



Sample Sorting and LIMS Logging

NPC.SOP.CC004 Version 1.1

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1. Purpose

The purpose of this standard operating procedure (SOP) is to document the following procedures:

- How to verify delivered sample aliquots using a LIMS system
- Arrangement of sample vials into random batches for storage

2. Scope

This SOP describes how to sort received samples into random batches for storage at -80°C prior to sample analysis. This SOP should be used in conjunction with a previously created LIMS sample list and a suitable barcode scanner for optimal sample tracking.

3. Materials

Consumables

- Dry ice (approx. 1 bag/150 samples)
- Complete set of samples for sorting
- Trays for dry ice
- Sample trays
- Computer(s) equipped with barcode scanner) and internet connection to a suitable LIMS.
- Industrial methylated spirit (IMS - 70% ethanol, 30% water)

Personal Protective Equipment

- White laboratory coats
- White cotton under-gloves
- Nitrile gloves
- Cryo-gloves
- Eye protection
- Portable O₂ alarm

4. Procedure

Prerequisite: Study and aliquot information should already be uploaded to the Centre LIMS, and a run order and batch list generated

4.1. Sample receipt

- 4.1.1 The integrity of the packaging should be inspected for signs of damage or tampering prior to signing the couriers Proof of Delivery (POD) document. Any damage or evidence of tampering must be documented on the POD and reported to centre management.
- 4.1.2 The shipping boxes must be checked against the customers shipment manifest, any discrepancies should be reported to the centre management.
- 4.1.3 Signed POD documents shall be placed in the POD documentation file and the project log updated.

4.2. Unpacking of samples

- 4.2.1 The shipping boxes should be unpacked as soon as possible to maintain the temperature and integrity of the samples.
- 4.2.2 Upon opening, the undisturbed content must be photographed, and all photographs stored in the project folder.
- 4.2.3 The remaining level of dry ice in the shipping box should be documented in the project folder.
- 4.2.4 The number of sample boxes present and details must be cross-referenced against the shipping manifest provided by the customer, and any discrepancies reported to the centre management.
- 4.2.5 Each unpacked sample box should be placed in temporary storage at -80 °C.

4.3. Preparation

- 4.3.1 Ensure your area is uncluttered and ready for use.
- 4.3.2 Dry ice trays should be arranged on the bench so they are easily accessed and well labelled. You will need sufficient trays for all your **sorted sample racks** and an additional tray for your **unsorted sample rack**.

- 4.3.3 Fill each tray with approximately 2 cm of dry ice and agitate each tray to distribute the dry ice evenly.
- 4.3.4 Place all **unsorted sample racks** onto dry ice and allow sufficient time for them to cool prior to adding samples.

4.4. Sample sorting

- 4.4.1 Remove only one rack of unsorted samples per person at a time; ensure that samples are stored on dry ice to prevent thawing during sample sorting.
- 4.4.2 Removing a single sample at a time from the *unsorted sample rack* and scan the unique barcode (*or manually lookup the sample identifier*) into the LIMS lookup function.
- 4.4.3 At this point note any observations about the sample such as unusual colour, consistency or low volume.
- 4.4.4 Log the sample, and place into the LIMS indicated position in the appropriate *sorted sample rack*.
- 4.4.5 Top up dry ice as required to ensure samples do not thaw during sample sorting.
- 4.4.6 Once a *sorted sample rack* is completed, this will be indicated by the LIMS - use the 'Assign Location' link to enter the location for -80 °C storage, with one box corresponding to one labelled freezer tray.

4.5. Unexpected or missing samples.

- 4.5.1. If samples are not located in the LIMS, return them to the unsorted tray aside from the main bulk to indicate that they require special attention.
- 4.5.2. Samples that cannot be located in the LIMS should be highlighted to centre management.
- 4.5.3. The experimental set in the LIMS should be checked for incomplete batches. Any such batches need to be reported to centre management

4.6. Post procedure steps

- 4.6.1 Allow used dry ice in trays to sublime
- 4.6.2 Wipe down trays, keyboards, computer mice, and benches with IMS solution.
- 4.6.3 Clear the bench area of all materials except for the LIMS entry computers

5. Related Documents

Document Number	Title
N/A	N/A

6. Version History

Current Version

Version number	Author	Changes and justification	Section(s) updated
V1.1	MGR/ VHS/AS	SOP transferred to new template	N/A

Previous Version

Version number	Author	Changes and justification	Section(s) updated
V1	AS	New SOP	N/A

7. Responsibilities

Centre management is responsible for ensuring that laboratory technical personnel are appropriately qualified to perform the procedures outlined in this SOP. The appointed laboratory personnel are in turn responsible for conducting the procedure as outlined in accordance with health and safety standards.

Health and safety statement: before commencing any activities described in this document personnel must be adequately trained e.g. staff having completed local institution Chemical Safety Training and staff having read and understood the relevant risk assessments. Chemical, biological and general waste should be disposed of according to local policies.

8. Approval

Prepared by Dr Verena Horneffer-van der Sluis

Date

Reviewed by Dr Maria Gomez-Romero

Date

Authorised by Dr Matthew Lewis

Date

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