MDHHS BOL Specimen Submission Guidelines

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Matthew Bashore – Data and Specimen Handling Manager

MDHHS

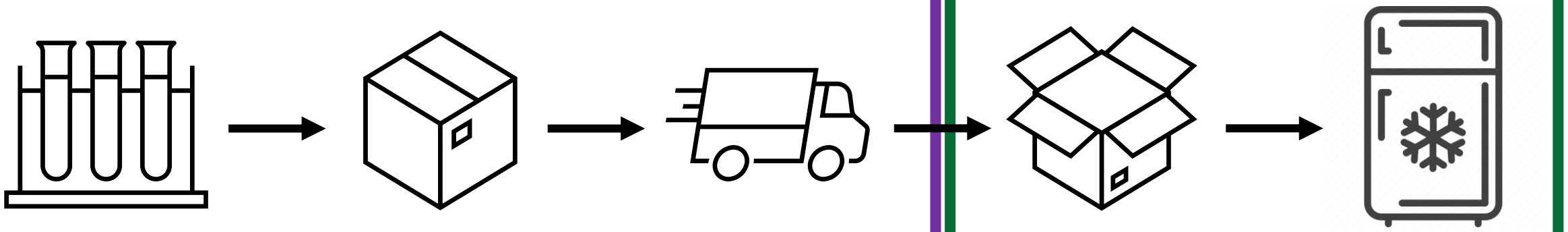
Michigan Department of Health & Human Services

A Specimen's Journey to the BOL

MDHHS Michigan Department of Health & Human Services

LHDs, Hospitals, other Partner Organizations

BOL



Sample Collection and Test Requisitions

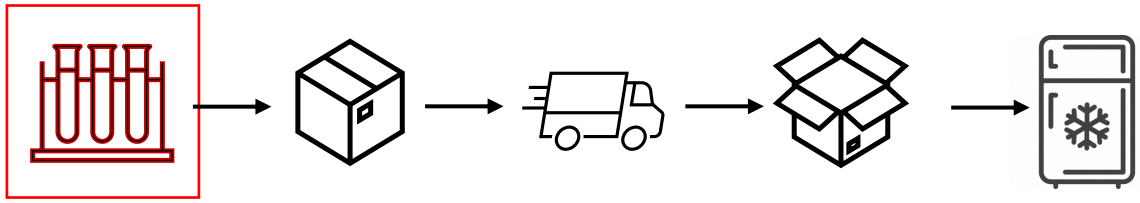
Sample Packaging

Sample Shipping

Sample Receipt

Sample Storage for Testing

Test Requisitions



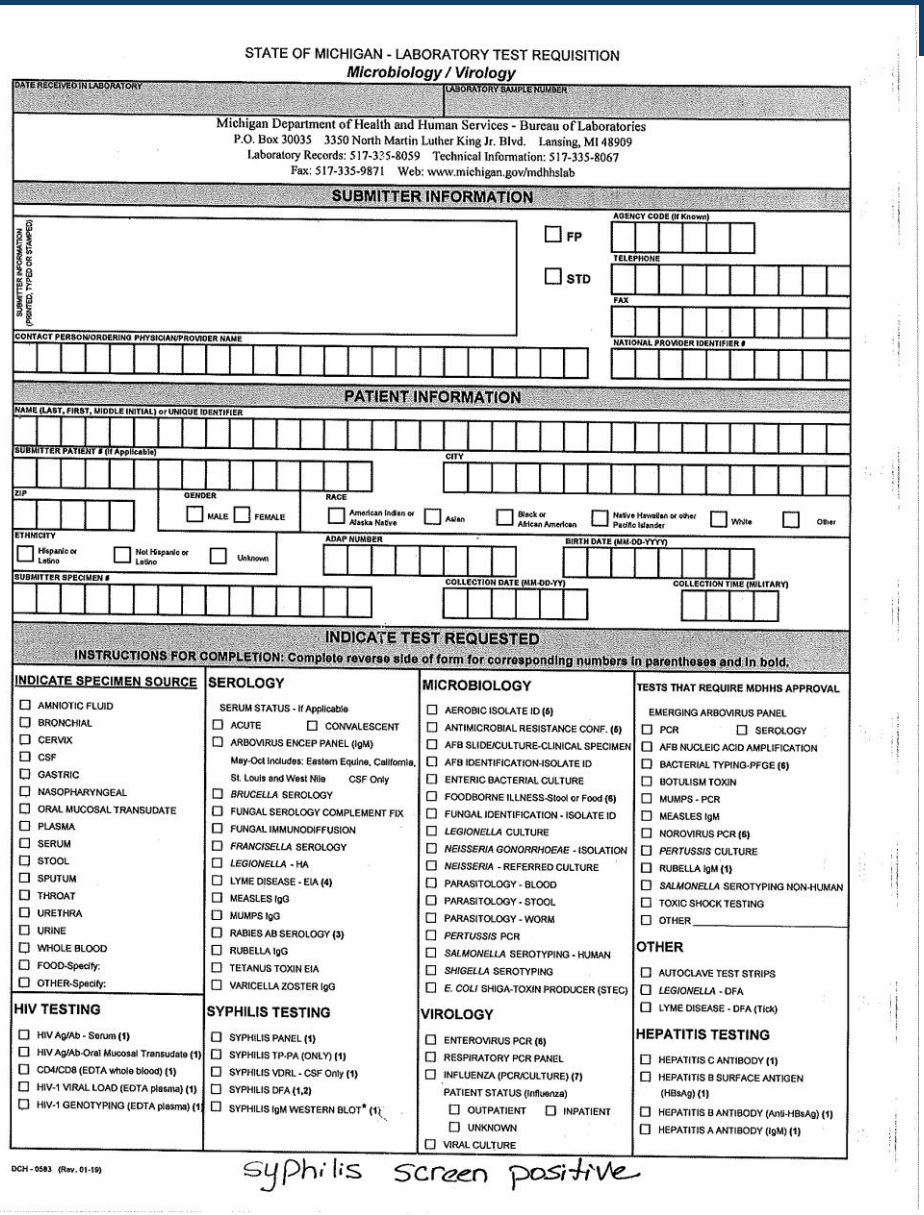
MDHHS
Michigan Department of Health & Human Services

Updated Virology Test Requisitions

MDHHS Michigan Department of Health & Human Services

Old Form - DCH-0583

- Still accepted for testing
- Microbiology is still using this form
- Virology has updated test requisition forms that don't require as many write-ins



STATE OF MICHIGAN - LABORATORY TEST REQUISITION

Microbiology / Virology

DATE RECEIVED IN LABORATORY | LABORATORY SAMPLE NUMBER

Michigan Department of Health and Human Services - Bureau of Laboratories
P.O. Box 30035 3350 North Martin Luther King Jr. Blvd. Lansing, MI 48909
Laboratory Records: 517-335-8059 Technical Information: 517-335-8067
Fax: 517-335-9871 Web: www.michigan.gov/mdhhslab

SUBMITTER INFORMATION

SUBMITTER INFORMATION (PRINTED, TYPED OR STAMPED)

☐ FP ☐ STD

AGENCY CODE (If Known) | TELEPHONE | FAX | NATIONAL PROVIDER IDENTIFIER #

CONTACT PERSON/ORDERING PHYSICIAN/PROVIDER NAME

PATIENT INFORMATION

NAME (LAST, FIRST, MIDDLE INITIAL) or UNIQUE IDENTIFIER

SUBMITTER PATIENT # (If Applicable) | CITY | ZIP

GENDER ☐ MALE ☐ FEMALE

RACE ☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American ☐ Native Hawaiian or other Pacific Islander ☐ White ☐ Other

ETHNICITY ☐ Hispanic or Latino ☐ Not Hispanic or Latino ☐ Unknown

ADAP NUMBER | BIRTH DATE (MM-DD-YYYY)

SUBMITTER SPECIMEN # | COLLECTION DATE (MM-DD-YY) | COLLECTION TIME (MILITARY)

INDICATE TEST REQUESTED

INSTRUCTIONS FOR COMPLETION: Complete reverse side of form for corresponding numbers in parentheses and in bold.

