

Legionella Chain of Custody Instructions

See website at www.estechlab.com for more detailed Sample Collection Guidelines, including a video demonstration.

CHAIN OF CUSTODY FORM (COC)

- Chain of Custody forms are provided for all clients to use in order to document sample collection, identification, location, conditions, and sample traceability.
- Check a box for **EACH** requested test as different types of samples are processed differently.
- Fill out and submit separate COC forms for each job site or address requiring separate reports.

STEPS FOR FILLING OUT COC FORMS:

Top Section – Job Site and Collection Information:

 <p>Environmental Safety Technologies</p>	 <p>ELITE Program</p>	 <p>AIHA LAP, LLC ACCREDITED LABORATORY ENVIRONMENTAL MICROBIOLOGY ISO/IEC 17025:2005 www.aihaaccreditedlab.org AIHA EMPAT # 102815</p>	<p>1815 Brownsboro Road; Suite 200 Louisville, KY 40206 Office: (502) 893-6080 Email: est@estechlab.com www.estechlab.com</p>
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Note: Fill out separate COC forms for Job Sites/samples requiring separate reports

Laboratory Chain of Custody Record		Email for Designated Report Contact:		Sample Date:		Page _____ of _____	
Company Name:	Company Phone:	Job Site:		Sampled By:		P.O.#:	
Company Address:		Job Site Address:		Sampled By Cell Phone:			
Company City, State, Zip:		Job Site City, State, Zip:		Sampled By Email Address:			

- Company Name, Company Address, Company City, State, Zip, & Company Phone**
 - If a COC record has been downloaded from our website www.estechlab.com, please fill out your Company's name and complete address.
 - Contact EST at est@estechlab.com or 502-893-6080 to obtain a custom COC form for use or for changes & updates.
- Email for Designated Report Contact**
 - Results will be emailed to the person(s) designated as the Report Contact for your company as established upon account setup with Environmental Safety Technologies; results are not emailed directly to each representative that submits samples.
- Job Site, Job Site Address, Job Site City, State, Zip**
 - Record the location where samples were collected for traceability of service.
- Sampled By, Cell Phone, Email Address**
 - Record of who collected the sample, their cell phone number, and their email address. Failure to provide contact information may delay sample processing.
- P.O. #**
 - If your company requires a Purchase Order, please obtain a P.O. Number before sample collection and record it on the COC form with samples submitted to the laboratory.
- Sample Date:**
 - A sample collection date is required for all samples submitted for *Legionella* analysis.

Middle Section - Sample Collection Information and Choosing Tests:

FOR EST USE ONLY Revision 3-3	Batch Number:	<p>List a Sample Location below for EACH sample submitted</p> <p>CHECK requested tests for EACH submitted sample site</p> <p>SAMPLE SITE:</p>	STANDARD TURNAROUND	RUSH TURNAROUND (Not available for all tests)	Legionella - Cooling Tower (L001)	Legionella - Potable Water (L010)	Legionella - Whirlpool, Hot Tub, Pool (L012)	Legionella - Decorative Fountain (L015)	Legionella - New York ELP (L028)	HPC - Aerobic Bacteria Count (B010)	HPC - Anaerobic Bacteria Count (B011)	Total Coliform/cell screen (B022)	Microbial Corrosion - Acid Producing Bacteria (M001)	Microbial Corrosion - Denitrifying Bacteria (M002)	Microbial Corrosion - Iron Related Bacteria (M003)	Microbial Corrosion - Sulfate Forming Bacteria (M004)	Microbial Corrosion - Sulfate Reducing Bacteria (M005)	Microbial Corrosion - Fluorescent Pseudomonas (M006)	Microbial Corrosion - Nitifying Bacteria (M007)	Microbial Corrosion - Algae (M008)	OTHER
Login By:	CUSTOMER SAMPLE NUMBER		STANDARD TURNAROUND	RUSH TURNAROUND (Not available for all tests)	Legionella - Cooling Tower (L001)	Legionella - Potable Water (L010)	Legionella - Whirlpool, Hot Tub, Pool (L012)	Legionella - Decorative Fountain (L015)	Legionella - New York ELP (L028)	HPC - Aerobic Bacteria Count (B010)	HPC - Anaerobic Bacteria Count (B011)	Total Coliform/cell screen (B022)	Microbial Corrosion - Acid Producing Bacteria (M001)	Microbial Corrosion - Denitrifying Bacteria (M002)	Microbial Corrosion - Iron Related Bacteria (M003)	Microbial Corrosion - Sulfate Forming Bacteria (M004)	Microbial Corrosion - Sulfate Reducing Bacteria (M005)	Microbial Corrosion - Fluorescent Pseudomonas (M006)	Microbial Corrosion - Nitifying Bacteria (M007)	Microbial Corrosion - Algae (M008)	OTHER
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- Customer Sample Number**
 - Assign each sample a unique number & label each bottle with this number.
 - For example, if a large and small cooling tower were collected at 111 Main Street, number them 111-1 and 111-2 or 111-L (indicating large tower) and 111-S (indicating small tower).

