



Indiana
Department
of
Health

TB SPECIMEN SUBMISSION & TESTING AT IDOHL

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LABORATORY SUPERVISOR

03/23/2023

OUR MISSION:

To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.



Objectives

- Specimen collection
- Packaging and shipping
- Testing and results interpretation
- Ordering testing and timeline for results
- QuantiFERON TB Gold Plus
- LimsNet



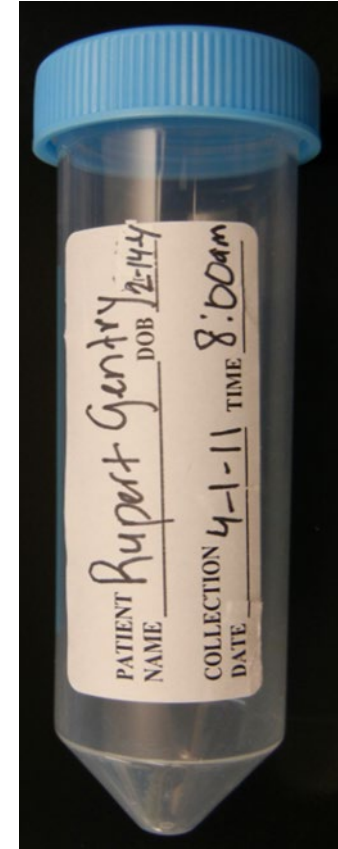
Specimen Collection



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Sputum Collection

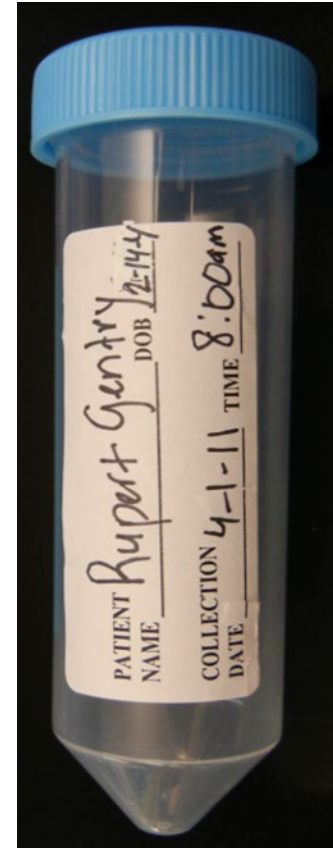
- Collect 3 sputa; at least 8 hours apart; at least one first thing in the morning
- 5-10 mL is optimal, however, smaller specimens are still accepted for testing
- More is better than less
- specimens of <0.5 mL will be noted on the report
- Make sure the patient is not just collecting saliva
- Refrigerate until shipment
- Transport to the lab as soon as possible



Unsatisfactory Specimens

Most common reasons for specimen rejection:

- **Missing information**
 - No name on the collection tube
 - No collection date on the collection tube
 - Name on specimen and form do not match
- **Specimen issues**
 - Leaking specimen tube—make sure the cap is secured tightly
 - No sputa in collection tube

