

## I. Supplies

The Indiana Department of Health (IDOH) Laboratory sends participating providers collection supplies for capillary collection to include lancets, filter paper cards, alcohol prep pads, gauze and bandages. We also will supply shipping containers for venipuncture confirmatory specimens. To order supplies, use the web portal - LimsNet.

### A. LimsNet Access

To access LimsNet, you first must have an **Access Indiana** account.

Use : [Access Indiana | Sign In](#).

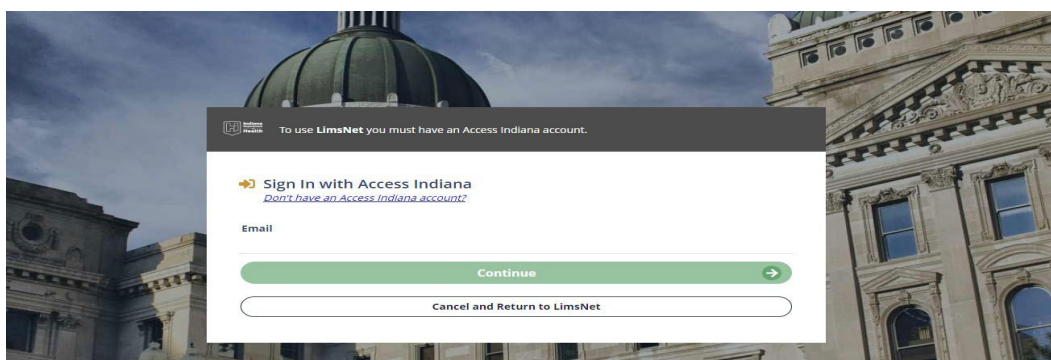


Figure 1. LimsNet log-in Screen through Access Indiana

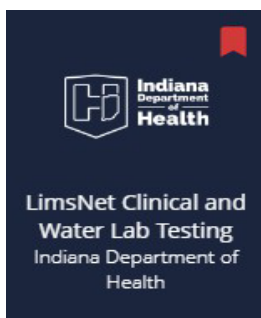


Figure 2. Choose LimsNet tile

To submit clinical specimens, you will still need an account associated with your facility. Contact LimsNet Help Desk: [LimsAppSupport@health.IN.gov](mailto:LimsAppSupport@health.IN.gov) (email preferred) or 317-921-5506.

## II. Capillary Collection Procedure

### A. Filter paper cards (dried blood spots)

1. Identify patient
2. Cover clean work surface with paper towels from dust-proof box
3. Place the following items (figure 3) on the paper towel for each child being tested:

Gauze  
Alcohol wipe  
Lancet (blade style)  
Filter paper card  
Soap  
Powder-free gloves

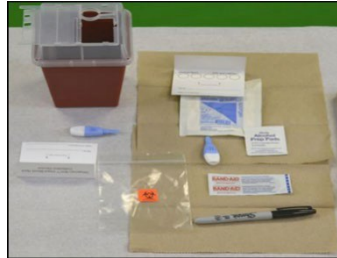
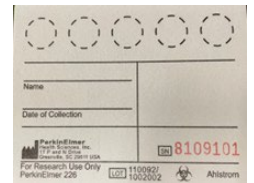
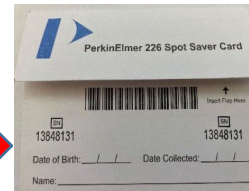


Figure 3

4. Completely label filter paper card (figure 4) with:

Child's full name  
Date of birth  
Date of collection

Figure 4



5. Wash child's hands with soap/water; dry with non-recycled paper towel from dust free box
6. Do not allow child to touch anything after washing
7. Open flap (if any) and lay flat
  - a. Do not touch any part of the filter paper or inside cover to avoid contamination
  - b. Do not fold flap under paper at this stage
8. Puncture finger with lancet; pinky side of ring finger is a good choice
9. Wipe away first blood drop using gauze
10. Turn patient's hand downward so finger is pointing to floor (figure 5)

Figure 5



11. Allow large drop to form at puncture site
12. Allow blood drop to free-fall onto collection card, allowing card to absorb blood until circle is full.
13. **Do not touch finger to card**
14. Minimum sample is one filled circle, but two is recommended (figure 6)
15. Place gauze on site and ask parent/guardian to hold pressure on finger
16. If necessary, bandage finger
17. Place filter paper on a drying rack (Figure 7), with the blood drops facing the ceiling. AVOID contact with blood drops.
18. \*Allow to dry for at least four hours\_away from direct sunlight or drafts from heat or air conditioning
19. A YouTube video is available [here](#).



