



***ECPHL* ERIE COUNTY PUBLIC HEALTH
LABORATORIES**

**SPECIMEN COLLECTION
and
TRANSPORT MANUAL**

***ECPHL* ERIE COUNTY 
PUBLIC HEALTH LABORATORIES**

503 KENSINGTON AVENUE
BUFFALO, NY 14214
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FAX: (716) 898-6110

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1. INTRODUCTION

Erie County Public Health Laboratories (ECPHL) provides a wide range of clinical and environmental laboratory services. Our goal is to provide each client organization with quality services and programs as reflected in our mission statement.

The Specimen Collection and Transport Manual (SCTM) details various laboratory services, contact information and many of the required elements for specimen submission. Accurate and timely laboratory results are only possible when the sample collection and submission is optimal. To that end this manual was designed to provide much of the information needed to optimize the collection and submission of specimens for testing.

We appreciate your selection of ECPHL as a provider of quality, public health diagnostic and environmental services. Our staff is available for inquiries and consultation on your testing needs and may be reached by calling the main lab at 716-898-6100.

Erie County Public Health Laboratories' Mission:

To provide proficient, cost-effective laboratory services, educational programs, method evaluations, epidemiological support and scientific study resources to the health care, laboratory, environmental sciences government and private communities of Western New York

2. ACCREDITATION

- **CLIA '88** 33D0654777 – Buffalo, NY
- **Federal I.D. Number** 16-6002558
- **Medicaid Provider Number:** 00623767

- **New York State Department of Health (NYSDOH)**

Clinical Laboratory Evaluation Program (CLEP) PFI: 1980 CODE#: 1401A100

Environmental Laboratory Approval Program (ELAP) #: 10472

Professional Affiliations

- APHL - Association of Public Health Laboratories
- NYAAEL – New York Association of Approved Environmental Laboratories
- ASM - American Society for Microbiology

Quality Control/Proficiency Testing Programs

- NYSDOH - New York State Department of Health
- CDC - Centers for Disease Control and Prevention

3. LOCATION



PUBLIC HEALTH LABORATORIES

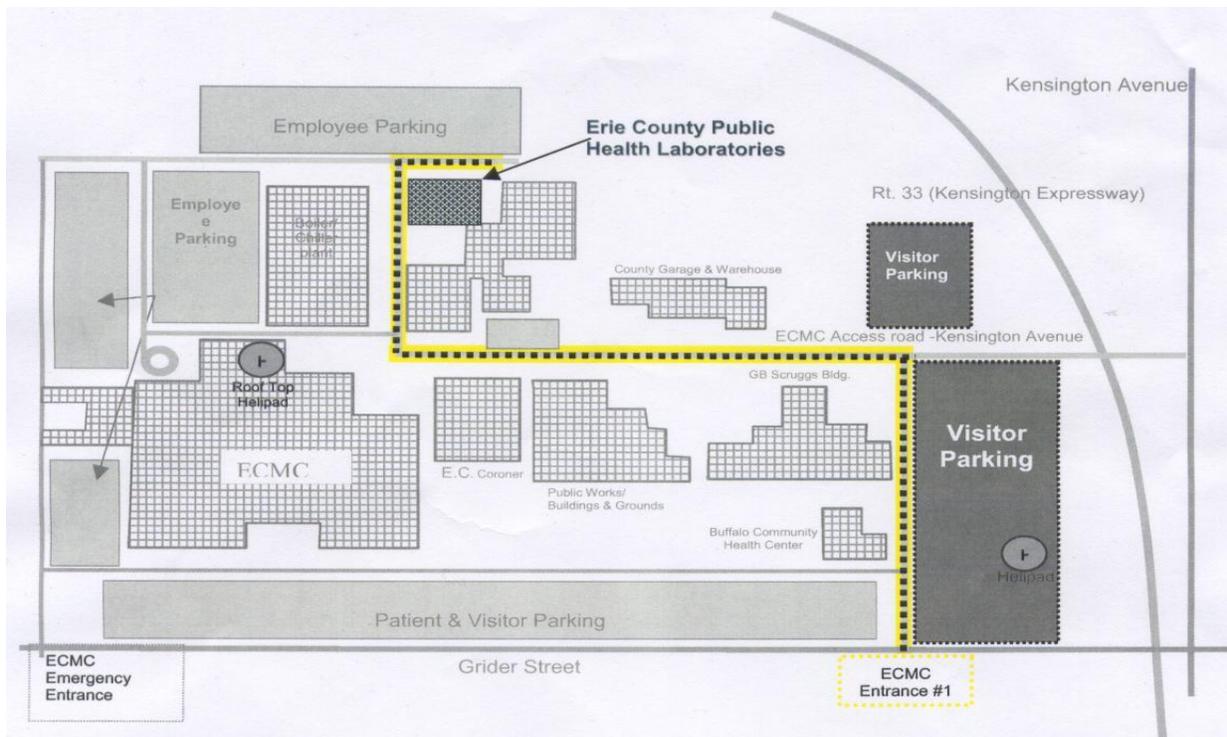
503 Kensington Avenue
Buffalo, New York 14214
Tel: (716) 898-6100
Fax: (716) 898-6110

Hours of Operation
Monday – Friday 8:30am to 4:30pm

**In the event of an emergency, call (716) 961-7898
(MERS-Medical Emergency Radio System)**

Directions from NYS Thruway (I-90):

- Traveling on the NYS Thruway, use exit 51W / Route 33W (Kensington Expressway) to downtown Buffalo.
- Proceed on Route 33W to Grider Street exit.
- Exit Route 33W and proceed through one (1) stop sign to Grider Street.
- Turn left on Grider Street and proceed through one (1) traffic signal to the Erie County Medical Center campus.
- Enter ECMC campus by turning right into the first entrance on Grider Street.
- Use the map below and follow signage to the Erie County Public Health Laboratories.



4. DEPARTMENT CONTACTS

Department	Phone	Room	Email address
Administration	716 898-6100	AA19	
Director			
Assistant Director	Scott LaPoint, MD 585 750-6574 716 626-7940	AA15	scottlapoint@gmail.com
Division Director	Keith Krabill, MD 716 462-2498 cell	AA15	kkrabill@kaleidahealth.org
	Carleen Pope 716 961-7588	AA15	carleen.pope@erie.gov
Executive Assistant (Laboratory)	716 898-6102	AA26	michael.simkins@erie.gov
Michael Simkins			
Central Receiving/Specimen Processing	716 898-6111	AA6	
Executive Assistant (Laboratory)			
Administrative Assistant (PHL)	Michael Simkins 716 898-6102 Joanne Kojm 716 961-7522	AA18	michael.simkins@erie.gov joanne.kojm@erie.gov
Clinical Public Health Lab	716 898-6116	AA11	
Chief PH Microbiologist			
	Shirley Keenan 716 898-6117	AA14	shirley.keenan@erie.gov
Emerging Infections and Biodefense			
	Carleen Pope 716 961-7588		carleen.pope@erie.gov
Environmental Health Lab	716 961-7520	AA21	
Senior Sanitary Chemist			
Sanitary Chemist	Gerhard Paluca 716 898-6118 Bryan Hill 716 961-7578	AA23 BB123	gerhard.paluca@erie.gov bryan.hill@erie.gov

5. GUIDELINES FOR SPECIMEN/SAMPLE COLLECTION AND HANDLING

The following general guidance is applicable to both clinical specimen and environmental sample collection. The following fundamentals should be considered when sending samples for laboratory analysis:

1. The sampling material must be truly representative of the site of interest. For clinical material it is the site of optimal recovery; for environmental material it is a homogenous sample.
2. Sufficient quantity of sample must be obtained.
3. The appropriate collection devices and sample containers must be used. Many contain preservatives or additives that ensure optimal holding and recovery of the analyte of interest.
4. Storage and transport conditions must be followed for optimal analysis.