INDICATE SPECIMEN SOURCE

- ☐ AMNIOTIC FLUID
- ☐ BRONCHIAL
- ☐ CERVIX
- ☐ CSF
- ☐ GASTRIC
- ☐ NASOPHARYNGEAL
- ☐ ORAL MUCOSAL TRANSUDATE
- ☐ PLASMA
- ☐ SERUM
- ☐ STOOL
- ☐ SPUTUM
- ☐ THROAT
- ☐ URETHRA
- ☐ URINE
- ☐ WHOLE BLOOD
- ☐ FOOD-Specify:
- ☐ OTHER-Specify:

HIV TESTING

- ☐ HIV Ag/Ab - Serum (1)
- ☐ HIV Ag/Ab-Oral Mucosal Transudate (1)
- ☐ CD4/CD8 (EDTA whole blood) (1)
- ☐ HIV-1 VIRAL LOAD (EDTA plasma) (1)
- ☐ HIV-1 GENOTYPING (EDTA plasma) (1)

SEROLOGY

SERUM STATUS - If Applicable

- ☐ ACUTE ☐ CONVALESCENT
- ☐ ARBOVIRUS ENCEP PANEL (IgM)
  May-Oct Includes: Eastern Equine, California, St. Louis and West Nile CSF Only
- ☐ *BRUCELLA* SEROLOGY
- ☐ FUNGAL SEROLOGY COMPLEMENT FIX
- ☐ FUNGAL IMMUNODIFFUSION
- ☐ *FRANCISELLA* SEROLOGY
- ☐ *LEGIONELLA* - HA
- ☐ LYME DISEASE - EIA (4)
- ☐ MEASLES IgG
- ☐ MUMPS IgG
- ☐ RABIES AB SEROLOGY (3)
- ☐ RUBELLA IgG
- ☐ TETANUS TOXIN EIA
- ☐ VARICELLA ZOSTER IgG

SYPHILIS TESTING

- ☐ SYPHILIS PANEL (1)
- ☐ SYPHILIS TP-PA (ONLY) (1)
- ☐ SYPHILIS VDRL - CSF Only (1)
- ☐ SYPHILIS DFA (1,2)
- ☐ SYPHILIS IgM WESTERN BLOT* (1)

MICROBIOLOGY

- ☐ AEROBIC ISOLATE ID (6)
- ☐ ANTIMICROBIAL RESISTANCE CONF. (6)
- ☐ AFB SLIDE/CULTURE-CLINICAL SPECIMEN
- ☐ AFB IDENTIFICATION-ISOLATE ID
- ☐ ENTERIC BACTERIAL CULTURE
- ☐ FOODBORNE ILLNESS-Stool or Food (6)
- ☐ FUNGAL IDENTIFICATION - ISOLATE ID
- ☐ *LEGIONELLA* CULTURE
- ☐ *NEISSERIA GONORRHOEAE* - ISOLATION
- ☐ *NEISSERIA* - REFERRED CULTURE
- ☐ PARASITOLOGY - BLOOD
- ☐ PARASITOLOGY - STOOL
- ☐ PARASITOLOGY - WORM
- ☐ *PERTUSSIS* PCR
- ☐ *SALMONELLA* SEROTYPING - HUMAN
- ☐ *SHIGELLA* SEROTYPING
- ☐ *E. COLI* SHIGA-TOXIN PRODUCER (STEC)

VIROLOGY

- ☐ ENTEROVIRUS PCR (6)
- ☐ RESPIRATORY PCR PANEL
- ☐ INFLUENZA (PCR/CULTURE) (7)

PATIENT STATUS (Influenza)

- ☐ OUTPATIENT ☐ INPATIENT
- ☐ UNKNOWN
- ☐ VIRAL CULTURE

TESTS THAT REQUIRE MDHHS APPROVAL

EMERGING ARBOVIRUS PANEL

- ☐ PCR ☐ SEROLOGY
- ☐ AFB NUCLEIC ACID AMPLIFICATION
- ☐ BACTERIAL TYPING-PFGE (6)
- ☐ BOTULISM TOXIN
- ☐ MUMPS - PCR
- ☐ MEASLES IgM
- ☐ NOROVIRUS PCR (6)
- ☐ *PERTUSSIS* CULTURE
- ☐ RUBELLA IgM (1)
- ☐ *SALMONELLA* SEROTYPING NON-HUMAN
- ☐ TOXIC SHOCK TESTING
- ☐ OTHER

OTHER

- ☐ AUTOCLAVE TEST STRIPS
- ☐ *LEGIONELLA* - DFA
- ☐ LYME DISEASE - DFA (Tick)

HEPATITIS TESTING

- ☐ HEPATITIS C ANTIBODY (1)
- ☐ HEPATITIS B SURFACE ANTIGEN (HBsAg) (1)
- ☐ HEPATITIS B ANTIBODY (Anti-HBsAg) (1)
- ☐ HEPATITIS A ANTIBODY (IgM) (1)

DCH - 0583 (Rev. 01-19)

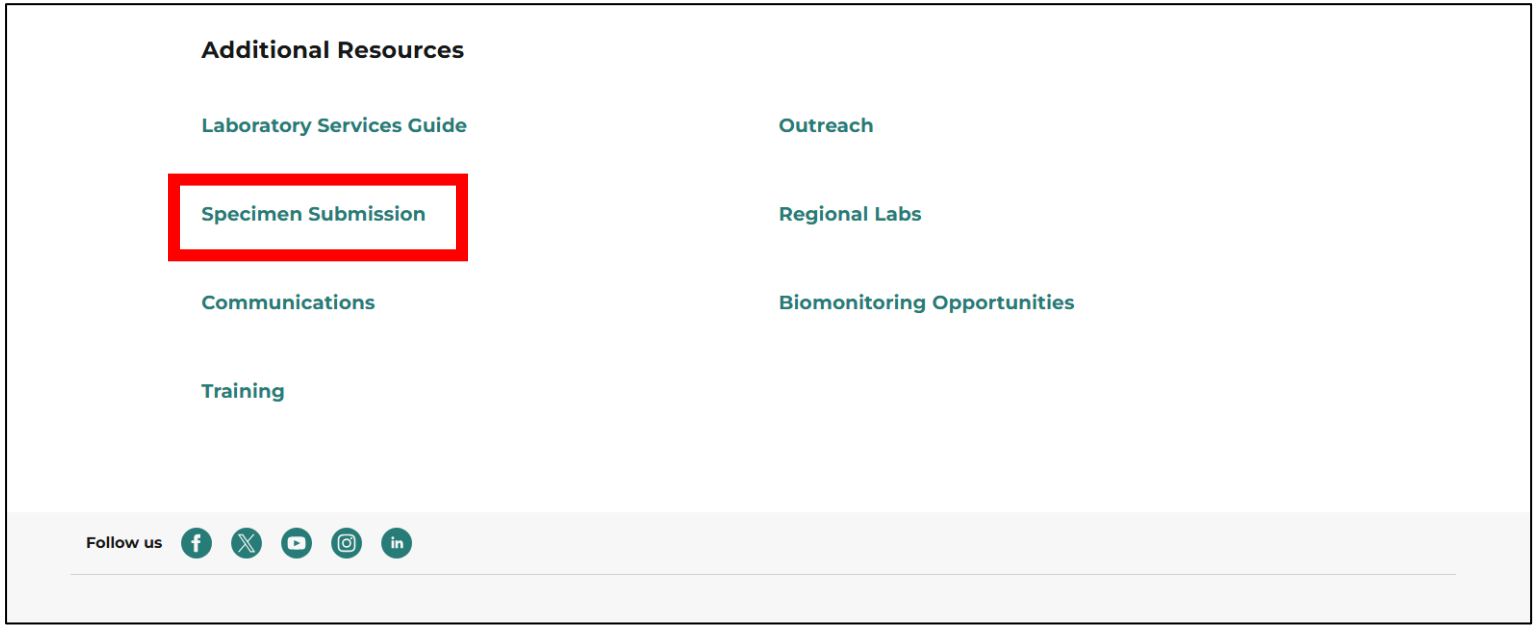
syphilis screen positive

Updated Virology Test Requisitions

- Virology/Serology (MDHHS-6084)
- Virology/Serology Collection Instructions (DCH-0812)
- Viral Respiratory Testing (MDHHS-6097)
- Viral Respiratory Testing Collection Instructions (DCH-0772)

www.michigan.gov/mdhhslab

- Link at the bottom of the page



Virology/Serology Test Req Form MDHHS-6084

MDHHS-6084, VIROLOGY/SEROLOGY TEST REQUISITION
Michigan Department of Health and Human Services (MDHHS)
Bureau of Laboratories
(New 2-24)

PO Box 30335 3350 North Martin Luther King Jr. Blvd. Lansing, MI 48909
Laboratory Records: 517-335-8059 Fax: 517-335-9871
Technical Information: 517-335-8067 Web: http://www.michigan.gov/mdhhslab

SECTION 1 – FOR LABORATORY USE ONLY

Date Received at MDHHS | MDHHS Sample Number

SECTION 2 – SUBMITTER INFORMATION

Submitter Information (Printed, Typed or Stamped) | Agency Code (if known)