Figure 6  
(One spot minimum)

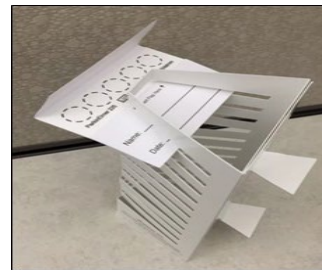


Figure 7

## B. Microtainer tubes

1. Label microtainer tube
2. Wash child's hands with soap/water; dry with paper towel from dust free box
3. Don't let child touch anything after washing
4. Open cap of microtainer and lay on flat surface
5. Puncture finger with lancet; pinky side of ring finger is a good choice
6. Wipe away first drop using gauze



Figure 8

7. Turn patient's hand downward such that the finger is pointing toward the floor
8. Allow large drop to form at puncture site (figure 8)
9. Allow blood drops to fall into microtainer tubes without scraping finger
10. Fill tube to first line (approximately 250  $\mu$ L); do this within two minutes of puncture
11. Place gauze over site and ask parent/guardian to hold pressure on finger



12. Cap microtainer tube and invert immediately; this mixes the specimen to prevent clotting
13. Check labeling - show to parent/guardian for confirmation of correct information
14. If necessary, bandage finger

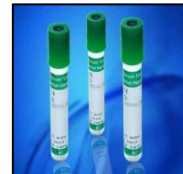


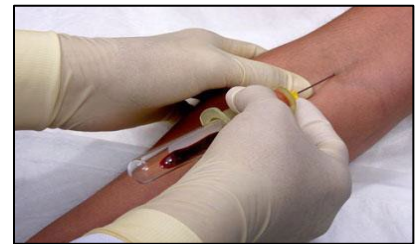
Figure 9

### III. Venipuncture procedure

#### A. Confirmatory venous specimens

1. Vacuum tube with EDTA preferred. These are not provided by IDOH (Figure 9)
2. Identify patient
3. Wash hands, tie tourniquet 3-4 inches above site (if it rolls up, it's too tight)
4. Have patient clench fist. Palpate veins in antecubital area.
5. Loosen the tourniquet once a vein has been selected
6. Assemble your equipment. This may also be completed in the beginning.
7. Tighten tourniquet again
8. Relocate vein and cleanse with 70% isopropyl alcohol
9. Allow alcohol to dry. It's less pain for patient this way.
10. Place collection tube in tube holder (adapter)
11. Remove needle cap
12. Turn needle to bevel up position
13. Pull skin taut just below puncture site
14. Insert needle at 30° angle (or less) (Figure 10)
15. Insert quickly, but not so fast that you go through the vein
16. Do not weave needle into vein (like an IV start)
17. You only need the bevel of needle in the vein to successfully draw blood (passing through the vein will cause a hematoma, or bleeding under the skin)
18. Push tube into adapter while pulling on lip edges of adapter to allow smooth insertion of rear needle into collection tube
19. Allow tube to completely fill with blood
20. To remove tube: pull tube with fingers while pushing on adapter wings with thumb of same hand to allow smooth removal of collection tube from rear
21. Remove tourniquet (removing needle prior to removal of tourniquet can cause a hematoma)
22. Place gauze over needle (without pushing down)
23. Remove needle quickly, then apply pressure with gauze
24. Invert tube five to seven times to mix
25. If patient is competent enough, ask them to hold pressure while you label the tube with the patient's name, date of birth and date of collection
26. Hold for one to two minutes

Figure 10



27. Check to see if bleeding has stopped. This takes five to 10 seconds.
28. Once bleeding has stopped, apply bandage
29. Application of bandage before bleeding has stopped can cause a hematoma

## IV. Shipping blood lead specimens to IDOH Laboratory

### A. Filter paper (dried blood spots)

1. Place dried filter paper in plastic bags after drying
2. Put **no more than five** bagged samples in an envelope (Figure 11) for shipment to the IDOH Laboratory for testing
3. Include LimsNet cover sheet (Figure 12) with specimens



Figure 11

LimsNet Samples Requested By ABC TESTING SITE			
Package ID:	1429905	2/15/2023	
Submitter Org:	ABC TESTING SITE		
Submitter ID:	999		
Submitter Name:	Samskrutha Bhumana	Phone:	317-921-5500
<hr/>			
C23005363			
First Name	Last Name	Specimen #	Date of Birth
a	a	G34567	3/16/2007
Test Requested	Collection Date	Sample ID	
Blood Lead	02/01/2023		
Mailing Address:			
Indiana Department of Health Laboratories 550 W 16th Street, Suite B Indianapolis, IN 46202			
PLEASE CHECK TO BE SURE ALL THE SAMPLES ON THE PRE-LOGGED LIST ARE IN SHIPMENT - Thank you.			