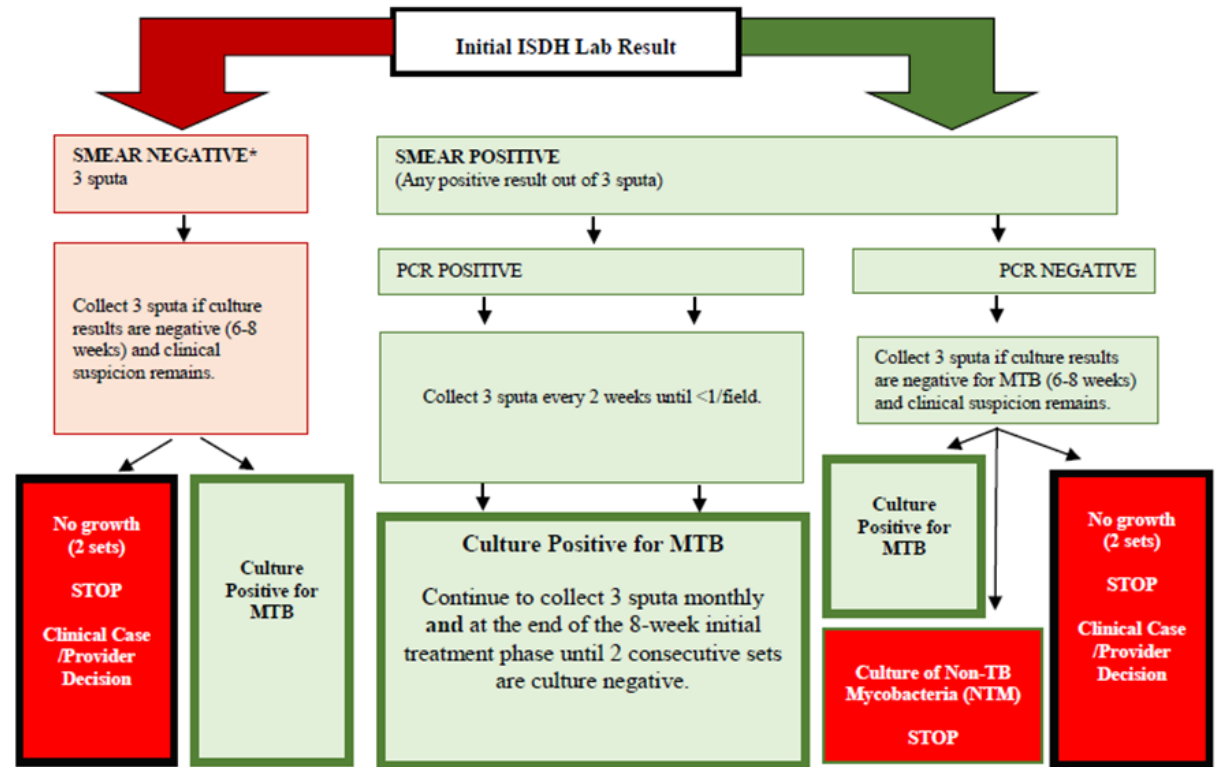


How often should sputa be collected?

Designed to assist the clinician by:

- Collecting the most appropriate number of sputa
- Collecting the most appropriately timed sputa
- Results interpretation
- Conserves resources by eliminating unnecessary testing

ISDH TB Control Sputum Collection Algorithm



* If clinical suspicion is high, a PCR may be requested. Requests must be received within 14 days of receiving the negative smear result.

What other specimen types can be accepted?

- IDOH TB Lab accepts non sputum types on a case-by-case basis, including:
 - BAL, lung tissue, urine, wounds, pleural fluid, lymph nodes
- Specimens must be collected in a sterile container and kept refrigerated
- Specimen PCR will be performed but it is not fully validated on most extra pulmonary specimen types. Results will be accompanied by a disclaimer
- Formalin fixed tissues are not acceptable for testing at IDOH, but testing may be able to be performed at the CDC (PCR only)



Packaging and Shipping and Transit Times



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Specimen Packaging and Shipping

- All sputum and blood specimens must be packaged as a Category B, Biological Substance
- IDOH provides sputum and QuantiFERON collection and shipping supplies free for local health departments

To order 6A containers:
Containers@health.IN.gov
317-921-5875

From:	FIRST CLASS MAIL	(Postage)
To: Indiana State Department of Health Laboratories 550 W. 16 th Street, Suite B Indianapolis, IN 46202-2203	UN3373	
In case of Damage or Leakage Notify		
Phone:		
State Form 39042 (R5/4-07)	Container 6A	BIOLOGICAL SUBSTANCE CATEGORY B

How do I pack a sputum specimen?

3 components:

1. Specimen collection tube (primary)
2. Watertight, secondary container
3. Rigid outer container
 - Secure cap to collection tube securely
 - Include absorbent material inside secondary container
 - Paperwork and cans should be placed in UPS bag for shipment



Be sure to send this ...