8. **List a Sample Location for EACH sample submitted**
 - For each sample collected, describe the sample site.
 - For samples described above, sample 111-1 would be listed as Large Cooling Tower and sample 111-2 would be listed as Small Cooling Tower.

9. **Choose a Legionella Turnaround for EACH Sample**
 - For each *Legionella* sample, check a box for Standard turnaround or RUSH turnaround.
 - **Standard: 7-10 Day Analysis** – A report with results and recommendations is issued within 7-10 days of sample receipt and processing.
 - **RUSH: 96 Hour Analysis** – Samples are processed upon arrival and results are read and reported on a workday, Monday through Friday, between 8:00-5:00 EST. A report is issued no sooner than 96 hours from processing in the laboratory following the confirmation of all cultured isolates. Samples that do not yield positive *Legionella* colonies upon culture are reported as negative for *Legionella* cultured growth (None Detected).

10. **Check all Requested Tests for EACH sample submitted**
 - Please check all tests to be performed on each sample to prevent delays in processing. The laboratory performs many tests other than *Legionella* so if a check is not made under the *Legionella* Culture column, processing will be delayed until lab personnel is able to call the person submitting the sample in order to verify which tests are to be performed.
 - **Legionella**
 - i. Standard *Legionella* Culture processed on selective media and incubated at 35° C for 7-10 days for CDC Elite approved detection and enumeration; including *Legionella pneumophila* serogroup 1, *L. pneumophila* serogroup 2-14 and Non-pneumophila species.
 - ii. New York State Department of Health (NSY-DOH) *Legionella* culture processed in accordance with NYS-DOH directives in accordance with ISO guidelines for 14 days. This testing must be requested in by using the "Other:" and the laboratory must be notified prior to sample arrival. Failure to do so may invalidate the samples for NYS-DOH Processing.
 - iii. *Legionella* Polymerase Chain Reaction (PCR) pneumophila Presence/Absence 36 hour screen. This testing must be requested in by using the "Other:" and the laboratory must be notified prior to sample arrival.
 - iv. *Legionella pneumophila* only screen processed with IDEXX LegioLert includes enumeration of *Legionella pneumophila* (all serogroups) after 7 day incubation.
 - **Heterotrophic Plate Counts (HPC) – Aerobic & Anaerobic**
 - i. Heterotrophic standard plate counts are obtained from samples plated on R2A agar and are incubated in the presence or absence of oxygen at 35°C for 5-7 days.
 - **Total Coliform/E. coli Screen**
 - i. Presence/Absence Screen
 - ii. Samples must be collected into bottles or jars containing a sodium thiosulfate tablet to neutralize any residual chlorine in the sample. Sample containers are available from EST.
 - iii. A minimum of 100 ml is required for processing. Leave ½" of air space in sample container.
 - iv. Please note that Total Coliform/E. coli samples must be shipped on ice packs overnight to the lab within 24 hours of sampling for valid test results.
 - v. Note: Since results must be read 24 hours after processing, samples must be collected Monday through Thursday. Samples may not be refrigerated prior to shipping. Screen is for environmental wastewater only; not for drinking water analysis.
 - **Corrosion Screens**
 - i. Estimated bacterial populations and bacterial activity (aggressiveness) may be determined using B.A.R.T. reactors for the following bacteria: Acid producing bacteria (APB), Denitrifying bacteria (DN), Iron Related Bacteria (IRB), Slime Forming Bacteria (SFB), Sulfate Reducing Bacteria (SRB), Fluorescent Pseudomonads (FP), and Nitrifying Bacteria (NB).
 - ii. Turnaround: Samples with highly active populations may be detected within a time lag of one day; activity is monitored up to 9 days before concluding samples to be non-active for specified microbial activity.
 - **Algae Screen**
 - i. Presence/Absence screen of active micro-algae such as the blue-green algae, cyanobacteria, and some of green algae belonging to the chlorophyceae.
 - ii. Turnaround: Samples with highly active algae populations may be detected in as few as 4 days; activity is monitored up to 25 days before concluding samples to be non-active for algae activity.
 - **Other Testing**
 - i. Identification of air, swab, bulk-liquid, and bulk-solid samples for bacteria (Genus and species) and fungi (Genus, *Aspergillus* species).
 - ii. Pathogen screens for *Pseudomonas aeruginosa*, *Enterococci*, *Listeria*, and *Salmonella* are processed daily. Please call to give notice for samples submitted for other screens (e.g. *MRSA*, *Acinetobacter baumannii*, *Candida*) so that selective agars are available for processing as orders may require 24 hour or more notice.
 - iii. Call to schedule other testing such as B.O.D., Total Suspended Solids, Total Oil & Grease, and pH.