Figure 12

4. Dried blood spot specimens are good for four months at room temperature
5. Venous specimens are good for four months at room temperature unless they have clotted
6. Specimens received after four months are canceled automatically
7. If you use a STAT COURIER pick-up site, you may use the envelopes shown in Figure 11 for the courier instead of mailing. Using the courier is highly recommended due to issues with USPS.



## B. Capillary microtainer shipping

1. Place completely labeled microtainer tubes in primary receptacle (Figure 13) with enough absorbent material to soak up all the liquid. Paper towels are ok.
2. Place paperwork and primary container in secondary receptacle
3. Label for UN3373 transport
4. If you use a STAT COURIER site. This is ok for pick-up.
5. Send to:

IDOH Laboratory  
550 W. 16<sup>th</sup> Street  
Suite B  
Indianapolis, IN 46202  
**Attention: Blood Lead Laboratory**

Figure 13



## C. Venous blood tubes shipping

1. Packaging (Figure 14) consists of the following components: primary receptacles (blood tubes not provided by IDOH Laboratory) and secondary packaging (materials used to protect primary blood tubes) required for UN3373 shipping
2. Place labeled venous tube in a leak-proof container or baggie
3. Place enough absorbent material to soak up all the liquid. Paper towels are ok.
4. Place primary container into secondary container. Tape lid if it seems loose.
5. Label for UN 3373 transport to:

IDOH Laboratory  
550 W. 16<sup>th</sup> Street  
Suite B  
Indianapolis, IN 46202  
**Attention: Blood Lead Laboratory**

Figure 14



## V. Supplies and test ordering in LimsNet

### A. Requesting supplies

1. Choose "kit order blood lead" from log new order (Figure 15)
2. Enter number of packages requested
3. Click "submit"
4. You should get a confirmation email

Figure 15

399 unsubmitted tests. Mary Ann Hagerman Site: ABC TESTING SITE  
 Log new order: **Kit Order Blood Lead** Submit Tests Packages Test Results Personalized Settings  
 Log Off

**IDOHL Clinical Container Request**

Shipping Information

Site\* ABC TESTING SITE  
 Contact Name\* MARY HAGERMAN  
 Phone 317-921-5500  
 Email ID\* mhagerma@health.in.gov  
 Street Address\* 550 W. 16th Street (LAB)  
 City\* Indianapolis State\* IN Zip\* 46202

Kit Request Information

Email Questions to: Containers@health.in.gov Questions call: 317-921-5875

Kit #	Kit Type	# Whole Kits*	Extra or Replacement Kit Components Only	Quantity
			Filter paper cards (usually in pkg/25) Max: 12 pkgs	4
			Postage Paid Envelopes (each envelope can hold up to 5 cards) Max: 20 Envelopes	2
			Ziploc bags for filter paper cards (usually in pkg/25) Max: 12 pkgs	4
<input checked="" type="checkbox"/>	SA Blood Lead Max units: 12		Alcohol Preps (usually in pkg/25) Max: 12 pkgs	4
			Gauze Pads (usually in pkg/25) Max: 12 pkgs	4
			Lancets (usually in pkg/25) Max: 12 pkgs	4
			Venous Mailing Tubes (UN3373 compliant) Max: 10 Tubes	0
			Adhesive Bandages (usually in pkg/25) Max: 12 pkgs	0

Submit

### B. Enter demographic information:

1. Choose "blood lead."
2. Enter information. You must enter all the information marked with a **red asterisk**.
3. Click on the save button on the bottom of the page. You should get a message indicating the form has been successfully saved. If not, there is missing information or some error in entry. Please scroll up to review the form.

### C. Marking specimens to ship to laboratory

1. Click on **submit tests** (A) at the top of the screen (Figure 16). You will see the saved entries ready to ship.



2. Select the specimens you wish to ship (B; remember - five per envelope, please)
3. Click on **submit checked samples** (C) at the bottom of the screen; a window should pop up with the cover page containing the package ID and corresponding barcodes for you to print and **send with your specimens**.

