

UCD IMPROVE Technical Information #251M

B/C Filter Shipping

*Interagency Monitoring of Protected Visual Environments
Air Quality Research Center
University of California, Davis*

*July 15, 2022
Version 3.0*

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DOCUMENT HISTORY

Date Modified	Initials	Section/s Modified	Brief Description of Modifications
02/24/2022	SRS	All	Previously anthologized version separated into individual TIs.
4/14/2022	GRM	All	Updated wording to accommodate new procedure

TABLE OF CONTENTS

1. Purpose and Applicability.....	4
2. Summary of the Method	4
3. Cautions	4
4. Personnel Qualifications	4
5. Equipment and Supplies	4
6. Procedural Steps.....	5
6.1 Preparing Contractor Lists for 2B Filters.....	5
6.1.1 Acquiring First Filter for New Shipment.....	5
6.1.2 Running the Macro	5
6.1.3 Entering Macro Information	5
6.1.4 Printing the Pages	5
6.1.5 Tray Checking.....	5
6.2 Monthly Ion Lab Blanks	5
6.2.1 Generating Labels.....	6
6.2.2 Appending the Inventory List.....	6
6.3 Preparing Contractor Lists for 3C Filters.....	6
6.3.1 Acquiring the Last Filter of Last Shipment	6
6.3.2 Running the Macro	7
6.3.3 Entering Macro Information	7
6.3.4 Printing the Pages	7
6.3.5 Tray Checking.....	7
6.4 Shipping Instructions for B-Ion or C-Carbon	7
6.4.1 Generating Excel Files.....	7
6.4.2 Creating a Cover Letter.....	7
6.4.3 Generating Tray Labels.....	8
6.5 Preparing the Shipment.....	8
6.5.1 Printing the Hard Copy and File Copy	8
6.5.2 Boxing the Trays.....	8
6.5.3 Printing Shipping Labels.....	8
6.6 E-mailing.....	9
6.7 Electronic File Storage.....	10

1. PURPOSE AND APPLICABILITY

The purpose of this TI is to describe the procedures used to check and ship nylon and quartz IMPROVE filters for analysis. These instructions apply to all routine 2B and 3C IMPROVE filters.

2. SUMMARY OF THE METHOD

Final tray check lists are generated for 2B and 3C filters before they are prepared for shipping. Once a month, five lab blanks are added to each nylon filter shipment. Nylon filters are sent to the ion contractor, which as of January 2019 is RTI, and the quartz filters are shipped to the carbon contractor, which as of January 2019 is DRI.

3. CAUTIONS

Be careful when tray checking to make sure that every Petri dish has a filter in it. Pay particular attention to the Petri dishes that are loaded with lab blanks.

Be aware that working with files in the U:\ drive is extremely risky. Any errors that may occur can cause problems for lab equipment or analysis. Be extra careful when deleting or moving files.

Pay close attention when entering information into any macro. The information has to be in a designated format for the macro to work.

4. PERSONNEL QUALIFICATIONS

Only trained lead lab technicians can generate tray check lists and create Excel files for shipping.

5. EQUIPMENT AND SUPPLIES

The following supplies are necessary for 2B and 3C shipments:

- 1ft. cubed cardboard box for C filters, or 12" x 12" x 10" cardboard box for B filters, and packing material
- Re-sealable bags
- Packing tape
- Ice Packs (for C filters)
- ULINE Premium Laser Labels S-8039
- Envelopes
- UPS shipping labels
- Computer access to U:\ drive

6. PROCEDURAL STEPS

6.1 Preparing Contractor Lists for 2B Filters

6.1.1 Acquiring First Filter for New Shipment

In the IMPROVE lab find the set number to be shipped by identifying the lowest set number for that year. Open the Inventory portion of the web app and click **View** for the set to be shipped out. Click the **Master List** button, and open in Excel. If all of the trays have not been generated yet follow the procedure laid out in *UCD IMPROVE TI #251F*, section 5.9.

6.1.2 Running the Macro

Open MACROS.xlsm, to access the macro, change back to the Master List file press **Alt+F8**. Select the “B_Filter_Inventory_ION” macro and click **Run**.

6.1.3 Entering Macro Information

The macro will ask for enough information to change the Master List into the desired format for the Contractor List. Follow the instructions in the input boxes. Be careful to enter the information in the exact format as the example. Following are the parameters of the input boxes:

- 1) **Year**. Enter the desired year in number format. Example: 2015.
- 2) **Set**. Enter the desired set in number format. Example: 1.

6.1.4 Printing the Pages

Print a copy of each B_Sheet_ [#] tab. The file will automatically be saved. If there was a previous version of the current set, that file will be overwritten by the new one.