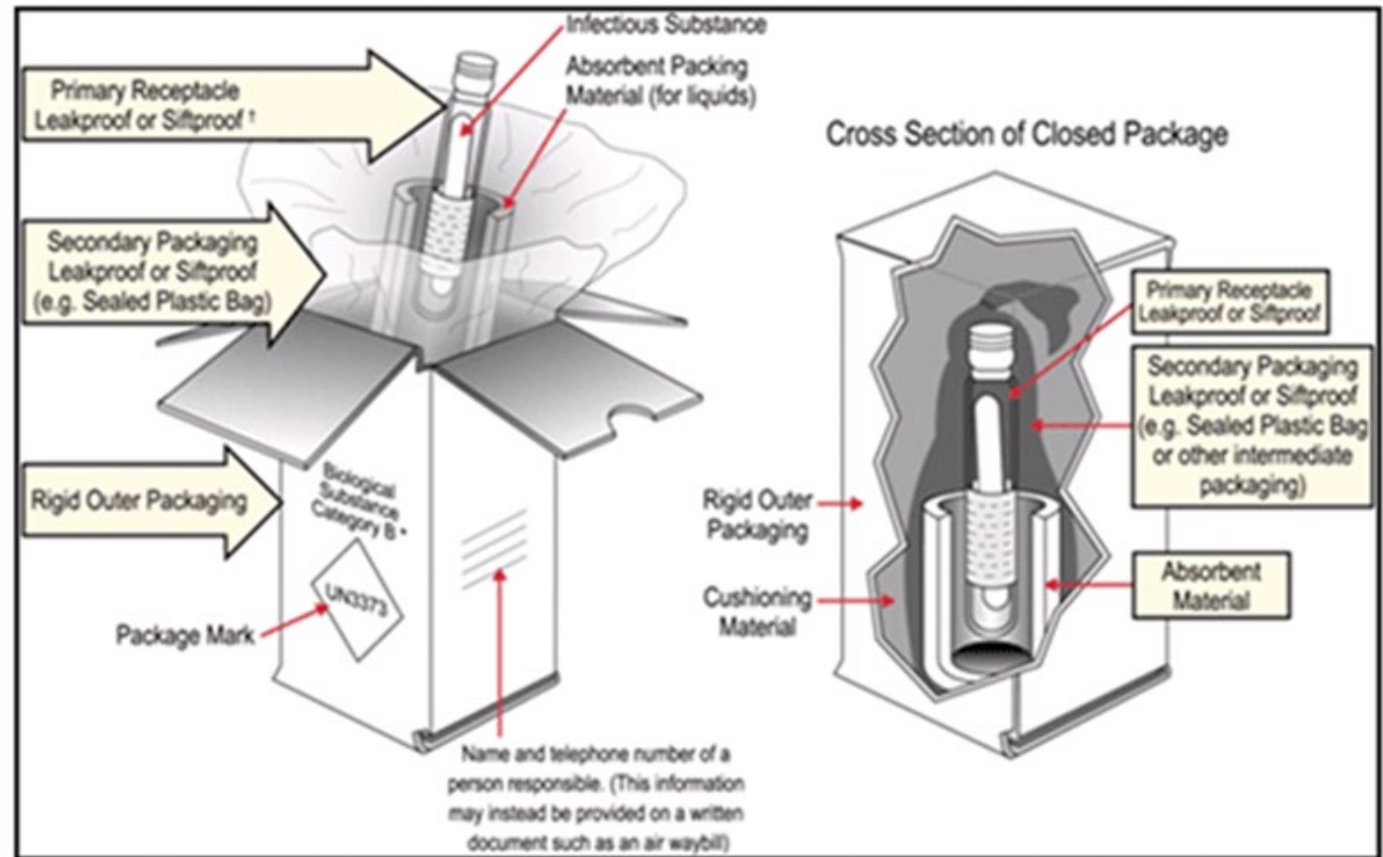


... and not this!



What if I don't have any IDOH containers, and I really need to ship?

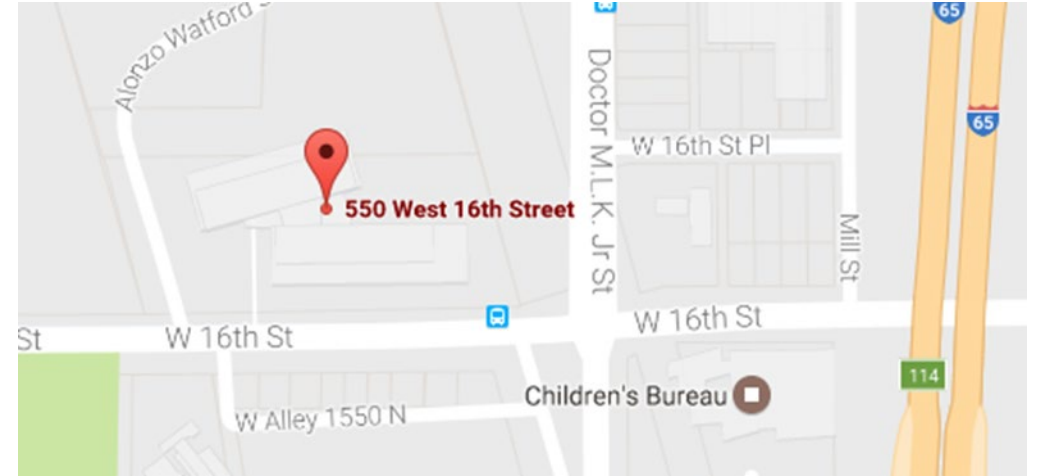
- Any sterile, leak-proof, screw capped collection container should be fine—for example, urine collection cups
- Remember to package as Category B, Biological Substances, including leak-proof secondary container and rigid outer packaging and rigid outer packaging



U.S. Department of Transportation

How do I get my specimens to the lab?