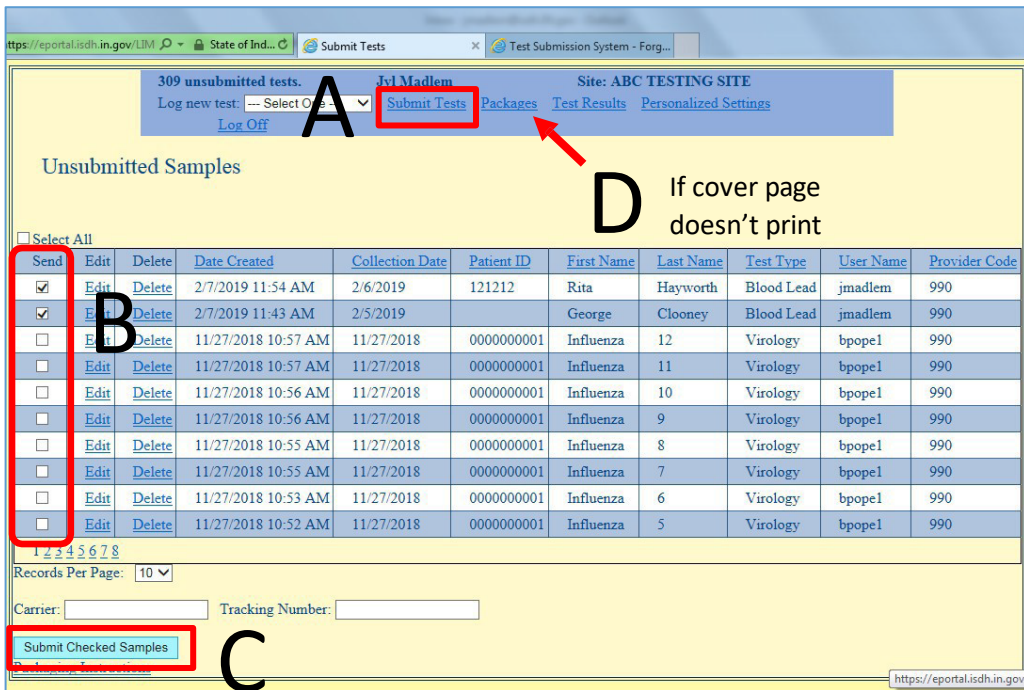
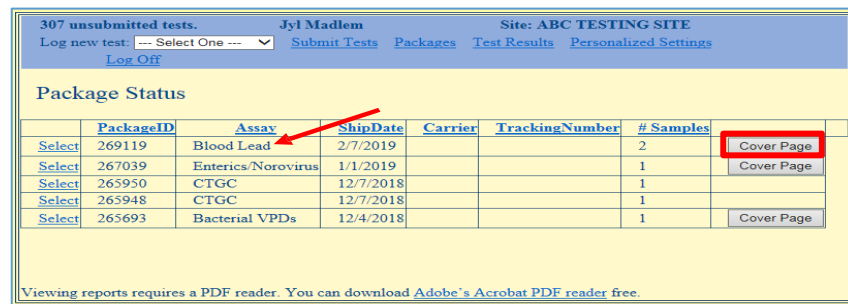


Figure 16

4. NOTE: If your pop-up blocker is on, this cover page window will not open; you may do one of two things:
  - Click on “packages” (D above), which will direct you to a link to the cover page on the far right. Choose your package and select “cover page” (Figure 17).
  - Turn off your pop-up blocker

Figure 17



Results are available under "test results" as a pdf. All results are sent to NBS/CHIRP.





## VI. Contact information

Chemistry Division Director	Mary Hagerman, MS <a href="mailto:mhagerma@health.in.gov">mhagerma@health.in.gov</a> , 317-921-5553
Clinical Response and Surveillance Supervisor (includes blood lead)	Olubiyi "B" Olukunle, PhD <a href="mailto:ololukunle@health.in.gov">ololukunle@health.in.gov</a>
Laboratory Program Advisor	Janet Kent, MAFM, CT (ASCP) <a href="mailto:jakent@health.in.gov">jakent@health.in.gov</a> , 317-921-5574
Lead and Healthy Homes Division Program Manager	Scile Wilz <a href="mailto:swilz@health.in.gov">swilz@health.in.gov</a>
LimsNet Help Desk	<a href="mailto:LimsAppSupport@health.IN.gov">LimsAppSupport@health.IN.gov</a> (preferred) or 317-921-5506 <i>To set up an account, please email LIMSAppSupport@health.in.gov or call the help desk at 317-921- 5506.</i>