The laboratory strongly encourages communication from the sender before the sample is received in the laboratory especially for new or “nonroutine” requests. This ensures guidance for proper specimen collection is up-to-date and correct. In an effort to provide accurate and timely results the laboratory reserves the right to reject specimens not properly collected, contained or transported.

Collection Materials

Specimen containers and supplies are provided by the laboratory according to the following table. Materials not listed below are deemed containers that may be supplied by clinics or commonly submitted by clients. Requests for collection materials can be made in person at the laboratory receiving area or by phone to **ECPHL Central Receiving at 716 898-6111**.

Clinical PH Testing

Clinical lab requisition
 Enteric transport cups
 JEMBEC culture plates
 NAAT swabs, male/female
 NAAT urines, male/female

 SST venipuncture tubes*
 Specimen transport bags*
 Viral transport tubes

Environmental Sampling

Environmental lab requisition
 Alkalinity bottle
 Beach
 BOD, COD, Residue 1 Quart Bottle
 Coliform testing Colilert Bottles – Sterile, with sodium thiosulfate

 Colilert bottles
 Cyanide Sodium hydroxide at pH=12
 Fluoride No preservative
 Nitrite
 Haloacetic acid 250mL amber bottle
 Inorganics No preservative – Chloride, Color, Residue

 Metals Nitric acid at pH less than 2.0
 Nitrate, chlorinated
 Nitrate, non-chlorinated
 Swimming pools
 Volatile Organic Compound 2-40mL amber vials and a
 (VOC) dropper bottle with HCl
 THM 2-40mL amber vials; Does not require HCL

* for designated providers

Acceptance / Rejection Criteria

The laboratory will examine and analyze only those samples/specimens for which it holds a NYS Permit for Testing or Certificate of Approval. In addition, the laboratory will only accept specimens at the request of persons authorized by law to use the findings of the laboratory examination in their practice or performance of their official duties.

Rejection criteria depend on several factors: the sample/specimen received, the test ordered and the laboratory policy. Determining the acceptable condition of a specimen is often a judgment call based as much on good laboratory practice as on objective assessment of the sample. In addition to the specific criteria listed below a specimen should NOT be tested if

- The apparent condition of the specimen indicates that it is unsatisfactory for testing or it is inappropriate for the test requested.
- It has been collected, labeled, preserved or otherwise handled in such a manner that it is unreliable for testing.
- It is perishable, that is, the time has lapsed between collection and receipt rendering the sample unreliable.
- The date or time of collection is not furnished to the lab for those tests that require it.

When a specimen is deemed unacceptable for testing the laboratory will promptly notify the sender and give the reason for rejection.

Rejection criteria applicable to all submissions include:

1. Requests for non-permitted laboratory tests.
2. Unlabeled, mislabeled, mismatched identification on container or requisition.
3. Incomplete information on requisition.
4. No sample/specimen received.
5. Improper, leaking or compromised sample container.
6. Quantity insufficient for testing.
7. Specimen receipt that exceeds the allowable time limit for testing.
8. Laboratory accident preventing analysis.

Additional rejection criteria related to specific tests and sources are listed in each laboratory section.

Laboratory Requisition and Specimen Labeling

All requests for testing are written not verbal. Laboratory requisitions both clinical and environmental serve as the written request and provide necessary information and identification for testing. Incomplete requisitions may require follow-up phone calls and can delay the start of testing.

Requisitions can be printed from the laboratory website:

http://www.erie.gov/health/services/public_health_lab.asp

Clinical specimen labeling includes the following and MUST match the completed lab requisition:

- Last name, First name
- Date of birth
- Date of collection

Environmental sample requisition must include:

- Complete sampling address
- Submitter name and address
- Complete sample description – see requisition.

Packaging and Transport

Appropriate packing and shipping of specimens is designed to follow all applicable federal and state regulations and to provide for the safety of all who come in contact with the samples.

Test Referral for Supplemental or Confirmatory Testing

Tests that are listed on the clinical and environmental ECPHL requisitions are performed on-site. On occasion it may be necessary for a sample or specimen to be referred to another laboratory for testing not performed on-site or for confirmation. The following guidelines are in effect:

1. Samples/specimens will either be returned to the submitter, if it is determined that the request was sent by mistake or referred to NYS accredited laboratories to perform the additional work.
2. Tests that are currently referred will be listed in the SCTM.
3. The laboratory report will contain the name of the testing lab and its NYS identification number as well as the test result. Referral lab contact information will be available on request for any inquiries.

The referral laboratories in current use include:

Erie County Medical Center
Laboratory Medicine
462 Grider Street
Buffalo New York 14215
PFI# 2009

Wadsworth Laboratories
David Axelrod Institute
120 New Scotland Avenue
Albany New York 12208

Referrals:

- AFB smear
- TB culture
- TB susceptibility

Referrals:

- Bacterial Isolates for confirmation
- HIV-1 RNA
- Influenza variants

Turn Around Time

Laboratory turn around time (TAT) is the time from receipt of the specimen until testing results are available. The laboratory monitors this as a quality assurance measure to providers and clients. It is recognition of the necessity for timely reporting.

Clinical Public Health Testing

General Elements

Clinical laboratory tests are conducted on specimens from a human source for the diagnosis or surveillance of human illness. These laboratory tests are regulated by NYSDOH CLEP which has deemed approved status for federal CLIA regulations. In addition, clinical laboratory testing must be performed by NYS licensed clinical laboratory technologists.

Specimen Collection by Body Site

The following procedures are designed as guidelines for the collection of human specimens for Erie County Public Health Laboratory analysis. Most collection procedures are considered invasive. As such, the procedures should always be performed by trained, experienced medical personnel. Individual collection methods may vary according to training but the following procedures highlight the basic steps to follow when collecting human specimens.

In addition, *standard precautions* must be followed for the safety of patient and healthcare personnel. ‘Standard precautions’ refers to a set of practices used to prevent the transmission of infectious diseases. It applies to specimens from all individuals whether or not they appear infectious or symptomatic. Personal protective equipment (PPE) should be worn according to the policy and procedures of the facility. Depending on the risk assessment and the specimen being collected PPE should include:

- disposable exam gloves
- protective clothing: fluid resistant lab coat/smock
- eyewear, safety glasses
- respiratory barriers, face masks

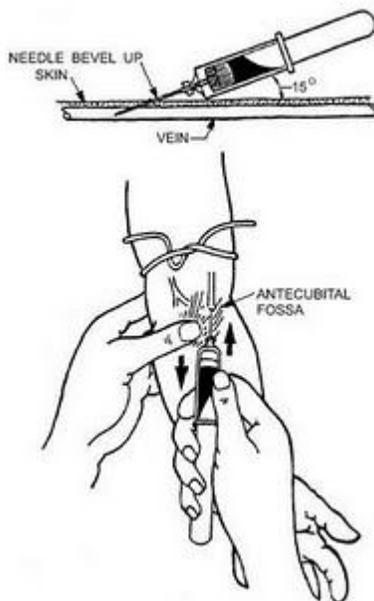
Laboratory analysis greatly depends on a properly collected, stored and transported specimen. In general, the sooner a specimen arrives in the testing laboratory the quicker the results and more accurate the analysis will be. However, appropriate storage and transport can be maintained when immediate delivery is unavailable. The following instructions are guidelines and may represent the optimum conditions. If there is an expectation that optimum collection, storage or transport conditions can not be met, contact the laboratory for further instructions. The prime objective is a properly maintained specimen for laboratory analysis.

