

Chain of Custody (COC) Instructions

See Environmental Safety Technologies (EST) website at www.estechlab.com for more detailed Sample Collection Guidelines. COC forms may be downloaded under the Documents tab.

- Chain of Custody forms are provided for all clients to use in order to document sample collection, identification, location, conditions, and sample traceability.
- Fill out and submit separate COC forms for each job site or address requiring separate reports.

General Sample Collection:

- Collect each water sample in a sterile HDPE or HDPP plastic container or clean, unused, HDPE or HDPP plastic container may be used is sterile is not available.
- EST offers free sample containers shipped via UPS Ground to all clients; clients pay for expedited outbound shipping and all return shipping costs.
- For *Legionella* analysis please submit minimum 100 ml of sample for cooling towers and 250 ml for potable water.
- 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 sodium thiosulfate as recommended by the CDC to neutralize residual chlorine or bromine.
- Securely tighten each lid and shake sample to completely dissolve the powder.
- 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.

Filling Out COC Forms:

Top Section – Job Site and Collection Information



Chain of Custody Record
 Website: www.estechlab.com
 Email: est@estechlab.com

1815 Brownsboro Road; Suite 200
 Louisville, KY 40206
 (502) 893-6080 Office
 (502) 893-6088 Fax

Company Name:	Job Site / Your Client:	Page ____ of ____
Company Address:	Job Site Address:	Sampled By:
Company City, State, Zip:	Job Site City, State, Zip:	Sample Date:
Phone:	Email:	Purchase Order Number:

Company Name, Company Address, Company City, State, Zip, & Company Phone

- 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 pre-filled with your contact information for future use or call for any changes or updates to an existing form.

Phone & Email

- Results will be emailed to the person(s) designated as the report contact for your company as established upon account setup with EST. Results are not emailed directly to each representative that submits samples.
- Failure to provide contact information may delay sample processing if the laboratory needs to verify sample collection information or processing requests.

Job Site, Job Site Address, Job Site City, State, Zip

- Record the location where samples were collected, this information will appear on the report.

Sampled By

- Record who collected the sample.

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.

Middle Section - Sample Collection Information and Choosing Tests

EST Batch Number: & Login Initials <input type="checkbox"/> EST bottles + Sodium thiosulfate <input type="checkbox"/> Customer bottles <input type="checkbox"/> Samples shipped on ice packs <input type="checkbox"/> Transit Delay or other issue; See Notes		Legionella Testing		Bacteria Testing			Microbial Corrosion (MIC) Testing															
EST USE ONLY	FOR EACH SUBMITTED SAMPLE: <ul style="list-style-type: none"> Assign a unique sample number and write this number on the bottle/swab. Record each Sample # on a row below and record a Sample Site Description Check <input checked="" type="checkbox"/> all applicable boxes in each section to the right for each sample. Fill out separate COC forms for job sites/samples requiring separate reports. Overnight shipping for Legionella is recommended; 2nd day acceptable per ISO11731:2017. <i>E. coli</i> and Endotoxin samples must be shipped overnight on cold packs (no ice). Sign below and date to document relinquishing samples. 		vPCR * Non-Potable Water	vPCR * Potable Water	RUSH vPCR * 4 Hour	Cultured Non-potable Water	Cultured Potable Water	RUSH Cultured 96 Hour	Swab	HPC – Aerobic Bacteria Count	Anaerobic Bacteria Count	Total Coliform/E.coli Screen	Pseudomonas aeruginosa Screen	Waterborne PATHOGEN SCREEN	Acid Producing Bacteria	Dentifying Bacteria	Iron Related Bacteria	Slime Forming Bacteria	Sulfate Reducing Bacteria	Fluorescent Pseudomonas	Nitrifying Bacteria	Algae
	Sample #	Sample Site Description																				

Assign a Unique Sample Number for each sample submitted

- Assign each sample a unique number & label each bottle with this number, no other information is needed on the bottle if the number matches the COC.

List a Sample Site for EACH sample submitted

- For each sample collected, record a description of the sample site.
- NOTE: Cooling Towers now list as Non-Potable water on the reports. Please use the words "Cooling Tower" in your sample site if you want that sample to be labeled as a cooling tower.

Check a Legionella Turnaround for each Legionella sample submitted

- All Legionella samples processed as STANDARD (7-10 for Culture or Next Business day for vPCR) unless RUSH turnaround is requested.
 - RUSH: 96 Hour Analysis – ONLY AVAILABLE ON LEGIONELLA CULTURE SAMPLES.** Samples are processed upon arrival and results are read and reported on a workday, Monday through Friday, between 8:00-5:00 EST. After a minimum 96 hours from processing the report will be issued following the confirmation of all cultured isolates.
 - RUSH: 4 Hour Analysis – ONLY AVAILABLE ON LEGIONELLA vPCR SAMPLES.** Samples are processed upon arrival and results are reported once complete.

