

Environmental Toxicology Laboratory
Toxicology Centre
University of Saskatchewan

STANDARD OPERATING PROCEDURE

UofS-ETL-EDNA-07

**MAINTENANCE OF eDNA SAMPLE:
CHAIN-OF-CUSTODY**

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APPROVAL PAGE

Revisions to an existing SOP, addition of a SOP change form, or preparation of a new SOP must be reviewed, approved, and signed by the following:

Authored By: Yuwei Xie, Paul D. Jones and John P. Giesy Date: 04/13/2018

Supervisor Review By:  Date: 04/30/2018

Reviewed By: _____ Date: _____
(QA Coordinator)

DEFINITIONS AND ACRONYMS

ETL	Environmental Toxicology Laboratory (University of Saskatchewan)
eDNA	Environmental DNA

CHAIN OF SAMPLE CUSTODY

To maintain the chain of custody, samples must be treated in the manner described below.

1. Samples are inspected upon arrival to see if they are in agreement with any accompanying inventory of samples. The sample condition should be noted and compared to expected condition.
2. Samples are assigned laboratory identification and custodian. Obtain documents of shipment or transfer from incoming person (e.g., bill of lading number or mail receipt).
3. Chain of Custody Record should be maintained throughout the project. The custodian has the responsibility to maintain the integrity of the sample. The custodian must maintain the original Chain of Custody Record. A copy may be obtained for the relinquishing party, if so desired.
4. Samples should be stored in refrigerators or freezers to maintain stability, following the specified conditions in sampling SOPs or sample preparing SOPs. The refrigerators and freezers are located in the Biochemistry Laboratory (Room 261).

SAMPLE SECURITY

Sample storage locations

1. Samples for analysis are stored in various refrigerators within the Biochemistry Laboratory.
2. Post analysis storage is in walk-in freezer (Room 116).

Sample access

1. Biochemistry Laboratory. The Biochemistry Laboratory is a locked laboratory within a locked building and is considered secure during working and non-working hours. All Environmental Toxicology Laboratory (ETL) employees have access to the freezer and refrigerators.
2. Walk-in freezer (Room 116). Access is limited to authorized personnel.

SCHEDULED MONITORING

All refrigerators and freezers used by the ETL are examined frequently due to constant use and monitored weekly by reading and recording the temperature on the Freezer/Refrigerator Temperature Record Sheet from a thermometer located in each unit. Freezer temperatures are maintained at a nominal -20°C . If the temperature rises to -15°C , corrective action must be taken. Actions include adjusting thermostats, having the unit serviced, or moving the samples to another unit.

1. During working hours, contact Dr. Paul D. Jones at 5062, or anyone else in the ETL who will help determine what should be done.
2. During evenings and weekends, if it isn't simply a matter of a freezer door being left open, call the campus operator and request physical plant emergency service for a freezer malfunction and Dr. Paul D. Jones at 281-2996 or 517-281-5666.

SAMPLE ACCOUNTABILITY

1. Must be a representative portion of product sampled.
2. Identity of sample must be established by person obtaining sample or submitting the sample to the laboratory for analysis.
3. Integrity of sample must be maintained from collection to delivery.
4. Composition and integrity of sample must remain the same during handling and storage before analysis.
5. Evidence must exist of sample's receipt and a Chain of Custody Record filled out and appropriate personnel notified of the sample arrival.
6. Person preparing sample must not allow composition of sample to change or integrity to be questioned.
7. Analyst must ensure the correct sample is analyzed.
8. Analyst must record all data contributing to analysis.
9. Records must be kept to trace sample from time obtained through reporting, including storage.
10. Special storage conditions must be documented.