6.1.5 Tray Checking

Confirm that each tray check list matches the inventory of filters in each tray. Print one copy of each sheet in the tray check list. Start with Tray 1. Open the first tray, with the filters on the right and the empty lid on the left. Note the site, sample date, and module of the first filter on the tray check list. Select the first filter in the upper left, position 1. Confirm a filter is present in the correct sample-side-up orientation, and that the filter information noted matches the tray check list. Perform the same checks for each filter on the tray check list/filter tray, correcting any discrepancies, as necessary. Continue to each subsequent tray until the set is done.

6.2 Monthly Ion Lab Blanks

Near the end of every month, five clean lab blanks must be sent out. Add these lab blanks to an ion set being prepared for shipment. This should be done in the web app before creating the Master List.

6.2.1 Generating Labels

Open the "Lab BLNK stickers" file located in U:\IMPROVE_Lab\Lab Gravimetric\Applications and Macros\Ion_Carbon Outgoing\ION. Enter the date that the filters are being shipped into the yellow box in the upper left corner. This should update the cassette stickers near the middle of the page. On the bottom left of the page, update the ship date to record when each month's lab blanks were shipped. Print out the cassette stickers to label five clean Petri dishes. Load one clean B filter (no paper dummies) into each of the five Petri dishes.

6.2.2 Appending the Inventory List

From the Improve Management Site web application home page, navigate to the "Inventory Boxes" page by clicking **Inventory** in the gray header. Find the appropriate filter set ID ("Set Number") in the box inventory and click **View**. On the "Inventory box details" page, find the last tray (highest number), and click **View**. Scroll to the bottom of the "Tray Details" page and remove the last five site filters from this tray (Tray Positions 46 to 50) by clicking the **Remove** button for each record. These removed filters will be added to the next set. Click the **Add blank button**, change the blank date to the current date, and then click **Update Inventory Box**. Repeat this action an additional four times for a total of five lab blanks. These five entries should all be identical except for the Filter ID, with nothing for the site (BLNK1 will show as the site on the Master List), and shipment day as the sample date. The status will be "NM" and the Purpose will be Lab Blank Ions.

Replace the last five network filters in Tray 8 with the five lab blanks, so that the tray check list matches the filters in the tray.

After adding the lab blanks follow the procedure laid out in 6.1 for preparing the contractor list and tray checking.

6.3 Preparing Contractor Lists for 3C Filters

6.3.1 Acquiring the Last Filter of Last Shipment

In the IMPROVE lab, find the set number to be shipped by identifying the lowest set number for that year. Open the Inventory portion of the Web App and click View for the set to be shipped out. Click the Master List button, and open in Excel. If all the trays have not been generated yet follow the procedure laid out in *UCD IMPROVE TI #251F*, section 5.9.

6.3.2 Running the Macro

Open MACROS.xlsm. To access the macro, change back to the Master List file, press **Alt+F8**. Select the **C_Filter_Inventory_CARBON** macro and click **Run**.

6.3.3 Entering Macro Information

The macro will ask for enough information change the Master List into the desired format for the Contractor List. Be careful to enter the information in the exact format as the example. Following is the list of the parameters it will ask for:

- 1) **Year**. Enter the desired year in number format. Example: 2015.
- 2) **Set**. Enter the desired set in number format. Example: 1.

6.3.4 Printing the Pages

Print a copy of each C-Sheet_ [#] tab and the new file will be automatically saved. Any previous version of the set's tray sheets will be overwritten with the new one. Close the file and collect the new tray checking lists from the printer.

6.3.5 Tray Checking

See Section 6.1.5 for instructions on tray checking.

6.4 Shipping Instructions for B-Ion or C-Carbon

6.4.1 Generating Excel Files

Open the appropriate Contractors file for the current shipment. Print a second copy of all the tabs labeled B_Sheet_# or C_Sheet_#.

6.4.2 Creating a Cover Letter

Open "RTI & DRI Cover Letter.xls" file which is located U:\IMPROVE_Lab\Lab_Gravimetric\Applications and Macros. Press **Alt+F8**. Select the "RTI & DRI Cover Letter.xlsm!SiteFetching.SiteFetching" macro and click **Run**. The macro will ask for enough information to update all records. Following is the list of the parameters it will ask for:

- 1) **Preparer's Name**. Enter desired name of person shipping outset.
- 2) **Date for Shipment**. Enter date shipment will be sent out. Example: 10/03/2022
- 3) **Shipment Year**. Example: 2022
- 4) **Shipment Set Number**. Example: 10
- 5) **Shipment Tray Count**. Enter the count of trays to be shipped out as part of the tray. Example: 8
- 6) **Shipment Filter Count**. Enter the number of filters to be sent as part of the set. Examp: 400

7) **Filter Type (B or C).** Enter shipment type, B for Ions or C for Carbon.

. If anything is incorrect, make the appropriate changes. If there are any network link updates, the links may need to be updated. Any changes will automatically update relevant fields for the entire workbook.