Bottom Section – Relinquishing your samples and Notes:

11. Notes and Comments

Notes and Comments	Samples Relinquished By:	Date/Time
	Received at EST By:	Date/Time

- Please record any notes or comments as necessary in the bottom section of the COC record.

12. Relinquish Custody of the Sample Upon Shipping

- Sign at the bottom of the form in the “Samples Relinquished By” field at the bottom of the COC and record the date and time. Upon arrival at the laboratory, EST personnel will sign and date the form in the “Received at EST By” field.

GENERAL SAMPLE COLLECTION

- Collect each water sample in a clean, unused, HDPE or HDPP plastic container.
- EST offers free sample containers shipped via UPS Ground to all clients; clients pay for expedited shipping costs.
- For *Legionella* cooling tower analysis please submit minimum 100 ml of sample and for *Legionella* potable water analysis please submit minimum 250 ml of sample.
- Microbial Corrosion (MIC) tests each require ~20 ml of sample. Up to five MIC tests, *Legionella* and bacterial plate counts (Aerobic or Anaerobic) analysis can be performed from one submitted 100 ml water sample.
- Using a waterproof marker, label each container with a unique sample number corresponding to the sample site listed on the COC record. No other info is needed on the container.
- Each sample container contains a sodium thiosulfate tablet of appropriate size as recommended by the CDC to neutralize residual chlorine or bromine.
 - Take caution not to rinse the tablet out of the container during sampling.
 - Securely tighten each lid and shake sample to completely dissolve tablet.
- Dry sites or sites with little water (e.g. air handler units, condensate coils) require specialized swabs for sampling and transport; request with bottle orders.
- Point of use devices (e.g. faucet, showerheads) and their biofilms may be sampled by using a sterile dry swab submerged in a water sample from same site.
- Detailed sample instructions available at www.estechlab.com.

SAMPLE SHIPPING

- Place the COC Record in a zip-top bag to protect against water damage and include this in the package with samples.
- Securely tighten bottle caps to prevent leaking and potential cross-contamination. Electrical tape can be wrapped around bottle caps to prevent leaks.
- For best test results, ship sample overnight with packing material the day they are collected with delivery the following day to ensure same day processing.
- Rush samples must be shipped overnight to lab for morning delivery.
- Samples shipped overnight do not require cold packs; do not ship samples directly on ice.
- Laboratory hours of operation Monday through Friday 8:00 am to 5:00 pm. Saturday receipt of samples available at an additional cost. Call to arrange Saturday processing prior to collecting the samples for cost and procedure.

SHIPPING ADDRESS:

ENVIRONMENTAL SAFETY TECHNOLOGIES, INC.
1815 BROWNSBORO ROAD
SUITE 200
LOUISVILLE, KY 40206

Email: est@estechlab.com

Local Phone: 502-893-6080

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