at RTI.
 - c. The date the unused portions of filters and packaging materials from the off-site laboratory must be shipped back to RTI.
7. Retain a copy of the cover letter at RTI.
8. Place the resealable bag containing the cover letter and the LCOC Form directly on top of the items in the cooler.
9. Close the cooler and seal the cooler securely with tape.
10. Prepare an airbill for overnight delivery service and affix it to the cooler.
11. Retain a copy of the airbill at RTI.
12. Ship the cooler via overnight service to the off-site laboratory. Only send shipments on Monday through Thursday and never on Friday through Sunday or on the day before a holiday.
13. Send an e-mail notification to the RTI Project Manager, who will inform the intended package recipient of the:
 - a. Date of shipment.
 - b. Identity of the shipment contents.
 - c. Carrier.
 - d. Airbill number used for the shipment.
 - e. Expected delivery date of the cooler.

4.5 Storage and Handling of Filter Samples By an Off-Site Laboratory

1. When a cooler is received, immediately remove the resealable bags containing the cardboard boxes of filters from the cooler.

2. Immediately place the resealable bags containing the cardboard boxes of filters into a freezer or refrigerator.
 - a. Teflon and nylon filters must be kept in a refrigerator at 4 degrees Centigrade.
 - b. Quartz filters must be kept in a freezer at or below minus 15 degrees Centigrade before and after analysis, but individual boxes of filters are to be kept in a refrigerator or cooler during working hours on the day (or days) they are to be analyzed.
3. Immediately after analysis, reseal each remaining filter in its original labeled petri slide to protect the integrity of the filters for potential future analyses and place it back into the refrigerator or freezer.
6. When analysis of the filters in the box or tray is complete, or at the end of day, whichever comes first, reseal the refrigerated box or tray of filters in its resealable bag and place it back in the freezer or refrigerator.

4.6 Return Shipment of Filters from an Off-Site Laboratory

1. Each shipment of filters sent from RTI must be shipped back to RTI after analysis unless by previous agreement the offsite laboratory will retain or archive the filters.
2. Place Blue Ice packs in a freezer at minus 15 to minus 20 degrees Centigrade for at least 48 hours prior to being used for shipping filters.
3. Make sure that:
 - a. The petri slides that contain the filters are all in the same cardboard boxes in which they were received.
 - b. Each box of filters is in a separate resealable bag.
 - c. All resealable bags are sealed.
4. Place the resealable bags containing the filters in a small insulated cooler.
5. Place all of the frozen Blue Ice packs that were received in the original shipment of filters around the packaged filters to fill the cooler and to keep the filters at or below 4 degrees Centigrade during transit.
6. Sign and date the original LCOC Form for these filters in the "Laboratory Out" section, indicating the date of shipment back to RTI.
7. Keep the second page of the multipart LCOC Form as part of the records of the analyses.

8. Place the original top page of the LCOC Form into a separate resealable bag.
9. If the off-site laboratory prepares a cover letter, place it in the resealable bag containing the LCOC Form.
10. Close the cooler and seal it securely with tape.
11. Prepare an airbill for overnight delivery service and attach it securely to the cooler.
12. Ship the cooler only via overnight service back to RTI. Only send shipments on Monday through Thursday and never Friday through Sunday or on the day before a holiday.
13. E-mail a notification to the contact at RTI on the date of shipment identifying the shipment contents, the carrier, the airbill number used for the shipment, and the expected delivery date of the cooler.