☐ FP ☐ STD

Telephone | Fax

Contact Person/Ordering Physician/Provider Name | National Provider Identifier Number

SECTION 3 – PATIENT INFORMATION (MUST MATCH SPECIMEN LABEL EXACTLY)

Name (Last, First, Middle Initial or Unique Identifier) | Submitter's Patient Number (if applicable)

Address and Apartment Number (if applicable) | City | State | Zip Code

Phone Number | MIDAP Number

Sex at Birth ☐ Male ☐ Female | Gender Identity ☐ Male ☐ Female

Race
☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American
☐ Native Hawaiian or Other Pacific Islander ☐ White ☐ Other

Ethnicity
☐ Hispanic or Latino ☐ Not Hispanic or Latino ☐ Unknown

Date of Birth (MM/DD/YYYY) | Pregnant? ☐ Yes ☐ No

SECTION 4 – TESTING REASON(S)

☐ Diagnosis ☐ Surveillance ☐ Outbreak
☐ PrEP ☐ Court Order ☐ Other (specify)

SECTION 5 – SPECIMEN INFORMATION

Submitter's Specimen Number (if applicable) | Date Collected (MM/DD/YYYY) | Time Collected

Indicate Specimen Source
☐ Serum ☐ CSF ☐ Buccal ☐ Sputum
☐ Plasma ☐ Nasopharyngeal (NP) ☐ Nasal ☐ Stool
☐ Whole Blood ☐ Oropharyngeal (OP) ☐ Bronchial Wash ☐ Other (Specify)

SECTION 6 – TESTS REQUESTED

HIV Testing

Diagnostic Screening
☐ HIV Ag/Ab – Serum
☐ HIV PrEP (Only) Panel – Serum (HIV Ag/Ab and NAT)

Treatment Monitoring Only
☐ CD4/CD8 – EDTA Whole Blood (Ambient Temperature)
☐ HIV-1 Viral Load – EDTA Plasma

Syphilis Testing
☐ Syphilis Panel (Screen) – Serum
☐ Syphilis TP-PA – Serum
☐ Syphilis VDRL – CSF Only
☐ Syphilis DFA – Lesion Smear Site

Hepatitis Testing
☐ Hepatitis C Antibody (Screen) – Serum
☐ Hepatitis C Viral Load – Serum or Plasma (For Treatment Monitoring)
☐ Hepatitis B Panel (HBsAg, Anti-HBs, Anti-HBc) – Serum (HBV Diagnostic Screen)
☐ Hepatitis B Antibody (Anti-HBsAg) – Serum (For HBV Immune Status)

Bacterial/Fungal Serology
☐ Lyme Disease Ab – Serum
☐ Brucella Serology – Serum
☐ Fungal Serology – Serum or CSF
☐ Fungal Serology with Immunodiffusion – Serum

Viral Serology
☐ Arbovirus Encep Panel (IgM) – CSF (Serum Requires Prior Approval)
Onset Date (MM/DD/YYYY)
Seasonal Testing beginning May 1st – Includes WNV, SLEV, EEEV, LACV and JCV
☐ Rabies Ab Serology – Serum Date of Last Rabies Vaccination (MM/DD/YYYY)

SECTION 7 – VIROLOGY – TEST THAT REQUIRE PRIOR MDHHS APPROVAL

☐ Measles IgM – Serum
☐ Measles PCR – OP or NP
☐ Mumps IgM - Serum
☐ Mumps PCR - Buccal
☐ Rubella IgM - Serum
☐ Hepatitis A IgM – Serum
☐ Dengue IgM – Serum
☐ Zika, Dengue and Chikungunya PCR Panel - Serum
☐ Norovirus PCR – Stool
Onset Date (MM/DD/YYYY)
☐ Other

MDHHS Prior Approval Name | Date

SECTION 8 – ADDITIONAL INFORMATION

Serum Collection Instructions (DCH-0812)

Main Points:

1. Use serum/clot tubes for collection (e.g., yellow, red, tiger top, etc.)
2. Let blood clot for 30-60 min. (up to 24 hrs.) and centrifuge at 1,000g for 10 min.
3. For all serum testing, one tube with ≥2 ml is sufficient for testing.

If ordering a combination of tests that may require NAT or viral load testing (e.g., HCV, HIV), please include one additional tube of serum with ≥2 ml which is sufficient for all combined tests.

4. Only one requisition form (MDHHS-6084) is needed per patient

Include at least 2 patient identifiers and ensure information on form matches with information on specimen tube.

5. Keep sample in 2-8ºC refrigerator until shipping. If shipping is delayed >3 days, freeze sample and send on dry ice (if possible).
6. Ensure sample is shipped cold or frozen by using frozen cold packs and Styrofoam containers.

Virology Respiratory Test Req Form MDHHS-6097

MDHHS Michigan Department of Health & Human Services

MDHHS-6097, VIRAL RESPIRATORY TEST REQUISITION
Michigan Department of Health and Human Services (MDHHS)
Bureau of Laboratories
(New 2-24)

PO Box 30335 3350 North Martin Luther King Jr. Blvd. Lansing, MI 48909
Laboratory Records: 517-335-8059 Fax: 517-335-9871
Technical Information: 517-335-8067 Web: http://www.michigan.gov/mdhhslab

SECTION 1 – FOR LABORATORY USE ONLY

Date Received at MDHHS | MDHHS Sample Number

SECTION 2 – SUBMITTER INFORMATION

Submitter Information (Printed, Typed or Stamped) | Agency Code (if known)

Telephone | Fax

Contact Person/Ordering Physician/Provider Name | National Provider Identifier Number

SECTION 3 – PATIENT INFORMATION (MUST MATCH SPECIMEN LABEL EXACTLY)

Name (Last, First, Middle Initial or Unique Identifier)

Address and Apartment Number (if applicable) | City | State | Zip Code

Phone Number | Submitter's Patient Number (if applicable)

Race
☐ American Indian or Alaska Native ☐ Asian ☐ Black or African American
☐ Native Hawaiian or Other Pacific Islander ☐ White ☐ Other

Ethnicity
☐ Hispanic or Latino ☐ Not Hispanic or Latino ☐ Unknown

Sex ☐ Male ☐ Female | Date of Birth (MM/DD/YYYY) | Pregnant? ☐ Yes ☐ No

SECTION 4 – TESTING REASON(S)

☐ Diagnosis ☐ Outbreak (Complete Section 8)
☐ Surveillance ☐ Other

SECTION 5 – SPECIMEN INFORMATION

Submitter's Specimen Number (if applicable) | Date Collected (MM/DD/YYYY) | Time Collected

Indicate Specimen Source
☐ Nasopharyngeal (NP) ☐ Nasal ☐ Bronchial Wash
☐ Oropharyngeal (OP) ☐ Sputum ☐ Other (Specify)

SECTION 6 – TEST(S) REQUESTED

Indicate Test(s) Requested
☐ Influenza (complete Section 9) ☐ COVID-19 (SARS-CoV-2)
☐ Influenza/SARS-CoV-2 (complete Section 9) ☐ Other

SECTION 7 – VIROLOGY – RESPIRATORY TESTS THAT REQUIRE PRIOR MDHHS APPROVAL

☐ Film Array Respiratory Panel
☐ Cepheid Respiratory Panel
☐ Middle East Respiratory Syndrome (MERS) - **(A PUI MUST be completed to obtain testing approval)**
☐ Other

MDHHS Prior Approval Name | Date

SECTION 8 – FOR OUTBREAK INVESTIGATION COMPLETE THIS SECTION

Onset Date (MM/DD/YYYY) | Organism Suspected (if applicable)

Outbreak Identifier

MDHHS Prior Approval Name | Date

SECTION 9 – FOR INFLUENZA PCR TESTING COMPLETE THIS SECTION

Patient Status
☐ Outpatient ☐ Inpatient ☐ Unknown

Results of Influenza Testing Performed | Test/Assay Used

Date of Last Influenza Vaccination (MM/DD/YYYY) | Type of Last Influenza Vaccination
☐ Flu Mist ☐ Quadravalent (Shot)
☐ Other

SECTION 10 – ADDITIONAL INFORMATION

The Michigan Department of Health and Human Services (MDHHS) does not discriminate against any individual or group on the basis of race, national origin, color, sex, disability, religion, age, height, weight, familial status, partisan considerations, or genetic information. Sex-based discrimination includes, but is not limited to, discrimination based on sexual orientation, gender identity, gender expression, sex characteristics, and pregnancy.

By Authority of Act 368, P.A. 1978.

