

# LabLink

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### Bureau Vision

The Bureau of Laboratories is a stronger, more diverse team within an integrated public health system. We utilize advanced technology and innovative leadership to provide comprehensive public health services in our dynamic global community.

### Bureau Mission

We are dedicated to continuing leadership in providing quality laboratory science for healthier people and communities through partnerships, communication and technical innovation.



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Editor: Heather Seymour

# Laboratory Kit Order Tracking System (LKOTS) Supplies Now Searchable by Kit

Kits appropriate for each test offered at the Bureau of Laboratories (BOL) are listed on the A-Z test form. A-Z forms are available on the BOL website at [michigan.gov/mdhhs/doing-business/providers/labservices/a-z-test-listing](http://michigan.gov/mdhhs/doing-business/providers/labservices/a-z-test-listing).

Each A-Z form indicates the appropriate shipping unit (kit) under the “Specimen Type” heading. For example, for Hepatitis C Real Time PCR testing, the appropriate shipping unit (kit) is 8A (example shown at right).

The LKOTS portal, [milkots.michigan.gov/login](http://milkots.michigan.gov/login), is used for supply requests. Supplies are only available to BOL submitters for testing performed by the BOL.

Submitters must create and verify an account to use the portal.

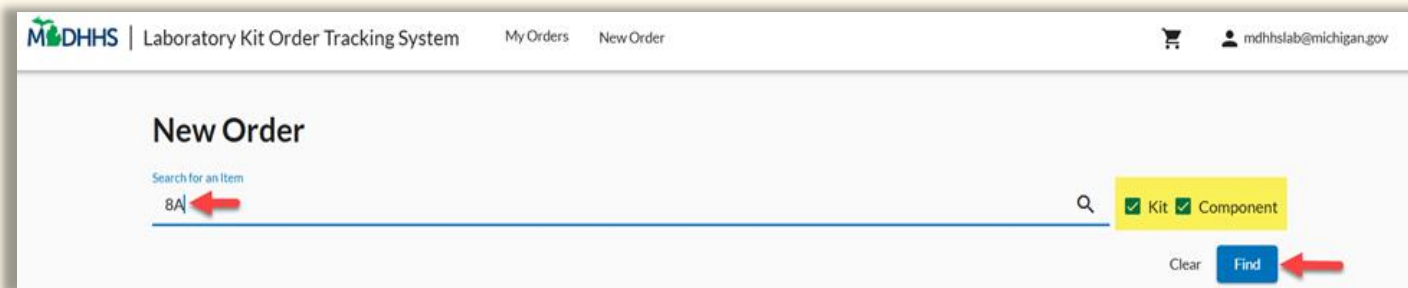
Shipping units (kits) can be requested as whole units. Because submission numbers may vary by shipment, components can also be requested individually.

To search by kit, log into the LKOTS portal and click on “New Order.”



Type the kit number in the search field, then click on “Find.”

Note: Leave both the kit and component boxes checked (checked by default).



## HCV Real Time RT-PCR

**ANALYTES TESTED:** Hepatitis C Virus

### USE OF TEST:

This assay uses Real Time RT-PCR for the qualitative analysis of viral RNA in human plasma or serum. Low volume reactive EIA specimens received refrigerated will be automatically reflexed to qualitative HCV RT-PCR testing.

### SPECIMEN COLLECTION AND SUBMISSION GUIDELINES:

- Test Request Form [MDHHS-6084](#)
- [Serum Specimen Submission Guidelines](#) (DCH-0812)
- Transport Temperature: Refrigerated with frozen ice packs (2-8°C) or frozen with dry ice ( $\leq -20^{\circ}\text{C}$ ). DO NOT send at room temperature.
- Patient Preparation: None

### SPECIMEN TYPE:

- Specimen Required: Serum or EDTA plasma
- Minimum Acceptable Volume: 1.0 ml
- Container: 5.0 mL Polypropylene tube with screw cap
- Shipping Unit: Unit 8A

### 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 cancellation or a delay in testing and reporting.

# Laboratory Kit Order Tracking System (LKOTS) Supplies Now Searchable by Kit

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The search will list the kit and all the available components. The default number of items to show on each screen is six. To display all available items, the number of items displayed on each page can be increased or the arrow key can be used to scroll through the pages.

For example, a search for kit 8A will now return the items pictured at right.

While not all collection supplies (i.e., swabs, transport media) are able to be provided free of charge, funds have been secured to allow the BOL to provide many of the items to submitters.