LEGIONELLA TESTING:

- vPCR = Viable *Legionella pneumophila* Polymerase Chain Reaction (PCR). Molecular analysis using EST's proprietary MasterMix II *Legionella* qPCR Kit and propidium monoazide to detect viable *Legionella pneumophila* serogroup 1 & *Legionella pneumophila* serogroup 2-15. Samples are reported as CFU/mL based on calculations derived from viable cells/mL which are converted by EST.
- Legionella* Culture processed on selective media and incubated at 36±2° C for 7-10 days per CDC Elite approved detection and enumeration; including *Legionella pneumophila* serogroup 1, *Legionella pneumophila* serogroup 2-14 and *Legionella* non-pneumophila species.

Check all Requested Tests for EACH sample submitted

- Please check all tests to be performed on each sample to prevent delays in processing.

OTHER BACTERIA TESTING:

Bacteria Heterotrophic Plate Counts (HPC) – Aerobic and Anaerobic

- Heterotrophic standard plate counts are obtained from samples plated on Standard Methods agar.
- Aerobic plates are incubated in the presence of oxygen at 35°C for 2-3 days.
- Anaerobic plates are incubated in the absence of oxygen at 35°C for 5-7 days.

Total Coliform/E. coli or Endotoxin Screen

- Samples must be collected in bottles or jars containing a sodium thiosulfate tablet/powder to neutralize any residual chlorine in the sample.
- A minimum of 100 ml is required for processing. Leave ½" of air space in sample container.
- Collect samples Monday through Thursday.
- Ship overnight on cold packs (not ice) for valid test results. Samples are read 24 hours after processing.
- Call to arrange for weekend analysis if samples must be collected on Friday; extra fees apply.
- Screen is for environmental wastewater only; not for certification of drinking water.

Pseudomonas aeruginosa Screen

- Samples must be collected in bottles or jars containing a sodium thiosulfate tablet/powder to neutralize any residual chlorine in the sample.
- A minimum of 100 ml is required for processing. Leave ½" of air space in sample container.

ENVIRONMENTAL PATHOGEN ANALYSIS:

- Analysis of *Pseudomonas aeruginosa* (culture), *Pseudomonas* ~~sp.~~ *sp.* (culture), *Enterococci* (Presence/Absence), *Listeria* (Presence/Absence), and *Salmonella* (Presence/Absence) in environmental samples.
- The following Environmental Pathogen Screens are available for waterborne and surface organism. Please call and notify the laboratory prior to 1:00 PM Eastern Time on the day of sampling (or before) to give notice so that selective agars may be made available for processing upon arrival the day following sample collection. The following is a list of some but not all organisms available for analyses.

Acinetobacter baumannii

Burkholderia cepacia

Sternotrophomas maltophilia

Fast-growing non-tuberculosis *mycobacteria*

Other organism screens are available upon request

MICROBIAL CORROSION (MIC) TESTING:

- Estimated populations and activity (aggressiveness) may be determined using B.A.R.T. reactors for the following: Acid producing bacteria (APB), Denitrifying bacteria (DN), Iron Related Bacteria (IRB), Slime Forming Bacteria (SLM), Sulfate Reducing Bacteria (SRB), Fluorescent Pseudomonads (FLOR), Nitrifying Bacteria (N), and algae.
- Turnaround: Samples with highly active populations may be detected within a time lag of one day; activity is monitored daily before concluding samples to be non-active for specified microbial activity, which may take up to 10 days per test.

BACTERIA AND FUNGI IDENTIFICATION:

- Identification of air, swab, bulk-liquid, and bulk-solid samples for bacteria (Genus and species) and fungi (Genus of mold, *Aspergillus* species). Counts only are provided for detected yeast colonies. These analyses can be requested in the "Other" column.

Bottom Section – Sampling Notes and Comments & Relinquishing Samples

Sampling Notes and Comments

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

- Please record any sampling notes or comments in the box on the bottom section of the COC record.

Relinquish Custody of the Sample Upon Shipping

- To officially relinquish custody of the sample prior to shipping, be sure to 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.

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.
- Ship sample overnight the day that 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 (excluding E. coli samples).
- 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 to the Laboratory

Environmental Safety Technologies, Inc.
1815 Brownsboro Road Suite 200
Louisville KY 40206

Contact Information

Email: est@estechlab.com
Phone: 502-893-6080