Respiratory Testing Collection Instructions (DCH-0772)

Test	Specimen Type	Transport Medium	Transport Temperature	Minimum Acceptable Volume
Influenza A and B	Nasopharyngeal (NP) swab, nasal swab, oropharyngeal (OP) or throat swab, or dual NP/OP swab in VTM or UTM Use a synthetic swab with a non-wooden shaft. No dry swabs. Nasal aspirates, bronchoalveolar, bronchial wash, sputum, lung tissue, and viral isolates.	Viral Transport Medium (VTM) or Universal Transport Medium (UTM) Washes, Aspirates or Lavage-sterile plastic container	Ship on frozen ice packs or frozen with dry ice	Swabs-3 mL VTM or UTM
Influenza SARS-CoV2	Nasopharyngeal (NP) swab nasal swab, oropharyngeal (OP) or throat swab in VTM or UTM Use a synthetic swab with a non-wooden shaft. No dry swabs. Nasal aspirates, bronchoalveolar, bronchial wash, sputum, lung tissue, and viral isolates.	Viral Transport Medium (VTM), Universal Transport Medium (UTM)	Ship on frozen ice packs or frozen with dry ice	Swabs-3 mL VTM or UTM
COVID-19 (SARS-CoV-2)	Nasopharyngeal (NP) or nasal swab in VTM or UTM, using a synthetic swab on a non-wooden shaft. No dry swabs.	Viral Transport Medium (VTM), Universal Transport Medium (UTM)	UTM, VTM, or PBS ship on frozen ice packs or frozen with dry ice. NP Cobas PCR Media may also be shipped ambient	Swabs-3 mL VTM or UTM

Respiratory Testing Collection Instructions (DCH-0772)

Test	Specimen Type	Transport Medium	Transport Temperature	Minimum Acceptable Volume
Influenza/SARS-CoV-2/RSV (CEPHEID, 4-plex) *PRIOR APPROVAL NEEDED*	Nasopharyngeal (NP) swab in VTM or UTM, or nasal swabs in VTM. Use a synthetic swab with a non-wooden shaft.	Viral Transport Medium (VTM) or universal transport media (UTM) Washes Aspirates or Lavage-sterile plastic container	Ship on frozen ice packs or frozen with dry ice	Swabs – 3 mL VTM or UTM
BIOFIRE/Filmarray *PRIOR APPROVAL NEEDED*	Nasopharyngeal (NP) swab in VTM. Use a synthetic swab with a non-wooden shaft.	Viral Transport Medium (VTM)	Ship on frozen ice packs or frozen with dry ice	Swabs – 3 mL VTM
Measles *PRIOR APPROVAL NEEDED*	Nasopharyngeal (NP), Oropharyngeal (OP), or throat swab in VTM. Use a synthetic swab with a non-wooden shaft.	Viral Transport Medium (VTM)	Ship on frozen ice packs	Swabs – 3 mL VTM
Mumps *PRIOR APPROVAL NEEDED*	Oral/buccal swab in VTM using a synthetic swab with a non-wooden shaft.	Viral Transport Medium (VTM)	Ship on frozen ice packs	Swabs – 3 mL VTM

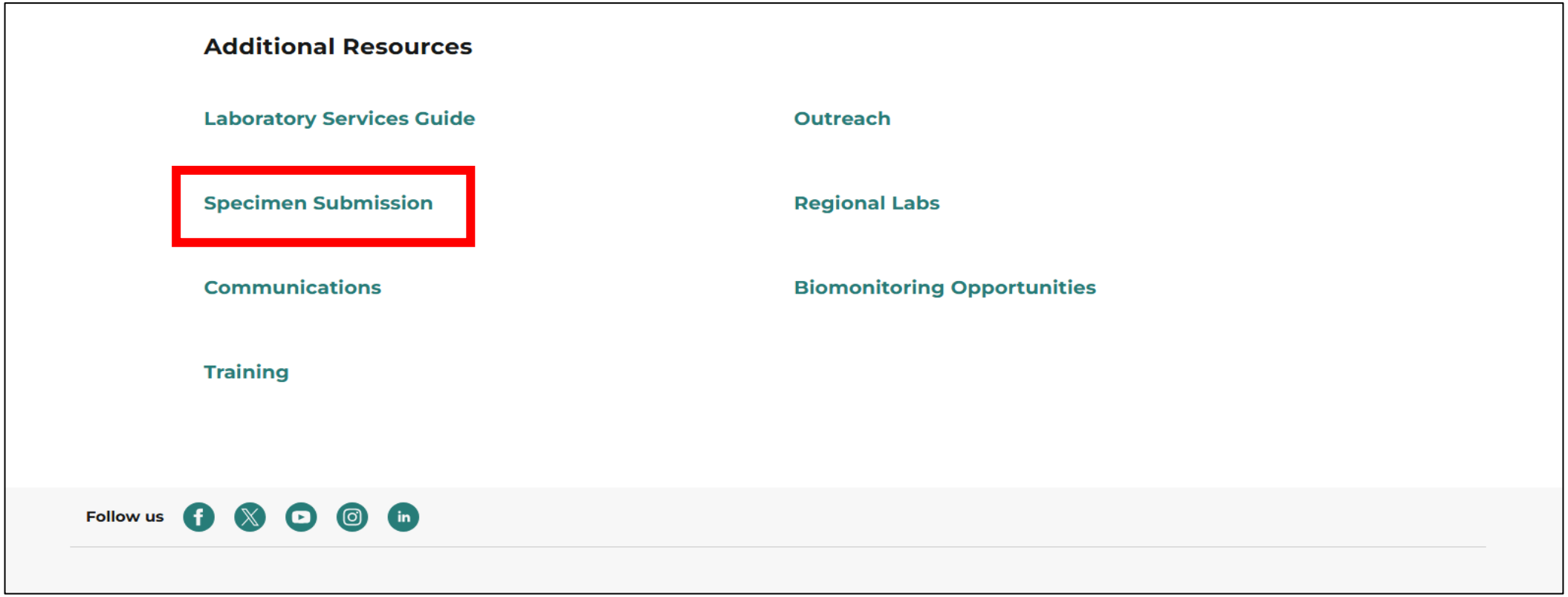
Set up for Success!

- Fill out as much information as you can!
- Critical Information
  - Submitter Information, including a good contact phone number
  - Two patient identifiers on both the requisition form and the patient specimen that MATCH EXACTLY
  - Specimen Source
  - Date of Collection
  - Test requested
- Incomplete requestion forms will delay the release of results until information can be collected.

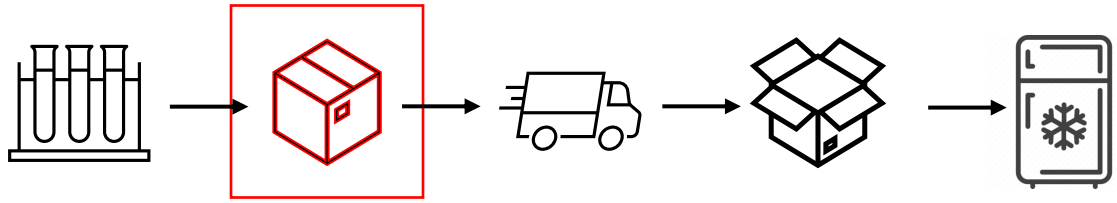
More Information on Req Forms and Collection Instructions

www.michigan.gov/mdhhslab

- Link at the bottom of the page



Specimen Packing and Shipping



MDHHS
Michigan Department of Health & Human Services

Overview

- Review of Ordering Process for Collection and Shipping Supplies
- Review of Collection and Shipping Supplies
- Review of Proper use of Materials
- Common Mistakes in Specimen Submission