All packaging and shipping supplies (i.e., boxes, biohazard bags) are currently able to be provided to BOL submitters free of charge.























Any questions about this new LKOTS functionality can be sent to

[MDHHS�ab@michigan.gov](mailto:MDHHS�ab@michigan.gov)



Items

Items per page: 6 (dropdown menu shows 6, 12, 24) | 1 - 6 of 11

<b>8A: Kit # 8A: Serum Submissions (including Hepatitis C Antibody)</b>  1 - Corrugated Box, 9" x 8" x 5" 1 - Styrofoam Box 1 - 95kPa Bio Bag (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>101: Absorbents for use with Kit 1, Kit 2, Kit 2U, Kit 2V, Kit 5, Kit 6, Kit 7C, Kit 7V, Kit 8A, Kit 10, Kit 12, Kit 15, Kit 42B, and Kit 45</b>  Absorbent Strips - Please request by the piece, not by number of packs (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>106: Bio Bag (kPa) appropriate for use with: Kit 1, Enteric Bacterial</b>  Bio Bag (kPa) appropriate for use with: Kit 1, Enteric Bacterial (Click Details for more) Qty <input type="text"/>  Add to Cart Details
<b>115: Corrugated Box for Kit 5, Kit 8A, and Kit 45</b>  Corrugated box appropriate for use with: Kit 5, Enteric Viral (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>126: Ice Packs for Kit 5, Kit 8A, Kit 13, Kit 45, Kit 47L, and Kit 47S</b>  Ice Packs appropriate for use with: Kit 5, Enteric Viral Infections (e/g/ (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>134: Polypropylene Pour off Tube with Cap (5.0 mL) for Kit 8A, Kit 10, Kit 13, and Kit 45</b>  Polypropylene Tube with Cap (5.0 mL) appropriate for use with: (Click Details for more) Qty <input type="text"/>  Add to Cart Details
<b>138: Refrigerate Do Not Freeze Label for Kit 5, Kit 8A, Kit 45, Kit 47L, and Kit 47S</b>  Refrigerate Do Not Freeze Label appropriate for use with: (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>141: Styrobox for Kit 5, Kit 8A, and Kit 45</b>  Styrofoam Box appropriate for use with: Kit 5, Enteric Viral (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>147: UN 3373 Label for Kit 8A, and Kit 42B</b>  UN 3373 Label 4" X 4.75" for shipping Category B Biological Substances (Click Details for more) Qty <input type="text"/>  Add to Cart Details
<b>148: Wadding for Kit 8A, Kit 13, Kit 42A, Kit 42B, and Kit 8A</b>  Wadding appropriate for use with: Kit 8A, Serum Submissions (including (Click Details for more) Qty <input type="text"/>  Add to Cart Details	<b>150: Zipper Bag, 4" X 8" for Kit 1, Kit 2, Kit 2U, Kit 2V, Kit 5, Kit 6, Kit 7C, Kit 7V, Kit 8A, Kit 10, Kit 12, Kit 13, Kit 15, Kit 42A, Kit 42B, and Kit 45</b>  Zipper Bag, 4" X 8" appropriate for use with: Kit 1: Enteric Bacterial (Click Details for more) Qty <input type="text"/>  Add to Cart Details	

# EPA Reconsideration of the Dust-Lead Hazard Standards and Dust-Lead Post-Abatement Clearance Levels

*Author: Kelly Freed*

As part of the Environmental Protection Agency's (EPA) high-priority initiative to reduce childhood lead exposure, on November 12, 2024, the EPA published a final rule to revise the dust-lead hazard standards (DLHS) and dust-lead clearance levels (DLCL). This action aims to better protect public health, particularly children, from lead exposure by setting stricter standards for lead in dust and soil. The rule also includes changes to the definitions and requirements for lead-based paint activities, ensuring that lead hazards are identified and mitigated effectively. This initiative is part of EPA's broader efforts to reduce lead exposures and the associated health risks.

Lead exposure is particularly harmful to young children due to the sensitivity their developing brains have to environmental contaminants. Reducing childhood lead exposure is a priority for the EPA and the Federal Government. In December 2018, the President's Task Force released the Federal Lead Action Plan to enhance efforts to identify and reduce lead exposure and support affected children. In October 2022, EPA released the Lead Strategy to strengthen public health protections, address legacy lead contamination and promote environmental justice. This final rule revision defining the dust-lead reportable levels (DLRL) and dust-lead action levels (DLAL) is part of the EPA's commitment to reducing lead exposure.