Blood - Whole blood by venipuncture, including requests for plasma and serum

Intended Use	Clinical chemistry: Alkaline Phosphate, ALT, AST, Bilirubin Hepatitis, HIV1-2, HSV-2, Syphilis EIA, RPR, TPPA
Container	Vacutainer: SST-marble top-preferred, red top- acceptable
Method	Venipuncture, phlebotomy
Labeling	Patient's last, first name; date of birth, date of collection.
Storage	At room temp <8 hrs; refrigerated 1-2 days
Transport	ASAP or within 1-2 days
Comments	Performed by trained medical personnel
Materials	Safety needles, tourniquet Antiseptic, 70% isopropyl alcohol wipes Sharps disposal container Bandages or cotton balls and tape for patient

Procedure

1. Identify the patient with name and date of birth.
2. Assemble all materials, including labels and requisition.
3. Select the site for venipuncture. Position the seated patient with arm extended from shoulder or slightly bent on a table surface. Use the cephalic or median cubital veins.
4. Apply the tourniquet about three inches above the selected site. Instruct patient to make a fist so vein dilates. Vein should spring back when tapped.
5. Sterilize the site with alcohol wiping in a circular motion from the center of site to the outside.
6. With bevel of needle up, insert the needle swiftly through the skin into the selected vein at a 15 to 30 degree angle. Once into vein push vacutainer tubes onto the needle and fill each tube completely.
7. While drawing last tube, remove tourniquet. Finish drawing last tube, withdraw needle placing cotton over needle site and apply pressure once needle has been removed. Maintain pressure until bleeding has stopped and apply bandage to patient.
8. LABEL all tubes with patient's first and last name, DOB and date of collection.
9. Transport or store appropriately.



Cervical, Endocervical

Intended Use	Nucleic Acid Amplification Test (NAAT), GC Culture, Gram stain
Container	BD Dry Transport Swab Kit, JEMBEC, microscope slide
Method	Internal exam
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Room temp <8 hrs, refrigerator 1-2 days; JEMBEC incubated 34-36°C
Transport	Within 1-2 days
Comments	Performed by trained medical personnel

Materials	Speculum Sterile swab: Dacron, rayon or cotton with plastic or aluminum shafts. BD Female Swab kit (pink) JEMBEC plate system Microscope slide
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Procedure

1. Prepare the female patient for an internal pelvic exam.
2. Moisten the speculum with warm water; lubricants are toxic to *Neisseria* sp.
3. Remove excess mucous from the cervical os with a cleaning swab.
4. Insert the specimen swab into the cervical canal and rotate for 15-30 sec.
5. Withdraw the swab carefully avoiding contact with the vaginal mucosa. Inoculate as follows:
 - a. For NAAT: Using the BD kit, place cap and swab into the transport tube and cap tightly. Label and transport
 - b. For GC culture: Gently roll swab onto the surface of a JEMBEC plate. Place the tablet (sodium bicarbonate/citric acid) into the well. Label the plate and place it into the zipper lock bag and incubate at 34-36°C or transport to the laboratory.
 - c. For Gram stain: gently roll swab onto the center of glass microscope slide, with the frosted edge up. Air dry, label and transport to laboratory in protective slide holder.

Feces/Stool

Intended Use	Enteric culture
Container	Stool collection kit – ECPHL provided
Method	
Labeling	Patient’s last, first name; date of birth, date and time of collection.
Storage	Refrigerate after collection
Transport	Within 3 days of collection
Comments	Patients can self collect.
Materials	Sterile cup with transport media Disposable spatula Patient ID label and instructions Plastic wrap or plastic-coated disposable plate

Procedure

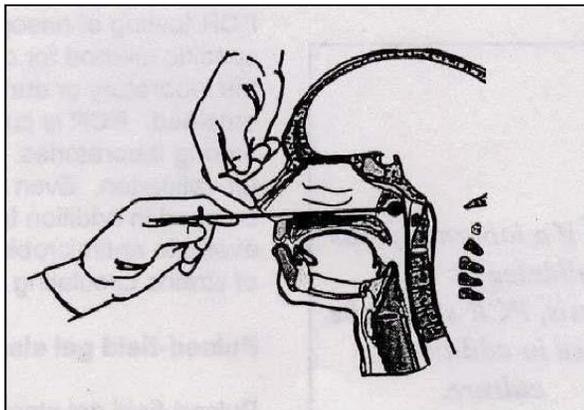
1. Instruct patients who can, to excrete directly into the cup. Do not take specimen from the water in the toilet or to allow urine to contaminate the specimen.
2. Alternately, loosely attach plastic wrap to the sides of the toilet between the patient and the water in the bowl or float a disposable plastic –coated (Styrofoam) plate in the toilet bowl.
3. After defecation, use the disposable spatula to place approximately 10-20 grams of the specimen into the transport cup. Specimen volume should be the size of a small egg.
4. Cap specimen tightly, label and transport to the laboratory immediately or refrigerate and deliver within three days of collection.

Nasopharyngeal

Intended Use	Influenza A & B; Bordetella
Container	Viral Transport media (VTM)
Method	
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Freeze (-20°C) after collection
Transport	Within 7 days
Comments	Performed by trained medical personnel
Materials	Sterile Dacron or rayon swab with plastic or aluminum shaft Viral transport media in screw-cap tubes

Procedure

1. Remove the excess mucous by having the patient gently blow his nose.
2. With patient's head against a wall or firm surface, insert the swab into one nostril and proceed straight back until it reaches the nasopharynx. The length from the nose to the ear gives an estimate of the distance the swab will travel. Do not force. If there is an obstruction try the other nostril.
3. Rotate the swab gently for 5-10 seconds to loosen epithelial cells.
4. Remove swab and place in VTM. Break or bend the swab to fit into the tube. Cap tightly and label with patient identity.
5. Store frozen until transport.



Rectal

Intended Use	GC culture
Container	JEMBEC or Culture swab
Method	
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Incubated 34-36°C
Transport	Within 1-2 days
Comments	Performed by trained medical personnel
Materials	Sterile swab: Dacron, rayon or cotton with plastic or aluminum shaft JEMBEC plate system

Procedure - JEMBEC

1. Prepare the patient for collection procedure.
2. Gently insert the swab 1-2 cm beyond the anal sphincter, rotate it swabbing the anal crypts. Remove swab, avoiding fecal contamination as much as possible.
3. Inoculate the JEMBEC plate by rolling the rectal swab onto the media. Place the bicarbonate tablet in the well, label the bottom of the plate with the patient identity and place the covered plate into the zipper lock bag.
4. Incubate at 34-36°C until transport to the laboratory.