Ordering Supplies (LKOTS)

www.michigan.gov/mdhhslab

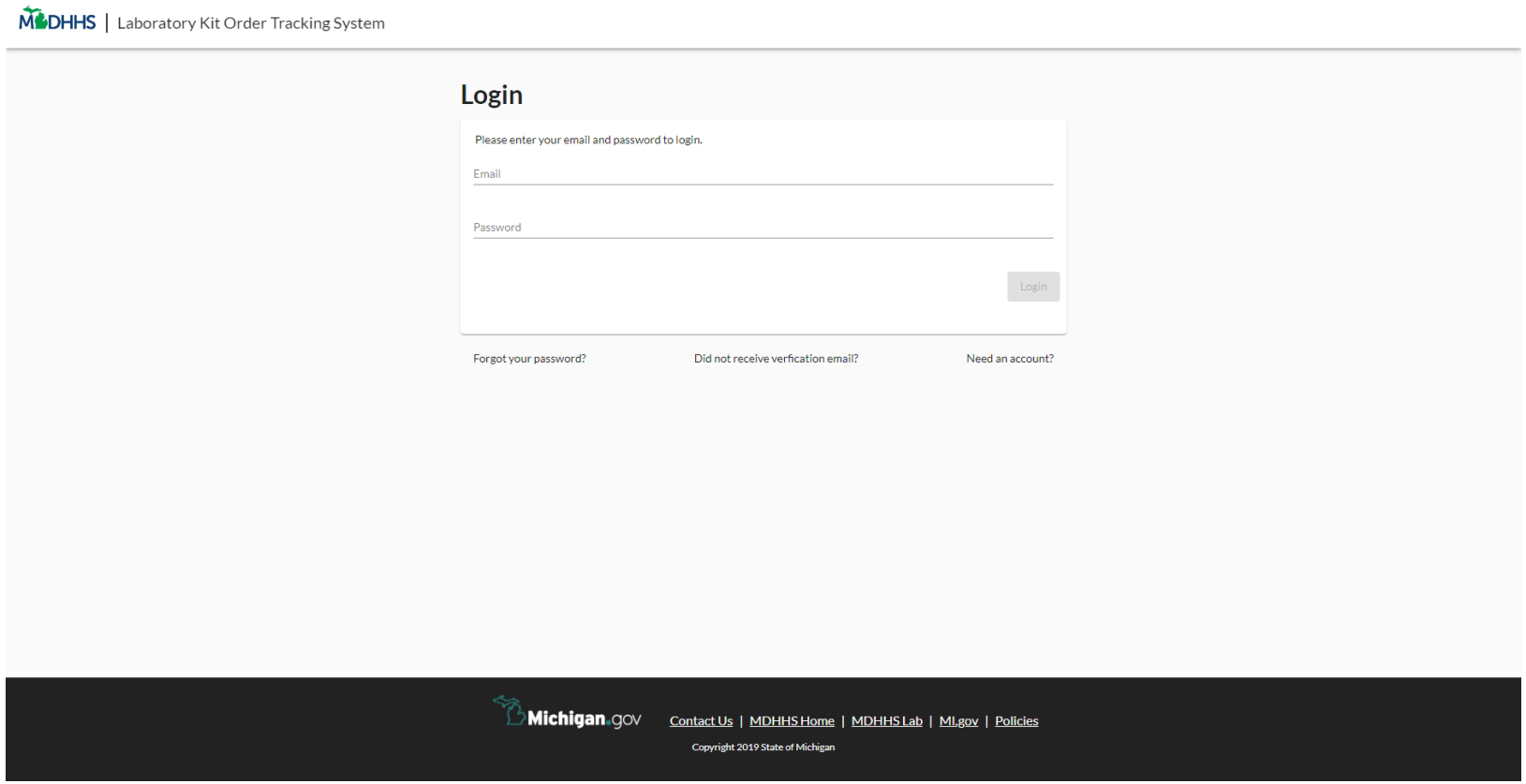
Bureau of Laboratories

In addition to sharing information about various reference services available, we hope to use this forum to interact with you to help meet the challenges of communicable disease and environmental concerns that adversely affect communities in Michigan.

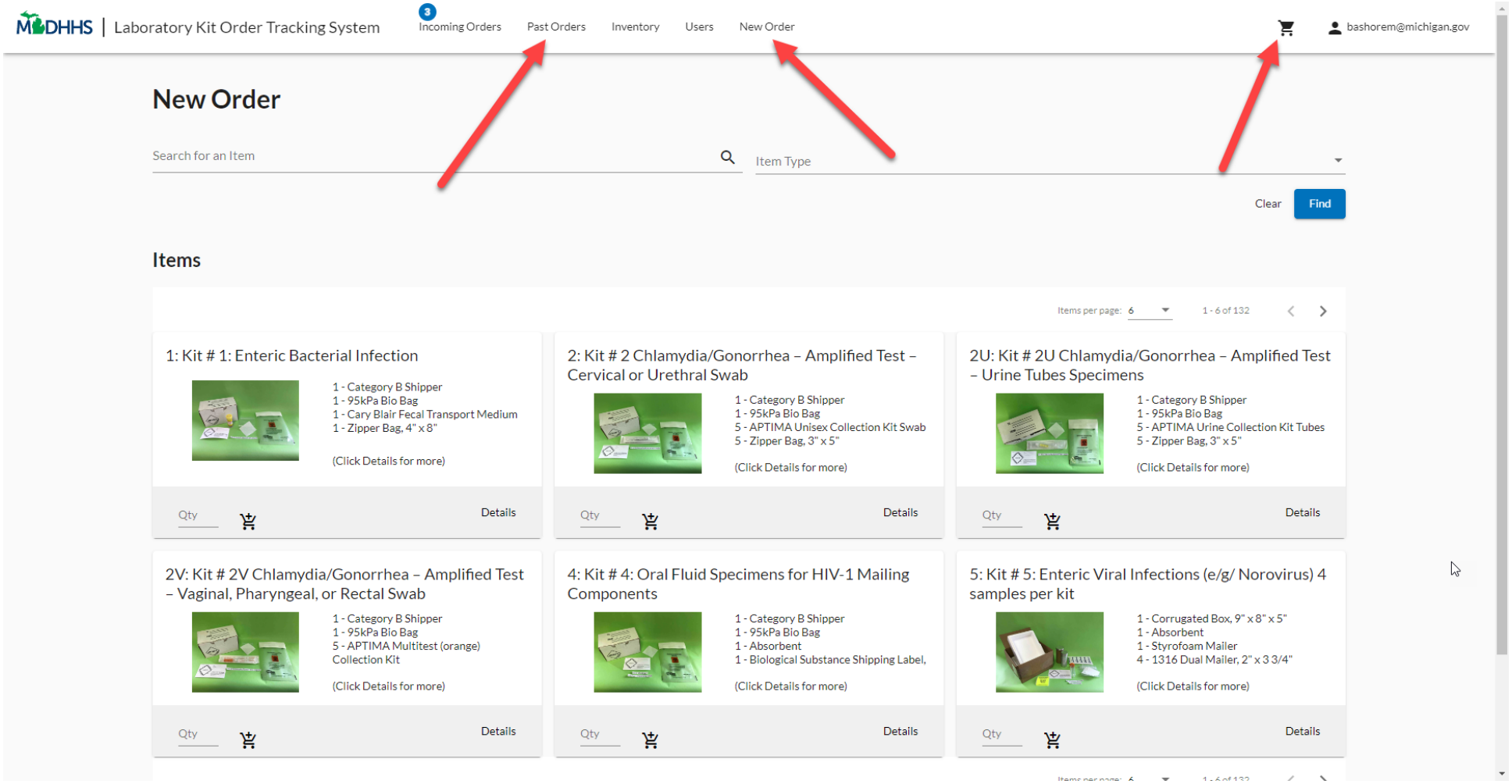
- MDHHS AFTER-HOUR EMERGENCY PHONE NUMBER: 517-335-9030
- Bureau of Laboratories Holiday Business Hours
- Contact Us
- Inside the Bureau of Laboratories
- A-Z Test Listing
- UPDATE (3/31/25): Temperature Requirements for Specimens
- Order Clinical and Environmental Collection Kits - Laboratory Kit Order Tracking System (LKOTS)
  - LKOTS - How to create an account
  - LKOTS - How to place an order
- Test Request Forms