For the B-ion cover letter, go to the “B Cover Letter” tab, and for C-carbon go to the “C Cover Letter” tab. The table in the upper left should reflect the same information as the “Site fetching” tab’s table checked previously. Confirm everything on the page is correct then print one copy of the cover letter.

6.4.3 Generating Tray Labels

Go to the “Generate Tray Labels” tab and fill out the appropriate information in the upper left corner. Note the warnings. Make sure that there is only one “Y” filled out for either “B” or “C” labels, or the sheet will error. The other entry should be “N.” Print the tray labels and apply them to the shipment’s trays. The labels are generated Tray 1-7 on the left column, from top to bottom, with Tray 8 on the right column. Print the correct labels onto ULINE Premium Laser Labels S-8039. Apply the labels to the tops of the correct tray, “facing” the right.

6.5 Preparing the Shipment

6.5.1 Printing the Hard Copy and File Copy

Prepare one set of tray check lists with the attached cover letter. Staple the cover letter to the top of the tray check lists (stacked with Tray 1 at the top). Fold the copy into thirds, it will later go into an envelope and will accompany the shipment.

6.5.2 Boxing the Trays

Place all filter trays into a 1 ft. cube cardboard box for “C” filters and a 12” x 12” x 10” cardboard box for “B” filters, stacked Tray 1-4 from top to bottom on the left, Tray 5-8 from top to bottom on the right (if there are more than four trays). Include the enveloped hard copy in a watertight re-sealable bag and use bubble wrap to secure the trays. Quartz shipments must include an ice pack, covered in bubble wrap to prevent the cardboard from getting moist. Ice packs are located in the Quartz-freezer in the IMPROVE lab. Securely seal the cardboard box with packing tape.

6.5.3 Printing Shipping Labels

Go to the UPS website and log into CampusShip. Ask the lead lab techs for the username and password.

Ion shipments will go to Research Triangle Institute (RTI in the UPS address book).

- Packaging: Other Packaging
- Weight: 10 lbs.
- Dimensions: 12 in. x 12 in. x 10 in.
- Service: UPS 2nd Day Air
- Declared Value: \$5000 (This package has “high value” requiring UPS to provide special handling)
- Reference #1: [Year]SET [#]BIONS
- Reference #2: [user initials]

Carbon shipments will go to Desert Research Institute (DRI in the UPS address book).

- Packaging: Other Packaging
- Weight: 12 lbs.
- Dimensions: 12 in. x 12 in. x 12 in.
- Service: UPS Ground (this should arrive at the same time as the Next-Day Air service)
- Declared Value: \$5000 (this package has “high value” requiring UPS to provide special handling)
- Reference #1: [Year]SET [#]CCARBON
- Reference #2: [user initials]

When the shipping label is printed, two copies of the shipping receipt must be printed as well (sending one print job onto letter-sized paper should print two identical copies).

Apply the shipping label to the outside of the box. One copy of the shipping receipt must be given to the UPS pickup driver. The other copy must be signed and dated by the same driver for tracking purposes.

For Ion shipments create a ground shipping return label and include it in the envelope with the hard copy of the tray check list as described in 6.5.1. When RTI is finished desorbing filters, they will send back each box of used Petri dishes.

6.6 E-mailing

For carbon shipments, open the “C email” tab in the “RTI & DRI cover letter” file, and for ion shipments, open the “B email” tab. Ions shipments will be addressed to Tracy Dombek (tdombek@rti.org) and all carbon shipments will be addressed to Matt Classen (eafcarbon@dri.edu). Make sure Miranda De Boskey (mdeboskey@rti.org) and Laurie Stella (lbs@rti.org) are copied in all Ion shipments.

Copy and paste (values only) the e-mail template to a new e-mail sheet. The “To” and “Subject line” guidelines can be found above the template.

Confirm the Year, Set Number, and Ship Date in the subject line, as well as in the e-mail template body, are correct. At the bottom, confirm each tray’s first filter site and date.

Attach the correct previously generated.xls file. Copy over the corresponding tracking information.

6.7 Electronic File Storage

After finishing all of the above steps the electronic files must be correctly stored.

- 1) Go into U:\IMPROVE_Lab\Lab Gravimetric\Applications and Macros\Ion_Carbon Outgoing\ION or U:\IMPROVE_Lab\Lab Gravimetric\Applications and Macros\Ion_Carbon Outgoing\CARBON, move the recently created set files for B and C to their correct Shipped Year folder.
- 2) Open the recently created Set file, and the current year's Masterlist excel file (found here: U:\IMPROVE_Lab\Lab Gravimetric\Applications and Macros\Ion_Carbon Outgoing\Masterlists). Copy the info on the Master List tab of the Set file, to the appropriate tab within the Master List file. Copy the tracking number from the UPS label and paste it in as well.
- 3) Update the Inventory box details of the shipped set to include the tracking number and the final inventory date.