The Bureau of Laboratories (BOL) is an EPA-recognized National Lead Laboratory Accreditation Program (NLLAP) laboratory through the American Industrial Hygiene Association (AIHA) Laboratory Accreditation Programs, LLC. As an EPA-recognized testing lab, the recent EPA rule changes have had several key impacts on testing. The new regulations lower the dust-lead hazard standards (DLHS) to any reportable level as analyzed by a laboratory recognized by the EPA's NLLAP. This means we must now detect and report even the smallest amounts of lead in dust.

In addition, the post-abatement dust-lead lead clearance levels have been reduced from 10 micrograms per square foot ( $\mu\text{g}/\text{ft}^2$ ) to 5  $\mu\text{g}/\text{ft}^2$  for floors, from 100  $\mu\text{g}/\text{ft}^2$  to 40  $\mu\text{g}/\text{ft}^2$  for windowsills, and from 400  $\mu\text{g}/\text{ft}^2$  to 100  $\mu\text{g}/\text{ft}^2$  for window troughs. As an EPA-recognized testing lab, we must demonstrate that we can analyze and achieve a quantitation limit "equal to or less than 80% of the lowest action level for dust wipe samples." These changes require method modifications and validations to ensure we can meet the new stricter standards.

These changes will likely increase the demand for our laboratory services as more frequent and detailed testing will be required to comply with the new regulations.

In addition to the above changes, some of the nomenclature has changed. Dust-lead hazard level (DLHL) has been renamed dust-lead reportable level (DLRL) and dust-lead clearance level (DLCL) is now dust-lead action level (DLAL).

The new standard changes were effective on January 13, 2025, with a compliance date of December 2025 for NLLAP labs. Effective May 20, 2025, the BOL lowered the reporting limit from 5  $\mu\text{g}/\text{ft}^2$  to 4  $\mu\text{g}/\text{ft}^2$  for lead in dust.



# HIV Testing Options at the BOL

*Authors: Melanie Thompson and Dr. Katie Margulieux*

The HIV Unit would like to provide guidance to our submitters on HIV laboratory testing available at the BOL. The BOL HIV Testing Unit provides testing for diagnostic screening, treatment monitoring, and monitoring of PrEP patients. All tests are performed at the BOL and do not require additional send-outs.

## HIV Diagnostic Testing

The BOL offers two HIV diagnostic tests that utilize different specimen types.

### 1. HIV Antigen/Antibody Screen ([AZ.086](#))

- **Test Use: Screen for initial diagnosis of HIV infection through the detection of HIV antigens or antibodies in serum.**
- Test Request Form: [MDHHS-6084](#).
- Specimen Type and Minimum Volume: 2 ml serum.
- Transport Temperature: Refrigerated with frozen cold packs (2-8° C) or frozen with dry ice ( $\leq -20^{\circ}$  C).
- All HIV Antigen/Antibody equivocal or reactive specimens will be automatically reflexed to the Geenius HIV-1/2 Differentiation Assay ([AZ.085](#)). All Geenius equivocal or non-reactive specimens will be automatically reflexed to the Cobas 5800 HIV-1/2 Qualitative NAAT ([AZ.098](#)) for molecular testing before reporting. Providers do not need to specify this reflex testing as it will be automatically ordered as required for the testing algorithm.
- Test Performed: Monday-Friday.

### 2. HIV-1 Dried Blood Spot Enzyme Immunoassay (EIA) Screening Test (Adult Dried Blood Spots) ([AZ.026](#))

- **Test Use: Preliminary screen for initial diagnosis of HIV infection through the detection of HIV antigens or antibodies in dried blood spots.**
- Test Request Form: [MDHHS-6084](#).
- Specimen Type and Minimum Volume: Must receive at least 2 completely filled and saturated circles of blood on the blood spot card.
- Transport Temperature: Room temperature (15-30° C).
- Results are preliminary. Positive EIA results require providers to obtain a patient serum sample for confirmatory testing.
- Test Performed: Weekly.

# HIV Testing Options at the BOL

*...continued from page 6*

## HIV Treatment Monitoring

The HIV treatment monitoring testing algorithm includes two tests run concurrently. The two tests require different specimen types. The BOL does not require submitters to order both tests from our laboratory. Submitters can use other non-state laboratory facilities for either test.