LKOTS:
Laboratory Kit Ordering Tracking System

https://milkots.michigan.gov/login

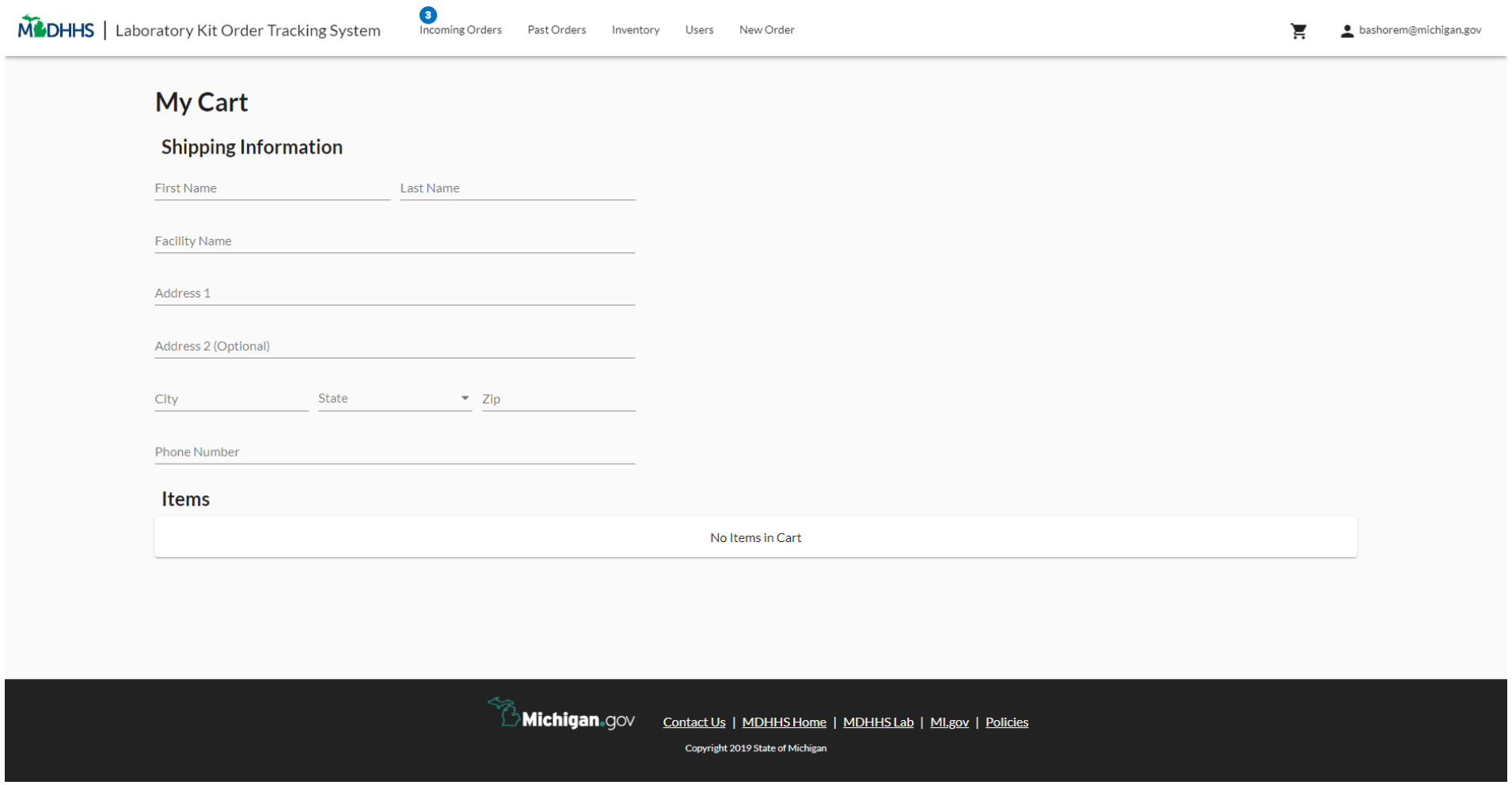


LKOTS


MDHHS | Laboratory Kit Order Tracking System
3
Incoming Orders
Past Orders
Inventory
Users
New Order
bashorem@michigan.gov
New Order
Search for an Item
Item Type
Clear
Find
Items
Items per page: 6
1 - 6 of 132
1: Kit # 1: Enteric Bacterial Infection
1 - Category B Shipper
1 - 95kPa Bio Bag
1 - Cary Blair Fecal Transport Medium
1 - Zipper Bag, 4" x 8"
(Click Details for more)
Qty
Details
2: Kit # 2 Chlamydia/Gonorrhea – Amplified Test – Cervical or Urethral Swab
1 - Category B Shipper
1 - 95kPa Bio Bag
5 - APTIMA Unisex Collection Kit Swab
5 - Zipper Bag, 3" x 5"
(Click Details for more)
Qty
Details
2U: Kit # 2U Chlamydia/Gonorrhea – Amplified Test – Urine Tubes Specimens
1 - Category B Shipper
1 - 95kPa Bio Bag
5 - APTIMA Urine Collection Kit Tubes
5 - Zipper Bag, 3" x 5"
(Click Details for more)
Qty
Details
2V: Kit # 2V Chlamydia/Gonorrhea – Amplified Test – Vaginal, Pharyngeal, or Rectal Swab
1 - Category B Shipper
1 - 95kPa Bio Bag
5 - APTIMA Multitest (orange) Collection Kit
(Click Details for more)
Qty
Details
4: Kit # 4: Oral Fluid Specimens for HIV-1 Mailing Components
1 - Category B Shipper
1 - 95kPa Bio Bag
1 - Absorbent
1 - Biological Substance Shipping Label,
(Click Details for more)
Qty
Details
5: Kit # 5: Enteric Viral Infections (e/g/ Norovirus) 4 samples per kit
1 - Corrugated Box, 9" x 8" x 5"
1 - Absorbent
1 - Styrofoam Mailer
4 - 1316 Dual Mailer, 2" x 3 3/4"
(Click Details for more)
Qty
Details

LKOTS

MDHHS Michigan Department of Health & Human Services



Serum Collection Kit

- Kit #8A
  - All serums: Syphilis, Hepatitis, HIV, measles and mumps antibody, Lyme, fungal serology, etc.
  - MUST be received at refrigerated temperatures

Viral PCR Specimen Collection Kit

- Kit #45
  - Influenza, SARS-CoV-2, measles, mumps
  - MUST be received at refrigerated temperatures

Additional STI Kits for Gonorrhoeae, Chlamydia, and Trichomonas

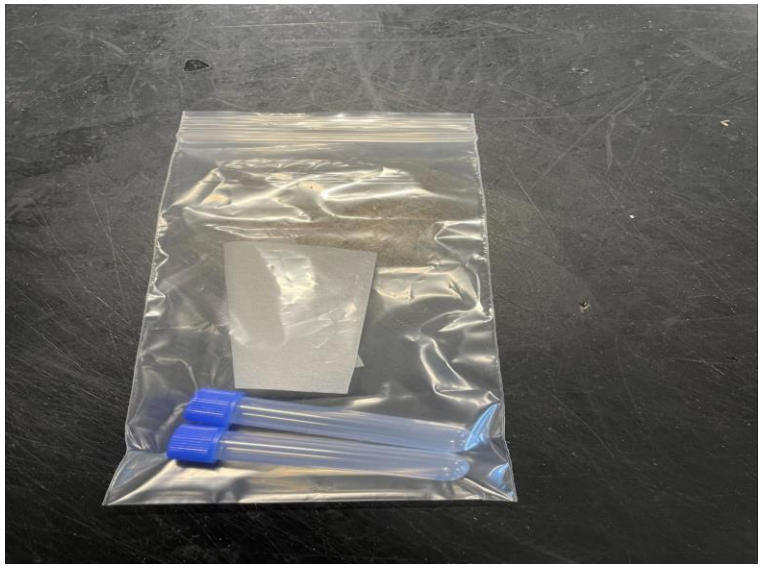
Kit 2 Series

- Kit #2 = Aptima® Unisex Swab Specimen Kit (DCH-0972)
  - Trichomonas, Gonorrhoeae & Chlamydia: (14 y/o and over only)
  - ONLY Endocervical or Urethral collection sites
- Kit #2-U = Aptima® Urine Specimen Collection Kit (DCH-0975)
  - Gonorrhoeae & Chlamydia testing (including under 14 y/o)
  - Trichomonas (14 y/o and over only)
- Kit #2-V = Aptima® Multitest Swab Specimen Kit (DCH-0972)
  - Gonorrhoeae & Chlamydia: (14 y/o and over only)
    - Rectal, Pharyngeal, Vaginal (including self collected at clinic)
  - Trichomonas (14 y/o and over only)
    - Vaginal (no self collects)

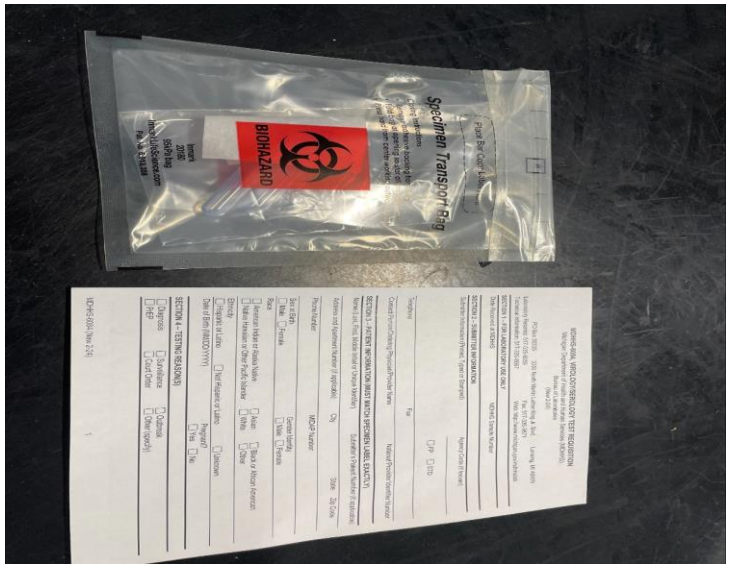
All Kit 2 Series Can be Received between -20C and 30C!