Procedure – Culture Swab

1. Prepare the patient for collection procedure.
2. Using the culture swab unit, gently insert the swab 1-2 cm beyond the anal sphincter, rotate it swabbing the anal crypts. Remove swab, avoiding fecal contamination as much as possible.
3. Place swab into plastic holder, label with patient identity and transport to the laboratory.

Throat

Intended Use	GC culture
Container	JEMBEC or Culture swab
Method	
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Incubated at 34-36°C
Transport	Within 1-2 days
Comments	Performed by trained medical personnel
Materials	Sterile swab: Dacron, rayon, or cotton with plastic or aluminum shaft Tongue depressor JEMBEC plate system

Procedure for JEMBEC

1. Position patient for throat collection.
2. Use the depressor to hold tongue down and locate areas of inflammation or exudate.
3. Firmly rub the swab over posterior pharynx.
4. Withdraw the swab, avoiding any contact with cheek, teeth, gums or tongue.
5. Inoculate JEMBEC plate, rolling swab over the surface of media, add bicarbonate tablet to well, label the bottom of the plate with the patient identity and enclose covered plate in zipper lock bag.
6. Incubate 34-36°C until transport to the laboratory.

Procedure for Culture Swab

1. Position patient for throat collection.
2. Use the depressor to hold tongue down and locate areas of inflammation or exudate.
3. Firmly rub the swab over posterior pharynx.
4. Withdraw the swab, avoiding any contact with cheek, teeth, gums or tongue.
5. Replace inoculated swab into the original plastic holder, label with the patient identity and transport to the laboratory.

Urethral

Intended Use	NAAT, GC culture, Gram stain
Container	BD urethral swab, JEMBEC
Method	
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Refrigerate urine, Incubate JEMBEC
Transport	Within 1-2 days
Comments	Performed by trained medical personnel
Materials	Sterile swab: Dacron, rayon or cotton, with plastic or aluminum shaft BD Male Swab kit (blue), JEMBEC plate system Microscope slide

Procedure

Note: Patient should not have urinated one hour before collection. Material from a site about 2 cm inside the urethra or expressed exudate is the specimen of choice.

1. Clean external skin flora of urethral meatus.
2. Strip the urethra toward the orifice to express the exudate and collect on a swab.
3. Alternately, insert a thin calcium alginate swab into the urethra 1-2 cm, gently rotate,
4. Withdraw the swab and inoculate as follows:
 - a. For NAAT: Using the BD kit, place cap and swab into the transport tube and cap tightly. Label and transport
 - b. For GC culture: Gently roll swab onto the surface of a JEMBEC plate. Place the tablet (sodium bicarbonate/citric acid) into the well. Label the plate and place it into the zipper lock bag and incubate at 34-36°C or transport to the laboratory.
 - c. For Gram stain: gently roll swab onto the center of glass microscope slide, with the frosted edge up. Air dry, label and transport to laboratory in protective slide holder.

Urine

Intended Use	Nucleic Acid Amplification Test (NAAT), pregnancy testing
Container	Sterile cup with screw-cap
Method	First void
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	Refrigerate 1-2 days
Transport	Within 2 days
Comments	Patient collected or by trained medical personnel
Materials	Sterile cup with screw-cap

Procedure

Note: Patient should not have urinated one hour before collection.

1. Do not remove the beads or the liquid preservative in the cup (if present).
2. Collect the first 15-60mL of voided urine. Use line on cup as guideline, do not overfill.
3. Cap tightly, label with patient identity, store refrigerated until transport to laboratory.

Vaginal

Intended Use	Wet Prep
Container	Microscopic slide with protective holder
Method	
Labeling	Patient's last, first name; date of birth, date and time of collection.
Storage	None
Transport	To on-site lab within 15 minutes
Comments	Performed by trained medical personnel
Materials	Glass microscope slides, and cover slips Protective slide holders Sterile saline

Procedure

1. Prepare the patient for an internal examination.
2. Using a speculum and a sterile swab, obtain the specimen from the posterior vaginal vault. If the hymen is intact a swab of the vaginal orifice is sufficient.
3. Allow the exudate to absorb onto the swab for a few seconds.
4. Dab the swab onto the slide under the frosted area, removing an adequate amount of vaginal material from swab to slide.
5. Immediately add one drop of saline to vaginal material. **AVOID** touching the specimen with the saline dropper.
6. Place slide with moist vaginal specimen into the slide holder and deliver to the on-site laboratory within 15 minutes of collection.

Clinical Testing Chart

KEY

- SST/gold: Serum separator tube, gold top.
- Venipuncture: whole blood, serum or plasma.
- CB -Cary-Blair
- JEMBEC – John E. Martin Biological Environmental Chamber
- VTM – Viral transport Media
- SA – Select Agent

Note: Multiple tests using serum can be performed on one full SST.

Code	Test Name	Method	Source	Container/Qty provided by LAB	Storage	Transport	TAT (days)	Rejection Criteria In addition to p.7
BACTERIOLOGY								
	Bacterial isolate, Rule-out Prior Notification Needed	LRN/PCR SA Rule-out	Isolate	Culture tube-5mL slant	Room temp	24 hrs	3 days	Uninoculated
	Culture, Enteric	Culture	Feces, Stool	CB transport 10-20 grams	Refrigerate	1-3 days	7 days	Greater than 72 hrs after collection
GC	Culture, <i>N. gonorrhoeae</i>	Culture	Cervical, Rectal Throat, Urethral Vaginal	JEMBEC or culture swab	Room temp & Incubate	1-3 days	7 days	Expired, frozen or dehydrated media; no CO2 pellet; refrigerated.
CLINICAL CHEMISTRY								
								Hemolyzed or lipemic
ALK	Alkaline Phosphatase	Enzymatic	Serum	SST	Refrigerate	24 hrs	3 days	
ALT	Alanine transaminase	Enzymatic	Serum	SST	Refrigerate	24 hrs	3 days	
AST	Aspartate transaminase	Enzymatic	Serum	SST	Refrigerate	24 hrs	3 days	
TBIL	Bilirubin, total	Photometric	Serum	SST	Refrigerate	24 hrs	3 days	
DIAGNOSTIC IMMUNOLGY								
								Receipt 7 days after collection
HBsAb	Hepatitis B surface antibody	EIA	Serum	SST	Refrigerate	1-3 days	7 days	
HBsAg	Hepatitis B surface antigen	EIA	Serum	SST	Refrigerate	1-3 days	7 days	
HCV	Hepatitis C antibody	EIA	Serum	SST	Refrigerate	1-3 days	7 days	
HIV	HIV-1,2 antibody	EIA	Serum	SST	Refrigerate	1-3 days	7 days	
	Multispot confirmatory							
HSV-2	Herpes Simplex Virus-2 type specific	EIA	Serum	SST	Refrigerate	1-3 days	7 days	
SYPH	Syphilis	EIA/RPR/TPPA	Serum	SST	Refrigerate	1-3 days	7 days	

MOLECULAR MICROBIOLOGY								
FLU	Influenza AB (A subtyping)	PCR	Nasopharyngeal Nasal swab	VTM, 2mL	Freeze	1-3 days	7 days	
BORD	Bordetella	PCR	Nasopharyngeal Nasal swab	VTM, 2mL	Freeze	1-3 days	7 days	
NAAT	Nucleic Acid Amplification Test for CT and NG	Strand displacement amplification	Endocervical Urethral Urine	Female/Male kit Sterile cup, minimum 30mL	Refrigerate	1-3 days	7 days	Receipt 7 days after collection.

