

### Welcome! Let's get started.

Your **Metabolon Study Success Sample Handling Kit** has been prepared specifically for your study to provide you with a consistent and simplified method to prepare, catalogue, and return your samples to Metabolon for quick and reliable analysis.

Our standard Sample Handling Kit includes Metabolon Standard Preferred barcoded tubes and a handheld barcode scanner to provide an easy and automated way to enter your sample identifiers into the digital manifest. This will help you minimize errors, reduce processing time and support on time delivery of your study. Your kit(s) may come configured without tubes, or without the scanner, depending on your specific needs.

### What's in the Kit?

- **Instructions for use**

Included with these instructions are additional documents to help you collect, catalogue and ship your samples back to Metabolon. These may include:

- Sample Preparation & Shipping Procedures
- Completing the Digital Manifest Instructions
- Matrix specific collection guidelines (if necessary)
- Assay specific collection guidelines (if necessary)

- **2D Barcoded Cryovial Tubes**

If using the provided **Metabolon Standard Preferred** tubes for your study, your kit contains the required quantity of 0.48mL tubes for biofluids, and/or 2.2mL tubes for biosolids, and/or 2mL tubes for cell pellets, depending on your study design. Your tube racks may arrive in protective cardboard cradles.

If using your own 2D barcoded tubes, your kit may not include any tubes but may contain cardboard cradles for placing your tube racks into for protection during return shipment.



Please re-use the cardboard cradles to protect your samples during return shipment to Metabolon

- **Tube Caps / Seals**

If using **Metabolon Standard Preferred** tubes for your study, a matching quantity of seals and/or caps will be provided.

- **Handheld Barcode Scanner**

Your kit may come with a barcode scanner to easily help you complete your sample Digital Manifest. The scanner comes with a USB Cable for immediate plug and play use with PC. If using a Mac, the scanner may need to be configured appropriately. Please contact your project coordinator for the proper setup code. The scanner is compatible with the provided Metabolon Standard Preferred tubes to easily generate an accurate sample manifest.



**Barcode Scanners can be used for future Metabolon studies. Please do not discard or return unless instructed.**

## Handling your barcoded samples:

Prior to preparing your samples for shipment, gather and ready the following materials:

- Barcoded tube racks and seals/screw caps
- Barcode scanner and cable
- Metabolon digital manifest file opened in Excel & Completing Your Digital Manifest instructions
- Sample Preparation & Shipping Procedures and Matrix Specific Collection Guidelines (if provided)

When ready for packing & shipment:

- Insulated shipping box & dry ice (not provided)
- Zip lock bags (not provided)

## Barcode Scanner Setup:

1. Connect the provided USB cable to the handle as shown.
2. Connect the barcode scanner to your PC or Mac with the provided USB cable.
3. Refer to the provided instructional insert Completing Your Digital Manifest to prepare for data entry using the barcode scanner.



## Preparing for Sample Transfer:

1. Review the provided **Sample Preparation & Shipping Procedures** and Matrix Specific Collection Guidelines (if applicable) before beginning transfer.
2. Remove the sample tube racks from the cardboard cradles (if included).
3. Set aside the cradles to re-use for return shipment.
4. Place and organize sample tube racks on wet ice or cold blocks during transfer.  
**Do not use dry ice during sample transfer.**
5. Remove the rack cover(s) by sliding locks into the open position

## Sample Transfer & Completing Your Digital Manifest:

- Sample amount is critical to a successful study. Do not exceed the maximum amounts (0.48mL for biofluids, 2.2mL for biosolids, 2.0mL for cell pellets).
- Do not add additional adhesive labels to your sample tubes that may interfere with automated handling and delay your study.
- Refer to the Sample Preparation and Shipping Procedures or matrix specific guidelines provided by your Metabolon Project Coordinator.

1. Starting at position A1, pipette or transfer the required sample amount into the tube. Perform transfer of biofluid samples into the 0.48mL tube on **wet ice or cold blocks**.
2. Seal the tube with either the seals or caps provided. Caps can be removed from the plastic mat individually and applied one at a time to the biofluid 0.48mL tube.
3. Scan the tube's barcode with the barcode scanner into the appropriate sample row within the "Unique Tube Label ID" column.



For full details on how to properly enter sample information into the manifest, see the [Completing Your Digital Manifest](#) instructions.

4. Replace the tube into the appropriate location in the provided rack.
5. Repeat steps 1 through 4 for each of the remaining samples working sequentially down the electronic manifest and by row or column down each rack.

## Securing Samples Prior to Shipment:

1. **Remove unused tubes from the rack.** Do not include in the return shipment or manifest.
2. Replace the cover on each rack and slide the locking mechanism to secure cover in place.
3. Freeze sample tube racks at -80°C in upright position until ready to ship.

## Shipping to Metabolon:

1. Obtain an insulated shipping box (not provided)
2. Place each rack into the cardboard cradle (if provided) for added protection during shipment.
3. Place each cradle with racks into a zip lock bag (not provided).
4. Place the cradled racks into the shipping box and surround with dry ice. Guidance on amount of dry ice needed is in the **Sample Preparation and Shipping Procedures** instructions.



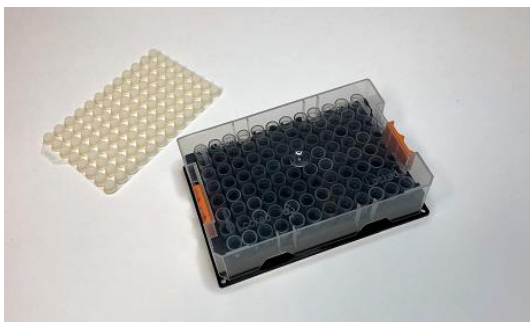
Be sure to include a printed hard copy of your completed **Digital Manifest** with your Metabolon assigned project code clearly noted.

5. **Please also email your digital manifest to your Metabolon Project Coordinator.**
6. Seal the box securely and ship to Metabolon with your preferred courier. International Shipments-Dry ice replenishment by the courier is recommended. Please package and ship according to appropriate regulations for your sample type and/or location.

## **Metabolon Standard Preferred and Sample Vial Label Type**

For sample traceability and efficient quality control transcription of Unique Sample Tube Label ID, Metabolon has adopted 2D data-Matrix barcoded tubes contained in 1D barcoded storage racks. Metabolon ships a Sample Handling Kit to clients with 2D data-Matrix tubes and a barcode scanner to facilitate the sample chain of custody between the client and Metabolon.

In cases where clients are unable to use Metabolon provided Standard Preferred 2D barcoded tubes, alternative commercially available sample tubes can also be received. Please discuss alternative tubes with your Metabolon representative. While Metabolon will still receive samples within human readable labeled tubes, it is not preferred as it can lead to labeling discrepancies that can delay the project.



### **Biofluid Sample Tubes**

Example of a 2D datamatrix barcoded tube and associated 96-position storage rack for **biofluids** (e.g., Serum, Plasma, Cell Media, etc.)



### **Biosolid Sample Tubes**

Example of a 2D data-Matrix barcoded tube and associated 24-position storage rack for **biosolids** (e.g., Tissue, feces, etc.).



### **Cell Pellet Tubes**

Example of a 2D data-Matrix barcoded tube and associated 48-position storage rack for **cell pellets**.