Packing Instructions

1.



2.



3.

4.

Packing Instructions

5.

6.

7.

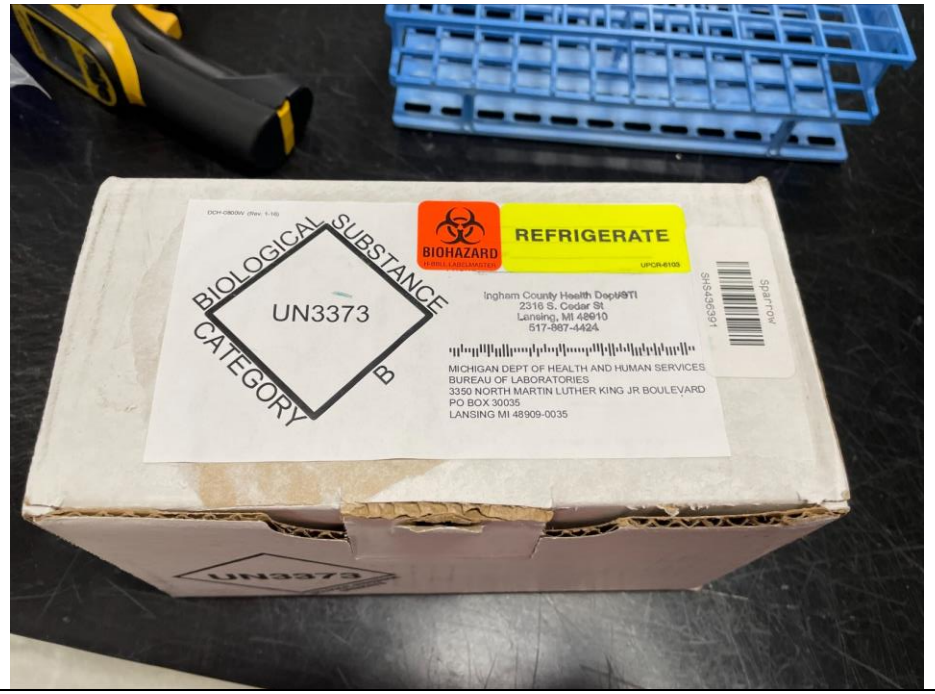
8.

Set up for Success!

- Samples must be sent on **frozen cold packs that have been stored in a freezer overnight**. It is encouraged to include multiple frozen cold packs in one container to ensure maximum contact with the specimens. Please split shipments into two boxes (or more) if there is not enough room to pack two frozen cold packs with the specimens.
- Please **pack specimens in a Styrofoam container** so the specimens and frozen cold packs retain the appropriate temperature during transport. Specimens shipped with only a cardboard box will warm or thaw during transport, resulting in rejection upon arrival.
- Specimens transported via courier should still be packed in a Styrofoam container with frozen cold packs, even if specimens are transported in coolers. Please **label the outermost container** “Refrigerate upon Arrival”. For specimens that require freezing, please label the outermost container “Freeze Upon Arrival”.

What NOT to do:

Don’t ship specimens that need to be kept at cold temperatures in a cardboard box with no insulation.



Submission is missing the styrofoam container.

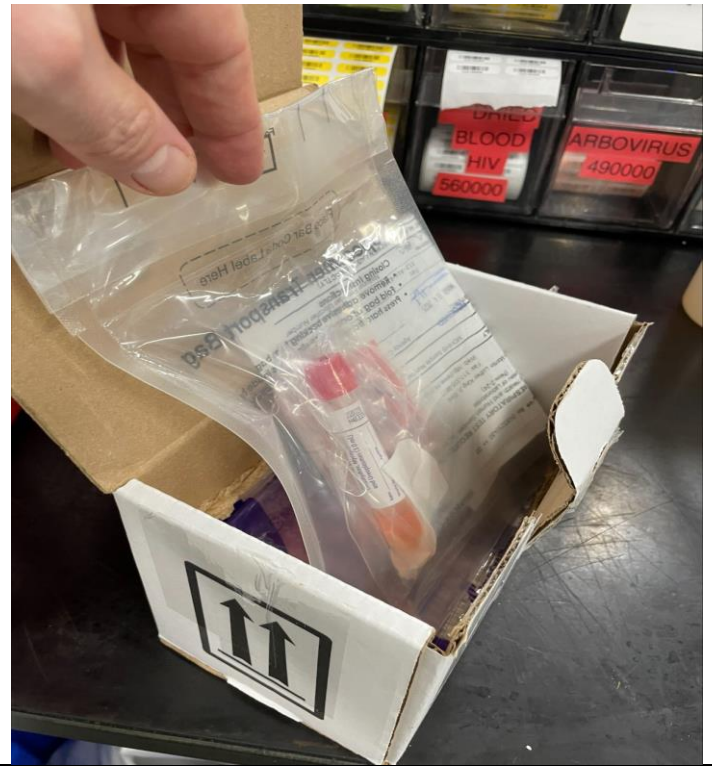
What NOT to do:

Submission is missing the styrofoam container, does not have cold packs, and has too many specimens.

Submission is missing a rigid outer container, no styrofoam container or cold packs.

What NOT to do:

Submission is missing styrofoam container and cold packs.



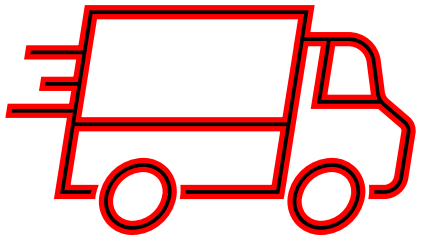
Make sure specimens that need to be received at refrigerated or frozen temperatures have the correct insulated packaging and enough frozen cold packs to maintain temperature!

Other Common Mistakes

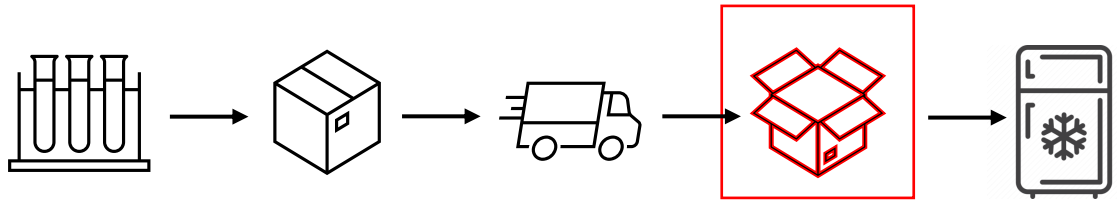
- **Specimen Label** – Two Unique Identifiers Required (Full Legal Name, Date of Birth, Patient Number) – Matches Test Requisition Form
- **Improper Packaging** – Category B (UN3373)
- **Incomplete Test Requisition Form** – missing required information. Missing information will delay results being released.
  - Submitter Information
  - Patient Name
  - Date of Birth
  - Date of Collection
  - Specimen Source
  - Gender of Patient

Saturday Delivery

- All specimens shipped for Saturday Delivery MUST have a label that specifies that
- Next Day Shipping is Next Business Day and will not arrive until Monday
- Saturday shipping labels can be provided by the laboratory under special circumstances for testing that has been approved on weekends.
- Contact MDHHSLab@michigan.gov



Temperature Monitoring of Specimens Upon Receipt at the BOL



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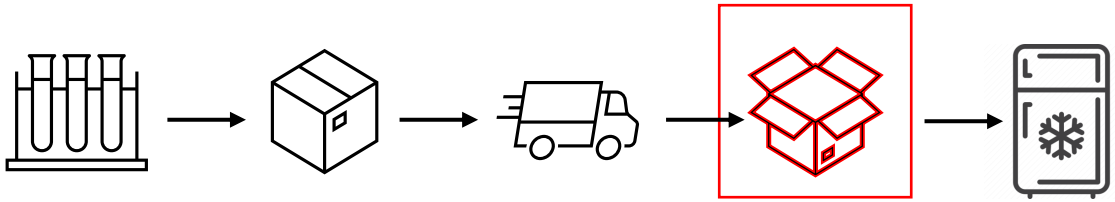
Temperature Monitoring of Specimens

- The BOL is now taking specimen temperature upon receipt at the laboratory.