### 1. HIV-1 CD4/CD8 (Whole Blood- EDTA tube) ([AZ.025](#))

- **Test Use: Monitoring of ongoing HIV-1 infection treatment efficacy.**
- Test Request Form: [MDHHS-6084](#).
- Specimen Type and Minimum Volume: Fill EDTA whole blood specimen tube to the intended fill volume.
- Transport Temperature: **Specimens must be received within 48 hours of collection and at room temperature (15-30° C).**
- Test Performed: Monday-Friday.

### 2. HIV-1 Viral Load ([AZ.033](#))

- **Test Use: Monitoring of ongoing HIV-1 infection treatment efficacy.**
- Test Request Form: [MDHHS-6084](#).
- Specimen Type and Minimum Volume: 2 ml of EDTA plasma.
- Transport Temperature: Refrigerated with frozen cold packs (2-8° C) or frozen with dry ice ( $\leq -20^{\circ}$  C). **DO NOT send at room temperature.**
- Test Performed: Monday-Friday, 2-3 times per week.

## PrEP Patient Monitoring

The PrEP monitoring testing algorithm includes two tests run concurrently using the same specimen type.

### 1. HIV Antigen/Antibody Screen ([AZ.086](#))

- **Test Use: Screen for HIV antibody seroconversion in patients on PrEP.**
- Test Request Form: [MDHHS-6084](#).
- Specimen Type and Minimum Volume: 2 ml serum.
- Transport Temperature: Refrigerated with frozen cold packs (2-8° C) or frozen with dry ice ( $\leq -20^{\circ}$  C).
- Test Performed: Monday-Friday.

### 2. HIV-1/2 Qualitative NAAT ([AZ.098](#))

- **Test Use: Screen for HIV retrovirus detection that would indicate early infection in patients on PrEP.**
- Test Request Form: [MDHHS-6084](#).
  - Section 4: Choose PrEP as the testing reason.
  - Section 6: Choose HIV PrEP as the test requested.
- Specimen Type and Minimum Volume: 2 ml of serum.
- Transport Temperature: Refrigerated with frozen cold packs (2-8° C) or frozen with dry ice ( $\leq -20^{\circ}$  C).
- Test Performed: Monday-Friday, 2-3 times per week.

Please contact Dr. Katie Margulieux, Virology Section Manager, at [MargulieuxK@Michigan.gov](mailto:MargulieuxK@Michigan.gov) or 517-335-8099 for questions or more information.

## Newborn Screening Celebrates 60th Anniversary

*Authors: Shawn Moloney, MPH, MSL(ASCP)<sup>cm</sup> and Shelby Heppe, MPH*

The Michigan Newborn Screening (NBS) Program celebrates its 60th anniversary in 2025. Screening began in 1965 with one disorder, phenylketonuria (PKU), and has expanded over the years to include two point-of-care tests performed at birthing hospitals along with 57 disorders that can be detected via a dried blood spot on filter paper. It is fitting that Michigan added a 60th disorder, mucopolysaccharidosis type II (MPS II), to its NBS panel this year as it coincides with the 60th anniversary of the program.

Since its inception, nearly eight million Michigan newborns have been screened by the program and more than 9,000 have benefited from early diagnosis of conditions detected from the blood spot panel. The NBS panel screens infants for rare but serious disorders that require early treatment. Advancements in laboratory technologies have made it possible to detect amino acid, organic acid, fatty acid oxidation, lysosomal storage disorders and more. A full list of newborn screening conditions can be found online at [Michigan.gov/NewbornScreening](https://Michigan.gov/NewbornScreening).

The first robust screening technology for the detection of PKU in newborns was developed by Dr. Robert Guthrie in 1960. Dr. Guthrie had a personal interest in ensuring all newborns in the country received screening from a preventable cause of intellectual disabilities, as his niece was diagnosed with PKU. Michigan's NBS Program began in 1965 and was pioneered by Dr. Richard Allen, a pediatric neurologist at the University of Michigan, and Dr. K. Stanley Read, a microbiologist at the Michigan Department of Public Health Laboratory. In 1977, Michigan became one of the first states to expand NBS beyond PKU. The addition of congenital hypothyroidism (CH) cemented Michigan's commitment to expanding this evidence-based public health program.

Michigan's NBS program has undergone remarkable expansion since its inception — from a single disorder in 1965 to 60 conditions in 2025. This year we celebrate one of the greatest public health success stories, the 60th anniversary of newborn screening in Michigan.