REFERENCE RANGES

The reference range for each clinical chemistry test is listed below. This range is the 95th percentile of results from a study of apparently healthy individuals. The number tested and the gender distribution varies according to each analyte and is listed in the manufacturer’s package insert.

ANALYTE	REFERENCE RANGE
Alkaline Phosphatase	Male: 40–129 U/L Female: 35-104 U/L
ALT (alanine aminotransferase)	Male: <41 U/L Female: <33 U/L
AST (aspartate aminotransferase)	Male: <40 U/L Female: <32 U/L
Total Bilirubin	Adults <1.2 mg/dL

Critical Values

TEST NAME	Critical Low (= or <)	Alert Low (= or <)	Alert High (= or >)	Critical High (= or >)
AST (SGOT)			500 U/L	
ALT (SGPT)			500 U/L	
Bilirubin, Total			12.0 mg/dL	15 mg/dL (<2 mo)

Critical Value - An abnormal patient test result that may be potentially life-threatening. A test result in the critical range as listed in the table above requires:

1. Confirm the results by repeating and/or diluting.
2. Telephone the results to the patient’s physician.

Alert Value - A patient’s test result approaching critical value. The laboratory will notify the physician via hardcopy report.

Emerging Infections and Biodefense

General Elements

The ECPHL Emerging Infections and Biodefense Laboratory serves Erie County and the western 16 counties of New York as a Biological Reference Level laboratory within the Laboratory Response Network (LRN). The laboratory analyzes environmental samples for the identification of biothreat agents as directed by the LRN under permit through the **NYSDOH ELAP** regulatory agency. For environmental samples the analysis is bacterial culture and PCR for *Bacillus anthracis*, *Francisella tularensis*, *Yersinia pestis*, *Brucella* spp., *Burkholderia* spp., Orthopox virus and Ricin toxin. In addition, the laboratory analyzes clinical isolates for the rule-out of biothreat agents submitted by sentinel laboratories under permit through **NYSDOH CLEP**. Analysis of biothreat culture isolates for PCR and culture include *Bacillus anthracis*, *Brucella* spp., *Francisella tularensis* and *Yersinia pestis*. **Note:** This is specialized testing requiring laboratory preparation and trained personnel.

It is important to notify the laboratory prior to collection.

Environmental Sample Collection

- Environmental samples include **direct** samples of small (less than 1 cubic foot) biothreat material such as powders, liquids or small particles and **indirect** samples such as swipes of larger environmental surfaces.
- All samples are collected by trained and experienced HAZMAT specialists who follow the NYSDOH CODE RED sampling protocol ([see attachment #1](#)).
- The decision to collect samples should follow a risk assessment by law enforcement or authorized local health officials and a determination of ‘credible threat’ that follows the NYS Guidance on Initial Response to a Letter/Container Containing a Suspicious Substance and /or Threat Statement ([see attachment #2](#)).
- Samples submitted for analysis are considered legal evidence for law enforcement purposes and will follow chain of custody (COC) requirements.
- The laboratory will only accept samples for analysis that it is permitted to perform. In addition, the submitted samples **must be screened** for radiological, chemical, and explosive hazards before acceptance into the laboratory.
- It is strongly advised that all submitting agencies **contact the laboratory prior** to sample collection both as notification for laboratory testing preparation and to ensure that proper methods of collection are followed.

Collection Material

- Personal Protective Equipment (**PPE**)
 - Gloves, minimum 2 per sample
 - Respirators, N95
 - Protective clothing as necessary.
- Permanent marker for sample labeling
- Evidence tape
- Sterile 2” x 2” Dacron gauze pads
- Sterile water or saline in 6oz/10mL vial

- Zippered plastic bags, minimum 3 per sample.
- Sterile spatula, scoop etc.
- Large rigid transport container, plastic or cardboard.
- 0.5% **bleach**, freshly diluted 1:10. (1 part bleach to 9 parts water).
- **Laboratory requisition or COC** form for each submitted sample.

Collection Procedure

Collectors must be trained in CODE RED Biothreat sample collection or equivalent procedures prior to beginning threat assessment and sample collection. CODE RED sample collection should be performed as a two-person team consisting of a **Collector** (considered dirty) and a **Facilitator** (considered clean). If the collection area requires HAZMAT containment, **pre-label** the specimen containers as much as possible. It is very important if more than one sample is collected at the scene that each item is labeled for identification.

The following is an annotated collection procedure from CODE RED:

1. In a clean area, outside the contaminated zone, don 2 layers of sterile, disposable gloves, N95 respirator and all protective clothing deemed necessary.
2. For **Envelopes**: Collector will directly place item into zippered bag held open by Facilitator. Do not try to remove excess air from bag. Proceed to Step 5.
3. For **Bulk powder samples**: Collector will use a card and dry swab to move powder to a collection cup or bag held open by Facilitator. Proceed to Step 5.
4. For **Surface swipe samples**: Collector will use moist swab for small surfaces or moist gauze for larger areas. Use a gentle back and forth sweeping motion to cover the surface. Place swab or swipe into the cup or tube and place that container into a zippered bag. Proceed to Step 5.
5. Wipe the outside of the bag with the disinfecting bleach solution and place it in a second zippered bag and seal. Remove first layer of gloves and dispose properly.
6. Again wipe outside of second bag and place into a 3rd zippered bag and seal.
7. Place the triple contained sample into a rigid-walled transport container, sealing with evidence tape.
8. Complete the laboratory requisition and chain of custody forms with all pertinent information.
9. Dispose of PPE properly or send to the laboratory for disposal.
10. It is expected that law enforcement will transport the samples and the completed forms to ECPHL for testing.

Clinical Specimen Collection

ECPHL will also accept clinical specimens for rule-out testing targeting *Bacillus anthracis*, *Brucella* spp., *Francisella tularensis*, and *Yersinia pestis* by PCR and subculture. These specimens must be submitted as a bacterial isolate on an agar slant or plate. Submission of direct clinical matrices will be available in 2015 (call the laboratory for information).

1. Notify ECPHL that a culture isolate from a clinical/patient source is being submitted for a rule-out of biothreat agents.
2. Include all results of testing performed by the submitting sentinel laboratory and complete an ECPHL laboratory requisition with all patient information and anatomical source. Please include the submitting laboratory contact information and the physician name and contact information.
3. Culture isolate should be grown on blood or chocolate agar, on a plate taped closed or on an agar slant in a screw capped tube. Place item in a zippered bag, decontaminate the outside with 0.5% freshly made bleach.
4. Place in a second zippered bag and then in a rigid transport carrier and deliver to the laboratory for testing.

If a biothreat agent is presumptively identified, the submitting sentinel laboratory is responsible to collect and secure all subcultures and aliquots of the specimen as required by the Federal Select Agent Rule.

Environmental Testing

General Elements

The Environmental Health Laboratory performs testing for the following:

Drinking Water

1. Bacterial Analysis
2. Mineral Content
3. Trace Metal Content
4. Trace Organics

Environmental Water

1. Bacterial Analysis
2. Mineral Content
3. Biological or Chemical Demand
4. Oil and Grease / Total Petroleum Hydrocarbons
5. Residue

Sample Collection Procedures

The laboratory will supply appropriate sample containers for all requested testing and will **ONLY** accept samples containers meeting test requirements as stated in the following procedures.