- Best practice to ensure specimens are acceptable for testing and ensure laboratory results are accurate.
- It is a requirement by laboratory accreditation bodies (CLIA and CAP) to ensure specimen temperature upon receipt is acceptable for testing to be performed.

What does this mean for me?

- Samples that do not meet temperature requirements upon arrival at the BOL WILL BE REJECTED.
- We are working with submitters to improve specimen packing and shipping.
- Use supplies that will maintain temperatures even if using a courier system for transport.
- Please reach out with any questions about packing and shipping requirements.

Set up for Success!

- Before packing the specimen, store them at refrigerated or frozen temperatures for a few hours to get the sample down to the correct temperature.
- When you get a shipment from LKOTS, immediately take out the cold packs and place them in the freezer. Store cold packs in the freezer so they are completely frozen when you go to pack the specimen boxes.
- Place the specimen directly on the frozen cold pack with as much surface area as possible. Do not place the requisition form between the cold pack and the specimen.

More information?

www.michigan.gov/mdhhslab

Bureau of Laboratories

In addition to sharing information about various reference services available, we hope to use this forum to interact with you to help meet the challenges of communicable disease and environmental concerns that adversely affect communities in Michigan.

- MDHHS AFTER-HOUR EMERGENCY PHONE NUMBER: 517-335-9030
- Bureau of Laboratories Holiday Business Hours
- Contact Us
- Inside the Bureau of Laboratories
- A-Z Test Listing
- UPDATE (3/31/25): Temperature Requirements for Specimens
- Order Clinical and Environmental Collection Kits - Laboratory Kit Order Tracking System (LKOTS)
  - LKOTS - How to create an account
  - LKOTS - How to place an order
- Test Request Forms

A-Z Forms

Measles RT-PCR Assay

ANALYTES TESTED: Measles virus nucleic acid.

USE OF TEST: Detection of Measles viral infection.

SPECIMEN COLLECTION AND SUBMISSION GUIDELINES:

- Test Request Form MDHHS-6084
- Specimen Collection DCH-0772
- Specimen Submission Guidelines
- **Testing must be pre-approved before shipping**. Contact the MDHHS Communicable Disease Epidemiology Division (517-335-8165) for approval.
- Transport Temperature: Refrigerated with frozen ice packs (2-8°C) or frozen with dry ice (≤ -20°C). DO NOT send at room temperature.
- Patient Preparation: None

SPECIMEN TYPE:

- Specimen Required: Throat swab, Oropharyngeal (OP) swab, Nasopharyngeal (NP) Swab. Use synthetic swab with a non-wooden shaft eluted in 3 ml viral transport medium.
- Minimum Acceptable Volume: 3.0 ml
- Container: Swab – plastic container with 3 ml viral transport medium
- Shipping Unit: Unit 45

SPECIMEN REJECTION CRITERIA:

Critical Data Needed for Testing:

- Patient Name
- Patient date of birth
- Specimen source
- Date collected
- Submitting Agency
- Incomplete test requisition information may lead to testing cancelation or a delay in testing and reporting.

Specimens will be rejected if:

- Specimens lacking two unique patient identifiers (i.e. full name and date of birth, patient number or specimen number) will not be tested.
- Swabs with calcium alginate or cotton tips and wooden shafts will not be tested.
- The specimen container is received leaking or has been contaminated by another leaking specimen in the same bag.
- The specimen is not properly labeled, or the test requisition is not completed.
- The specimen label does not match the test requisition.
- The collection supplies were expired on date of collection.
- Specimens received outside of appropriate transport temperature may not be tested.

Virology - Serum Temperatures

- **All serum specimens must be transported to the BOL at refrigerated temperatures (2-8°C) on frozen cold packs or frozen on dry ice.**
- Tests Examples:
  - Measles (IgM/IgG)
  - Mumps (IgM/IgG)
  - HCV
  - HIV
  - Fungal Serology
  - Syphilis
  - Arboviral testing (Submit CSF cold also)

Measles and Mumps Serums

- For Measles, Rubella, and Mumps IgM testing, specimens stored at refrigerated temperature must be shipped immediately. If sample processing is delayed > 48 hours, specimens must be frozen at <-20 °C and shipped on dry ice to remain frozen during transport.

Viral RT-PCR Specimen Temperatures

- **All specimens that will be tested via RT-PCR must be transported to the BOL at refrigerated temperatures (2-8°C) on frozen cold packs or frozen on dry ice.**
- Test Examples:
  - Influenza/SARS-CoV-2 Multiplex
  - Influenza Subtyping Multiplex
  - Measles RT-PCR from swabs in VTM
  - Mumps RT-PCR from swabs in VTM
  - Respiratory Panels

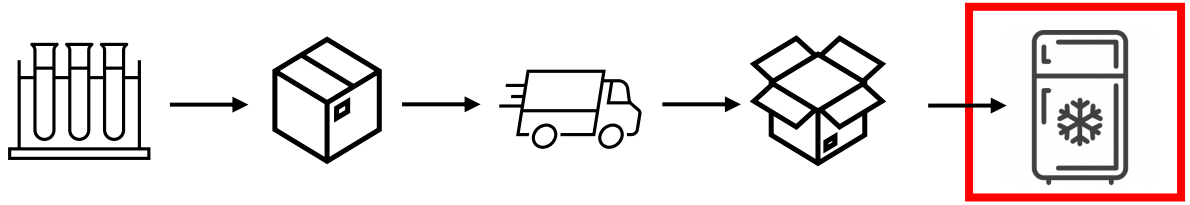
HIV Treatment Monitoring Specimens

- HIV-1 treatment monitoring specimens require two shipping conditions.
  - CD4/CD8 EDTA whole blood specimens must be shipped at room temperature.
  - HIV-1 Viral Load plasma specimens must be shipped frozen or at refrigerated temperatures (2-8°C)

Sending Virology and Microbiology Specimens in the Same Container

- Specimens for *Neisseria gonorrhoeae* and *Chlamydia trachomatis* detection may also be submitted in the same package as serums if there is no dry ice (only frozen cold packs), since the acceptable temperatures for these samples are ambient and cold.
- Continue to submit bacterial isolates at ambient temperatures.

Virology Section Test Menu



MDHHS
Michigan Department of Health & Human Services

Virology Test Menu

Serology Tests

- Lyme Disease Antibodies
  - IgG and IgM EIA for *B. burgdorferi*
- Fungal Antibodies
  - *Histoplasma capsulatum*
  - *Blastomyces dermatididis*
  - *Coccidioides immitis*
- Arbovirus Encephalitis Panel (CSF)
  - West Nile Virus (WNV)
  - Eastern Equine Encephalitis (EEE)
  - St. Louis Encephalitis (SLE)
  - La Crosse Virus (LCV)
  - Jamestown Canyon Virus (JCV)

  Serum testing prior approval only
- Dengue IgM
- Syphilis panel for diagnosis
- Hepatitis B panel for diagnosis
- Hepatitis B for immune status*
- Hepatitis C antibody screen
- Hepatitis A IgM (prior approval only)
- Measles and Mumps IgM
- Measles, Mumps, Rubella, VZV for immune status (IgG)*
- Rabies antibodies

*Available by purchasing a Medical/Nursing Student Form DCH-0459. Contact 517-284-9370 or groffs@michigan.gov

Virology Test Menu

HIV Tests

- Diagnostic Testing
  - HIV Antigen/Antibody Screen
  - Reflex to confirmatory testing if positive
- PrEP Monitoring
  - HIV Antigen/Antibody Screen
  - HIV-1/2 Qualitative Assay
- HIV Treatment Monitoring
  - CD4/CD8 Count Assay
  - HIV-1 Viral Load Assay

Viral Molecular Tests

- Influenza detection and genotyping
- SARS-CoV-2
- Measles RT-PCR
- Mumps RT-PCR
- Mpox (dry swab)
- Hepatitis C Viral Detection (serum)
- Zika, Dengue, and Chikungunya PCR Panel (serum)

MDHHS BOL Contact Information

Specimen Submission – Matthew Bashore – bashorem@michigan.gov

To Order Supplies – MDHHSLab@michigan.gov or
https://milkots.michigan.gov/login
Testing or Results – Data and Specimen Handling Unit - 517-335-8059

For the Virology Testing Lab:
Dr. Katie Margulieux - MargulieuxK@michigan.gov, ph: 517-335-8099
Kristine Smith - SmithK8@michigan.gov, ph: 517-335-8100

For the Microbiology Testing Lab:
Dr. Kimberly McCullor – MccullorK@michigan.gov, ph: 517-335-9641
Nicole Ayers – AyersN@michigan.gov, ph: 517-335-2432