

<b>Title: Sample Extract – Reception, Processing and Storage in the Instrumental Analysis Laboratory</b>		Copy No: <b>##</b>
SOP No.: 5.04/2.5/S	Effective Date: October 12, 2011	Location: <b>###</b>

QSM Approval: \_\_\_\_\_

## Sample Extract - Reception, Processing and Storage in the Instrumental Analysis Laboratory

### 1. Introduction

The following procedures ensure that the sample integrity is maintained from sample reception to final analysis in the instrumental analysis lab and that all necessary documentation pertaining to sample traceability is readily available.

### 2. Procedure

#### 2.1 Sample Reception

- 2.1.1 All sample extracts received are accompanied by the corresponding sample tracking sheet (TS) containing all necessary information such as, sample ID (LIMS code), sample description, field ID, project ID, sample prep, batch number (where applicable), tracking sheet number, client ID, type of analysis required, final volume, surrogate spike, performance/recovery standard and any other pertinent information. All samples processed as a batch should have a common Client ID. For controls and method blanks the client will be AAQS. The first samples from each batch should be accompanied by a copy of the Submission Sheet for that batch, so turnaround times can be determined.
- 2.1.2 Upon receipt, the analyst immediately verifies sample integrity as well as the information provided on the sample tracking sheet. Any discrepancies are immediately noted.
- 2.1.3 All necessary TS information is entered in Turnaround Time Sheet and the 'Sample Analysis Log'. The Log sheets are used to record the following information: date received, TS#, Batch#, number of samples, analytes, analysis date, instrument ID, analyst name and date reported, batch complete date as well as dilution date and repeat analysis date.
- 2.1.4 Sample tracking sheets are stored in the appropriate section of the binder entitled "Sample Tracking Sheets".
- 2.1.5 Samples are processed by TS# on a first in - first out basis unless otherwise specified (i.e. priority samples).
- 2.1.6 As samples are processed, all necessary information is recorded in the Sample Analysis Log and on the corresponding TS by the responsible analyst.

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- 2.1.7 When sample analysis is complete a copy of the corresponding TS is stored in the appropriate section of the binder which is subdivided by analyte group. The original TS is placed in the appropriate binder in the section's library (room 198).
- 2.1.8 The batch complete date reported that is recorded in the Sample Analysis Log is the date for which all sample results for a given Batch are reported to the Client.
- 2.1.9 The analyst reporting test results is responsible for entering the corresponding results into the LIMS using the appropriate worklists.
- 2.1.10 A copy of the results reported are stored in the "Results" binder.

## 2.2 Sample Processing - GC/MS

- 2.2.1 Sample analyses are recorded in the corresponding Sample Injection Log books. GC/MS methods, analyst ID, TS and/or Batch#, Project ID, Sample ID and instrument ID are documented.
- 2.2.2 Each analytical instrument has a separate logbook.
- 2.2.2 A printout of the injection sequence is generated and the information contained verified by the responsible analyst, initialled and placed in the appropriate binder entitled "Sequence".
- 2.2.3 Samples extracts are removed from the auto sampler tray when analysis is complete, re-capped, and archived in sample fridge 1.

## 2.3 Sample Storage

- 2.3.1 Upon reception, samples are stored on the appropriate shelf in sample fridge 1 according to sample status (i.e. samples in process, archives).
- 2.3.2 Each batch of samples is clearly identified by way of TS#, target analyte group and batch# until processed.
- 2.3.3 All aspects of sample handling are documented daily in the appropriate log books as well as in the LIMS and on the corresponding sample tracking sheets (i.e. procedures used, observations, problems, deviations from the method etc.)
- 2.3.4 Records of all archived samples are maintained up-to-date in the archiving log book.
- 2.3.5 All samples are kept in the lab sample refrigerator, and then are archived to the Utility Room fridge, where they are kept for a duration of one to three years and then disposed of following specific instructions from the supervisor.

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**3. Revisions**

- Sept 1997: Author: Mylaine Tardif. New Document
- July 1999: minor changes to Sections: 2.2.3, 2.3.1, 2.3.2; 2.1.1 (add Client ID)  
2.3.5 (archive samples stored for 1 to 3 years rather than only 1 year)
- Sept 2001: New header added
- Nov 2003: Minor changes made to sections 2.1.1, 2.1.3, 2.1.8, 2.1.9, 2.2.3, 2.3.4.
- Oct 2005: some grammatical changes throughout.  
Section 2.1.7: Change location to archive original tracking sheet from the supervisor to appropriate binder in Room 198.  
Section 2.1.8: Specify that batch complete date is reported to Client instead of being forwarded to supervisor  
Section 2.1.10: Remove procedure to “store results in “preliminary Results” file until approval and then store in Approved Results file.”
- Oct 2009: Lead Reviewers: David Harnish and Jennifer Verner.  
Added last paragraph in Section 2.1.1 and changed AAQD to AAQS  
Added Turnaround Time Sheet to 2.1.3  
Added archiving information and reworded 2.3.5
- Sept 2011: Section 2.1.7: Changed division to section  
Section 2.2.1: Changed chemstation to instrument

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**Lead Reviewer:** David Harnish **Date:**  
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**Approved by:** Mylaine Tardif **Date:**  
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