Coliform Testing

Container	Coliform / Colilert bottle
Contents	Sterile, with sodium thiosulfate
Notes	Do not open until ready to sample

Direction for Sampling

1. Select a sample point, the faucet that is representative of the service throughout the location. Do not choose a faucet connected to a storage tank. In addition, choose a site that looks clean.
2. If faucet is a *mixing type*, that is one handle, carefully remove the faucet screen or aerator, if possible. Do NOT force removal.
3. Open cold water faucet and allow water to run for at least 2-3 minutes or sufficient time for service line to clear. If faucet is mixing type, run hot water for 2 minutes followed by cold water for 2-3 minutes. NOTE: If sample is collected from a well fitted with a hand pump, pump water for about 5 minutes before collection.
4. Reduce flow of water to avoid splashing.
 - a. Unscrew cap but do not place it on the surface to avoid contamination.
 - b. Sample bottle contains a powder that will remove residual chlorine, if present. **DO NOT RINSE OUT BOTTLE!**
5. Fill the bottle just over the molded fill line that surrounds the bottle, cap immediately.
6. Bring sample to the testing laboratory by 2:00 PM the day of collection or refrigerate and deliver the next day. Sample must be processed **within 24 hrs of collection.**
7. Complete a requisition for each sample bottle including
 - a. Date and Time of collection
 - b. Name of collector
 - c. Sample location (address and location with the residence (i.e. kitchen)
 - d. Billing address

Note: For questions please call (716) 898-6100

Haloacetic Acids in Drinking Water

Container 250mL amber bottle

Notes Sample bottle contains preservative. Do not open until ready to sample

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes, such as the kitchen faucet. Allow the water to run for at least 1 minute.
2. Unscrew the sample bottle cap, then immediately and slowly fill to the neck of the sample bottle being careful not to let the preservative out of the bottle.
3. Slowly screw the cap back on the bottle and deliver it to the testing laboratory.
4. Complete a requisition for each sample bottle including:
 - a. Date and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen”)
 - d. Billing address

Note: For questions please call (716) 898-6100

Note: Common practice dictates collection of the sample after 2-3 minutes of flushing the faucet. The use of a Trip Blank (a contaminant-free water sample provided by the lab) is to compensate for any environmental contaminants that may be present during the transport and collection of samples between the sample source and the laboratory.

Inorganics in Drinking Water

Container Inorganics

Notes Used for sampling for the following tests:
Color, Total Dissolved Solids, Calcium Hardness, Chloride, Fluoride, ortho-Phosphate, and Sulfate

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes, such as the kitchen faucet.
2. Turn on faucet and let cold water flush for 2-3 minutes.
3. Unscrew sample bottle and slowly fill to the shoulder of the bottle just below the threaded portion of the bottle neck.
4. Screw cap back on the sample bottle and promptly deliver to testing laboratory in cooler containing ice. If sample cannot be delivered on the day of collection, place sample in refrigerator and keep cold until transport to the laboratory in a cooler on ice.
5. Complete a requisition for each sample bottle including:
 - a. Date and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen”)
 - d. Billing address

Note: For questions please call (716) 898-6100

Note: Color and ortho-Phosphate require analysis within 48 hours of collection.

Lead or Metals in Drinking Water

Container	Metals bottle
Contents	Nitric acid , pH <2
Notes	Sample bottle is precleaned in lab. Do not open until ready to sample

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes, such as the kitchen faucet.
2. Unscrew the sample bottle cap and turn on the faucet, immediately fill the sample bottle up to the shoulder of the bottle just below the threaded portion of the neck.
3. Screw the cap back on the bottle and deliver the sample to the testing laboratory within one week from collection. The result generated from this sample will reflect possible lead contamination from this faucet only.
4. An optional second sample may be collected from the same faucet after allowing the faucet to flush for 2-3 minutes.
5. Complete a requisition for each sample bottle including:
 - a. Date and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen”)
 - d. Billing address

Note: For questions please call (716) 898-6100

Note: Common practice dictates collection of an initial sample (immediately upon opening the faucet) and a second sample after 2-3 minutes of flushing the faucet. The initial sample represents potential lead contamination from the faucet, whereas the flushed sample represents lead contamination from your well or municipal service line.

Nitrates or Nitrites in Drinking Water

Container Nitrate and nitrite bottle

Notes Sample has an allowable hold time of 48 hours, and laboratory can only accept samples Monday through Thursday, so choose day where sample can be delivered after collection.

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes (ex. kitchen faucet).
2. Turn on faucet (cold water) and let flush for a few minutes.
3. Unscrew sample bottle and **slowly** fill sample bottle to the shoulder of the bottle just below the threaded portion of the bottle neck.
4. Screw cap back on the sample bottle and return to laboratory **in a cooler containing ice.**
5. Complete a requisition for each sample bottle including:
 - a. Name and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen”)
 - d. Billing address

Note: For questions please call (716) 898-6100

THM Compounds in Drinking Water

Container Two 40mL amber vials

Notes Two 40ml sample vials are pre-preserved in the lab. Do not open either vial until ready to sample.

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes (ex. kitchen faucet). Allow that water to run for at least one minute.
2. Unscrew sample bottle cap, then immediately and slowly fill the first sample vial until it is just about to overflow.
3. Slowly screw cap back on the sample vial to prevent air bubbles in the vial.
4. Repeat the process explained in steps 1 thru 3 for the second sample vial.
Note: Invert vial and verify that no air bubbles are present. If air bubbles are noticed, repeat step 2 thru 3, slowly adding a few drops of water to vial until no air bubbles are noticed.
5. **Transport vials to laboratory in cooler containing ice.**
6. Complete a requisition for each sample bottle including:
 - a. Name and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen”)
 - d. Billing address

Note: For questions please call (716) 898-6100

NOTE: Common practice dictates collection of two sample vials after 2-3 minutes of flushing the faucet. The use of a Trip Blank (a contaminant-free water sample provided by the lab) is to compensate for any environmental contaminants that may be present during the transport and collection of samples between the sample source and the lab.

Volatile Organic Compounds in Drinking Water

Container Two 40mL amber vials and a dropper bottle of HCl

Notes Two 40mL sample vials are pre-preserved in the lab. A small dropper bottle containing dilute **hydrochloric acid** is obtained with the sample vials. Do not open either vial until ready to sample

Directions for Sampling

1. Select a sample point that is used mainly for drinking and cooking purposes such as the kitchen faucet. Allow the water to run for at least 1 minute.
2. Unscrew the sample bottle cap, then immediately and slowly fill the first sample vial half way. Cautiously, add 5 drops of hydrochloric acid and continue filling the vial until it is just about to overflow. (*Use hydrochloric acid with caution as it burns skin when spilled*).
3. Slowly screw cap back on sample to prevent air bubbles in the vial and deliver to testing laboratory along with the hydrochloric acid dropper bottle.
4. Repeat the process in steps 1 through 3 for the second sample vial.
5. **Transport vials to laboratory in cooler containing ice.**
6. Complete a requisition for each sample bottle including:
 - a. Name and time of collection
 - b. Name of collector
 - c. Sample location (address and location within the residence; i.e. “kitchen)
 - d. Billing address

Note: For questions please call (716) 898-6100

Note: Common practice dictates collection of two samples vials after 2-3 minutes of flushing the faucet. The use of a Trip Blank (a contaminant-free water sample provided by the lab) is to compensate for any environmental contaminants that may be present during the transport and collection of samples between the sample source and the laboratory.

