

Title: Sample Reception and Processing		Copy No: ##
SOP No.: 3.01/3.7/S	Effective Date: June 20, 2013	Location: ###

QSM Approval: _____

Sample Reception and Processing

1. Introduction

The following procedures are to be followed by the analysts to ensure that sample integrity is maintained from sample reception to final analysis and that all necessary documentation pertaining to sample traceability is readily available.

2. Procedure

2.1 Sample Reception

- 2.1.1 All samples received are accompanied by a sample submission sheet containing the necessary sample information such as, sample ID, the date and location collected, sample description, client contact information and the type of analysis required.
- 2.1.2 Upon receipt, the analyst must verify sample integrity as well as the information provided on the client's sample submission sheet prior to signing off the submission sheet. Report immediately to the supervisor of any discrepancies.
- 2.1.3 Record the date and time of sample reception, as well as the initials of the analyst receiving the sample(s) on the sample submission sheet.
- 2.1.4 Assign a batch number to the sample and log into the Laboratory Information Management System (LIMS), which will generate a unique laboratory code. The sample is then labelled with this unique laboratory code.
- 2.1.5 Record the corresponding LIMS code and batch number on the appropriate sample submission sheet.
- 2.1.6 Record each sample into the laboratory logbook with all pertinent information (lab code, customer code, project, sample date, date of receipt, sample description, and type of analysis required).
- 2.1.7 A copy of the sample submission sheet is kept in the laboratory. A copy is forwarded to the instrument analysis laboratory and the original sample submission sheet is placed in the appropriate binder in the section's library (Room 198).
- 2.1.8 Ambient air samples are stored in the freezer below 0°C while other samples are stored below 10°C until ready for processing.

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2.2 Sample Processing

- 2.2.1 All sample processing procedures must be strictly followed.
- 2.2.2 Deviations from the method must be approved by the supervisor before implementing.
- 2.2.3 Samples are labelled and securely handled and stored during all steps of sample preparation.
- 2.2.4 Fully document all aspects of sample processing each day in the logbook, the cleanup data sheet, the LIMS and on the corresponding sample tracking sheets (i.e. procedures used, observations, problems, deviations from the method).
- 2.2.5 Process a method blank and a control sample with each batch of up to 15 test samples or as specified in the test method used. Typically a blank is run with every 10 samples and a control with every 20 samples.
- 2.2.6 Spike all samples with the appropriate surrogate solution prior to processing as described in the corresponding test method. During spiking, distractions must be kept to a minimum and whenever possible, it should be done in the presence of another analyst.
- 2.2.7 Add a recovery standard to every sample just prior to instrumental analysis as described in the corresponding test method.
- 2.2.8 Transfer sample extracts to clean, labelled vials, sealed with Teflon tape (if they do not get analyzed within a week) and keep them refrigerated (below 10°C) until ready for analysis.
- 2.2.9 A sample-tracking sheet detailing the procedures, dates and analysts involved in the sample preparation is submitted along with each sample for further processing or analysis. The analyst must verify the accuracy of the information provided on the form and immediately enter any corrected values into the LIMS before sending out the samples and the forms. A copy of the sample-tracking sheet is retained for the laboratory files. Notify the supervisor when each batch has been sent for analysis.
- 2.2.10 Record details of the sample processing in the analyst's logbook.
- 2.2.11 All archived samples and analysed samples are kept for a minimum of one year and then disposed of upon approval and following the instructions of the supervisor.
- 2.2.12 Copies of the laboratory's routine methods and standard operating procedures are available in each laboratory for reference.
- 2.2.13 All original copies of sample tracking sheets and sample submission sheets are maintained in a central archive for ease of access.
- 2.2.14 After final analysis, cap and place the samples in a labelled vial and store them in the refrigerator.

3. Revisions

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September 1995: Author: Mylaine Tardif; New document (SOP OL12)
 September 2002: Section 2.1.5: Room 198
 Section 2.1.6: Ambient air samples are stored in the freezer below 0°C while other samples...
 Section 2.2.4 "... logbook, pre-cleanup data sheet
 September 2009: Lead Reviewers: Jennifer Verner and Alison Walkey
 Section 2.2.4: removed the pre-from pre-cleanup sheet, they are called cleanup data sheets now.
 Section 2.2.5: added, "Typically a blank..." sentence.
 December 2009: Section 2.1.2 added, and numbering fixed to reflect the changes.
 February 2010: Lead Reviewer: Alison Walkey
 Section 2.2.6: Added "During spiking..."
 May 2011: Lead Reviewers: Michael Lister and Gary Poole
 November, 2011 Lead Reviewer Gary Poole
 Section 2.13: reference to invoices removed and add date, time and initials of analyst receiving the samples is recorded on the sample submission sheet.
 Section 2.16: insert reference to option of recording sample into a sample logbook.
 Section 2.2.7 Deleted internal standard
 June 2013: Reviewed by: Alison Walkey
 Changed sentence structure to second-person imperatives
 Section 2.1.1: Changed "client ID" to "client contact information" and deleted "batch number..."
 Section 2.1.4: Added "Samples are assigned a batch number" and "Laboratory Information Management System"
 Section 2.1.5: Added "and batch number"
 Section 2.1.7: Changed "supervisor" to "instrument analysis laboratory"
 Section 2.2.1: Changed "are strictly adhered to" to "must be strictly followed"
 Section 2.2.2: Changed "are" to "must be" approved
 Section 2.2.9: Changed the supervisor is "provided a copy..." to "notified when samples are sent for analysis"
 Removed revision records 2001 and older.

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