

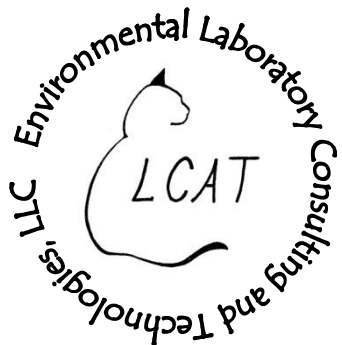


# 5.8 Handling Samples and Test Items

Forum on Laboratory Accreditation  
February 2015

*Silky S. Labie*

Environmental Laboratory Consulting &  
Technologies, LLC





# Topics in the Standard

- **5.8.1 Procedures for sample handling (cradle to grave)**
- **5.8.2 Identifying samples**
  - 5.8.5 Documentation
- **5.8.3 Sample receipt and assessment**
  - 5.8.6 Sample Acceptance Policy
  - 5.8.7 Sample Receipt Procedures
- **5.8.4 Sample Storage**
  - 5.8.8 Legal Chain of Custody
  - 5.8.9 Sample Storage and Disposal





## 5.8.1 You must have:

- ***Procedures:***

- ***Transportation***
- ***Receipt (5.8.3, .6 .7)***
- ***Handling***
- ***Protection***
- ***Storage (5.8.4, .9)***
- ***Retention (5.8.4, .9)***
- ***Disposal (5.8.4, .9)***

- ***Provisions to protect:***

- ***The integrity of the sample***
- ***The interests of the laboratory & customer***
- ***Preparations beforehand to deal with a need***
- ***The act of providing or supplying something***



## 5.8.2 Identifying Samples (5.4.5)

- ***System for Identifying Samples***
  - ***Cannot be confused either physically or in records***
  - ***Address sub-division of groups***
  - ***Address intra and inter-laboratory transfers***
  - **Unique Identifier for all samples, sub-samples, preservation, sample containers, extracts & digestates**






- ***System for Identifying Samples***

- Place on the sample container
- Links sample to all lab activities associated with it
- Field ID and Lab ID may be the same
  - Collector and Analyst are the same
  - Laboratory preassigns IDs to container

- ***ID must be maintained***



# 5.8.3 Sample Receipt & Assessment

- ***Record any unusual or unacceptable conditions***
- ***Consult the customer for instructions before proceeding if***
  - ***The sample is not consistent with the description (submittal records)***
  - ***The sample does not meet acceptance requirements***
  - ***The desired test is not identified or is vague***
  - ***Retain records of the discussion/emails***





## 5.8.6 Written Sample Acceptance Policy

- Must be written
- Proper, full and complete documentation
- Proper sample labeling (unique ID, durable labels, indelible ink)
- Proper sample containers
- Holding time
- Adequate sample volume
- Procedures/consequences when samples are damaged, contaminated or improperly preserved
- Use of data qualifiers



## 5.8.7 Sample Receipt Protocols

- Procedures for verifying and documenting preservation
- Requirements/process when samples do not meet acceptance policy
- Requirement for a permanent chronological record
- Retention of documentation
- Retention of complete chain of custody record





- **Permanent chronological records**
  - Client/project name
  - Date and time of receipt
  - Unique ID code
  - Signature or initials of person completing the entries
- **Information to be linked (or included) in the log**
  - Field ID code associated with each Lab ID
  - Date and time of collection
  - Requested Analysis (with method numbers)
  - Comments from inspection

## **5.8.7 Sample Receipt Protocols**





## 5.8.4 Sample Storage

- ***Procedures and facilities to avoid***
  - ***deterioration***
  - ***loss***
  - ***damage***
- ***Follow handling instructions when provided***
- ***Observe storage or other required conditions***





- ***When specified, maintain and monitor storage conditions***
  - ***Keep records!***
- ***If an item must be held secure to protect the condition and integrity of the sample***
  - ***Includes storage and security***



## 5.8.8 Legal Chain of Custody

Procedures employed to record the possession of samples from the time of sampling through the retention time specified by the client or program.

These procedures are performed at the special request of the client and include the use of a Chain of Custody Form that documents the collection, transport, and receipt of compliance samples by the laboratory. In addition, these protocols document all handling of the samples within the laboratory.





- **Performed by client request**
- **You must have a procedure**



 **Legal Chain of Custody, cont.**





## 5.8.9 Sample Storage & Disposal

- **Storage**

- Follow condition required by mandated requirements

- Thermal preservation  $\pm 2^\circ$  of specified storage temperature

- Store away from standards, reagents and food

- Organize to prevent cross contamination

- **Store fractions, extracts and leachates in the same manner or per method**



- **SOPs for disposal of samples and sample preparation aliquots**



  **Sample Storage & Disposal, cont.**