Environmental Testing Chart - Sample: Drinking Water

Code	Test Name	Method	Container (provided by ECPHL)	Storage	Allowable time Collection to test	TAT	Rejection Criteria
BACTERIOLOGY							
TC	Total coliform-E.coli	Colilert	Sterile with sodium thiosulfate, Bottled water	2-6°C	30 hrs	18-24 hrs	More than 30 hrs old
SPC	Standard Plate Count	Pour plate	Sterile with sodium thiosulfate, Bottled water	2-6°C	8 hrs Dialysis-24 hrs	2-3 days	More than 8 hrs old
CHEMISTRY-INORGANICS-RESIDUES							
TDS	Total Dissolved Solids	Evaporation	Inorganics	2-6°C	7 days	3 days	Greater than 6°C – FLAG*; More than 7 days old
CHEMISTRY-ORGANICS							
HAA	Haloacetic acid	GC-ECD	250mL amber vial	2-6°C	28 days	5 days	Greater than 6°C – FLAG; More than 28 days old
THM	Trihalomethanes Microextractables	GC/MS GC/ECD	40mL amber vial with sodium thiosulfate	2-6°C	14 days 28 days	5 days	Greater than 6°C – FLAG; More than 14 days old
VOC	Volatile Organic Compounds	GC/MS	40 mL amber vial with ascorbic acid	2-6°C pH<2	14 days	5 days	Greater than 6°C – FLAG; Chlorine present; pH greater than 2
CHEMISTRY - METALS							
	Antimony	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Aluminum	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Arsenic	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Barium	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Beryllium	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Cadmium	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Chromium	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Copper	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Iron	AAS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Lead	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Manganese	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Mercury	ICP/MS	Metals	18-24°C	28 days	10 days	More than 28 days old
	Nickel	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Selenium	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Silver	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Sodium	AAS	Metals	18-24°C	6 months	10 days	More than 6 months old

Code	Test Name	Method	Container (provided by ECPHL)	Storage	Allowable time Collection to test	TAT	Rejection Criteria
	Thallium	ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
	Zinc	AAS, ICP/MS	Metals	18-24°C	6 months	10 days	More than 6 months old
CHEMISTRY-INORGANICS							
	Alkalinity	Titrimetric	Alkalinity Fill completely to exclude all air	2-6°C	14 days	5 days	Air present in container; More than 14 days old; Greater than 6°C –FLAG
	Calcium, hardness	Titrimetric	Metals	18-24°C	6 months	10 days	More than 6 months old
	Chloride	IC	Inorganics	18-24°C	28 days	5 days	More than 28 days old
	Color Prior notification needed	Visual	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
	Cyanide	Lachat FIA	Cyanide	2-6°C	14 days	5 days	Greater than 6°C – FLAG; More than 14 days old
	Fluoride	IC	Fluoride	18-24°C	28 days	5 days	More than 28 days old
	Nitrate	Lachat FIA/IC	Nitrate, chlorinated	2-6°C	14 days	10 days	Greater than 6°C – FLAG; More than 14 days old
	Nitrate	Lachat FIA/IC	Nitrate, non-chlorinated	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
	Nitrite	Spectrophotometer/ IC	Nitrite	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
	pH Prior notification needed	Electrometric	P or G	18-24°C	None – Test Immediately	24 hrs	More than 1 hr old
	Phosphate (ortho-)	IC	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48hrs old
	Sulfate	IC	Inorganics	2-6°C	28 days	5 days	Greater than 6°C – FLAG; More than 28 days old

*FLAG – External comment will be added to report

Environmental Testing Chart - Sample: Environmental Water and Solids

Code	Test Name	Method	Sample	Container (provided by ECPHL)	Storage	Allowable transport time Collection to test	TAT	Rejection Criteria
BACTERIOLOGY								
TC	Total coliform	Membrane filter quantitation	Non-turbid	Coliform	2-6°C	8 hrs	24 hrs	More than 8 hrs old
TC-SPC	Total coliform, SPC	Pour plate	Frozen dessert	Sterile	-4-0°C	No set time	24-48 hrs	Greater than 0°C – FLAG*
FC	Fecal coliform	Membrane filter quantitation	EW	Coliform	2-6°C	8 hrs	24 hrs	More than 8 hrs old
EC	<i>E.coli</i>	Membrane filter quantitation	Beach, EW	Coliform	2-6°C	8 hrs	24 hrs	More than 8 hrs old
SPC	Standard Plate Count	Pour plate	EW	Sterile with sodium thiosulfate	2-6°C	8 hrs	2 days	More than 8 hrs old
	Sterility/Biological Indicator	Culture	other	Attest vials	18-24°C	24 hrs	2 days	Cracked or leaking vials
	Food	Culture	2x2 inch food sample	Sterile whirl pack	2-6°C or <0°C	24 hrs	7 days	Greater than 6°C; More than 24 hr old
CHEMISTRY-INORGANIC-RESIDUES								
TS	Total Solids	Evaporation	EW	Inorganics	2-6°C	7 days	3 days	Greater than 6°C – FLAG; More than 7 days old
TDS	Total Dissolved Solids	Evaporation	EW	Inorganics	2-6°C	7 days	3 days	Greater than 6°C – FLAG; More than 7 days old
TSS	Total Suspended Solids	Evaporation	EW	Inorganics	2-6°C	7 days	3 days	Greater than 6°C – FLAG; More than 14 days old
SS	Settleable Solids	Imhoff Cone	EW	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
CHEMISTRY-INORGANICS								
	Alkalinity	Titrimetric	EW	Alkalinity Fill completely to exclude all air	2-6°C	14 days	5 days	Air present in container; More than 14 days old; Greater than 6°C - FLAG
BOD	Biochemical oxygen Demand Prior notification needed	Electrode	EW	Quart bottle, P/G	2-6°C	2 days	5 days	Greater than 6°C – FLAG; More than 48 hrs old
COD	Chemical oxygen demand	Spectrophotometric Hach 8000	EW	Quart bottle, P/G	2-6°C pH <2	28 days	5 days	Greater than 6°C – FLAG; pH>2 – FLAG; More than 28 days old

Code	Test Name	Method	Sample	Container (*provided by ECPHL)	Storage	Allowable transport time Collection to test	TAT	Rejection Criteria
	Chloride	IC	EW	Inorganics	18-24°C	28 days	5 days	More than 28 days old
	Color Prior notification needed	Visual	EW	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
	Cyanide	Lachat FIA	EW	Cyanide	2-6°C pH >12	14 days	5 days	Greater than 6°C – FLAG; pH<12 – FLAG; More than 14 days old
	Fluoride	IC	EW	Fluoride	18-24°C	28 days	5 days	More than 28 days old
	Hardness	EDTA titrimetic	EW	Metals	18-24°C	6 months	10 days	More than 6 months old
	Nitrate	Lachat FIA/IC	EW non- chlorinated	Nitrate, non- chlorinated	2-6°C	48 hrs	2 days	Greater than 6°C – FLAG; More than 48 hrs old
	Nitrite	Spectrophotometer/IC	EW	Nitrite	2-6°C	48 hrs		Greater than 6°C – FLAG; More than 48 hrs old
O&G	Oil and Grease	Extraction	EW	1 Liter Amber Glass Bottle	2-6°C pH <2	28 days	5 days	Greater than 6°C – FLAG; pH greater than 2 – FLAG; More than 28 days
	Phosphate (ortho-)	IC	EW	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
	Sulfate	IC	EW	Inorganics	2-6°C	28 days	5 days	Greater than 6°C – FLAG; More than 28 days old
TPH	Total Petroleum Hydrocarbons	Extraction	EW	1 Liter Amber Glass Bottle	2-6°C pH <2	28 days	5 days	Greater than 6°C – FLAG; pH greater than 2; More than 28 days
	Turbidity	Nephelometric	EW	Inorganics	2-6°C	48 hrs	24 hrs	Greater than 6°C – FLAG; More than 48 hrs old
Chemistry - Miscellaneous								
FT-IR	Unknown Identification	Fourier transform infrared spectroscopy	Various Matrices	FT-IR Sample Kit	18-22°C	No set time	5 days	Not Applicable

*FLAG – External comment will be added to report

Environmental Testing Chart - Sample: Dialysis Fluids

Code	Test Name	Method	Container (provided by ECPHL)	Storage	Allowable time Collection to test	TAT	Rejection Criteria
	DF Inorganics - Fluoride - Nitrate - Sulfate	IC	Inorganics	2-6°C	48 hrs	5 days	Greater than 6°C – FLAG*; More than 48 hrs old
	DF Metals - Aluminum - Antimony - Arsenic - Barium - Beryllium - Cadmium - Calcium - Chromium - Copper - Lead - Magnesium - Mercury - Potassium - Selenium - Silver - Sodium - Thallium - Zinc	ICP/MS	Metals	18-24°C	6 months	5 days	More than 6 months old

*FLAG – External comment will be added to report

Attachment #1
NYSDOH Code Red



Please read all sections of this card before initiating Sample Assessment or Collection.

If people on the scene have become ill after exposure, a chemical or toxin event is likely. Avoid area and contact Fire/HazMat (NYS Fire 518-474-6746) immediately.

Not for use in NYC. If within NYC jurisdiction, please call the NYC DOHMH at 212-447-1091 for specimen collection guidance.

REMEMBER...

- Minimize sample handling.
- Only HAZMAT should open sealed packages.
- Minimize dispersal of aerosols.
- Contact Wadsworth Center Lab.
- Complete NYS PIN BIO1 formatted message.

①

COLLECTION MATERIALS (PER SAMPLE)

- 2 pair of protective gloves per person
- N95 (or better) respirator
- 2 Ziploc bags
- Fresh 10% bleach (decontamination solution)
- Documentation
- 1 hard-sided container or Tupperware
- Evidence tape

SAMPLE SWIPE KIT

- One 2x2 inch, sterile, non-cotton gauze
- Small bottle sterile liquid (saline or water)

TESTING LABS

- Wadsworth Center Lab: (518) 474-4177
- Erle County Lab: (716) 898-6100
- Westchester County Lab: (914) 231-1610
- NYSDOH After Hours Duty Officer: (866) 881-2809

LAW ENFORCEMENT

- Albany FBI: (518) 465-7551
- Buffalo FBI: (716) 843-4300
- New York City FBI: (212) 384-1000

- Regional NYS PIN: _____
- UNYRIC: (866) 4-UNYRIC

Mandatory Notification:
 Alert Upstate New York Regional Intelligence Center (UNYRIC), via NYS PIN
 BIO1 Format Message: (type CTRL-A) BIO1 (XMIT)

Local Health Dept: _____

②

BIOHAZARD SAMPLING SOP

- C**ontrol Scene
 Restrict access, contain area, minimize airflow around specimen, record names and contact information of people in area.
- O**pen Dialog
 Call appropriate law enforcement, Wadsworth Center, and local health (page 2).
- D**etermine Biohazard Credibility
 In collaboration with above groups, evaluate using Credible Biohazard Criteria (page 4).
- E**mploy Collection Protocol
 Gather Collection Material (page 2) and if necessary Sample Swipe Kit (page 2). Follow Annotated Collection Procedure (page 5)
- R**emove Contamination
 Use 10% bleach for solid surfaces and outer package, remove personal protective equipment (PPE), wash hands.
- E**nter Information
 Fill out BD Custody and BD Submission forms (available on CTN or HAN).
- D**ispatch Specimen
 Coordinate transport, notify testing lab with ETA, dispatch specimen and documentation, launder clothes after shift.

③

Evaluate biohazard threat using Criteria below. Call Wadsworth Center Biodefense Laboratory at (518) 474-4177 to help in assessment as Criteria may change after an event.

These questions are meant to HELP evaluators make decisions on-site. Evaluators should use their professional judgment to collect and submit samples for laboratory testing.

CREDIBLE BIOHAZARD CRITERIA

- 1) Was there a **THREAT**?
- 2) Was there **VISIBLE MATERIAL**?
- 3) Was there an **UNCERTAIN ORIGIN**?
- 4) Was there an **EXPOSURE**?

RESULT A: Answer is YES to Criteria 1 (regardless of others). **Potential crime.** Collect and treat sample as evidence for criminal prosecution. Discuss need for laboratory testing with Wadsworth Center.

RESULT B: Answer is YES to Criteria 1, 2, 3, 4. **Potential biohazard and crime.** Collect and treat sample as evidence for criminal prosecution. Submit to lab.

RESULT C: Sample does not meet Result A or B criteria. Treat as nuisance material. Collect and dispose of according to local SOP.

④

Annotated Collection Procedure (annotated from BD Environmental Sampling Protocol available on HAN and CTN)

1. Get Collection Materials.
2. Don appropriate PPE in clean area.
3. If sample (e.g., letter) will fit directly into Ziploc bag, do so and skip to Step 8, otherwise get Sample Swipe Kit and proceed to Step 4.
4. Open sterile gauze square.
5. Dampen gauze with sterile liquid (should NOT be dripping wet).
6. Take one open Ziploc bag and dampened gauze to collection site.
7. Touch wet gauze to powder or swipe surface (~ 10 inches X 10 inches) and place gauze in Ziploc bag.
8. Hand bag to second person wearing gloves to close (don't force air out of bag).
9. Remove gloves and place in second bag.
10. Have second person place bag containing sample in second bag (containing gloves from step 9) and seal.
11. Have second person spray outside of outer bag with 10% bleach.
12. Place decontaminated bags in hard-sided container and close.
13. Secure access to container with 2 inches of evidence tape.
14. Remove PPE and wash hands with soap and water for 3 minutes.
15. Proceed to Enter Information.

⑤



State of New York • George E. Pataki, Governor
 Department of Health • Antonia C. Novello, M.D., M.P.H., Dr. P.H., Commissioner
 7063 08/04

Attachment #2

NYS Guidance on Initial Response to a Letter/Container Containing a Suspicious Substance and /or Threat Statement

This is a restricted document for official use only.

The document may be accessed by authorized individuals at the NYS Health Commerce website or may be obtained by contacting the Erie County Public Health Laboratories.

References

1. Miller, J Michael. Specimen Management in Clinical Microbiology 1999 ASM. Washington DC
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