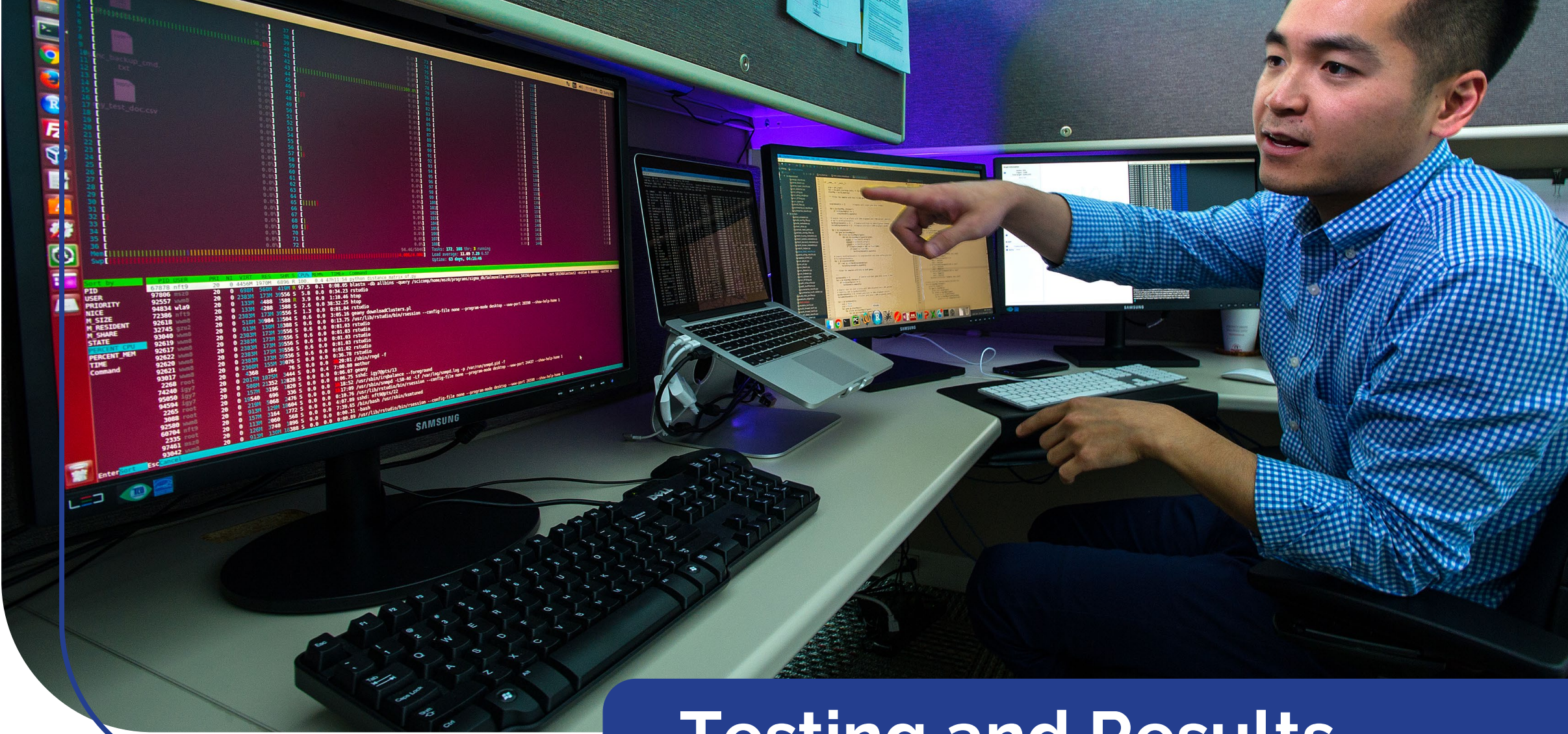
- Use UPS bags provided by IDOH—**FREE!!!**
- Deliver them yourself—open 8:15 a.m. to 4:45 p.m. 550 W. 16th St., Suite B, Indianapolis, 46202
- Remember not to ship on Friday or the day before a state holiday



Google Maps

What are the transit times and why should I be concerned about them?

- Transit time is defined as the length of time between specimen collection and receipt at the lab
- The sooner the specimen arrives here, the faster it can be tested, and the faster new TB cases can be identified
- Shorter transit times=faster results
- IDOH must report transit time data to the CDC as part of the TB Cooperative grant—the goal is 24 hours from collection
- Do not “BATCH” your specimens!
 - Ship one immediately, and the others the next day
 - Remember, UPS shipping is FREE!



Testing and Results Interpretation

Testing Objectives

1. Identify Acid Fast Bacteria (AFB) in specimens
2. Use Polymerase Chain Reaction (PCR) to detect *Mycobacterium tuberculosis* complex (MTBC) DNA in smear positive sputa
3. Culture specimen
4. Identify culture growth as MTBC
5. Determine antibiotic susceptibility
6. Ship the culture for genotyping

AFB Microscopy

- **Acid Fast Microscopy (AFB Smear)**—sputum is smeared on a glass slide, stained, and examined under a microscope.
- **Results:** **AFB Found** (Positive) or **Not Found** (Negative)
- Positive slides are quantified as the number/field:
 - AFB Positive--> 50/field, > 10/field, 1-10/field, < 1/field
 - Equivocal—only 1, 2, or 3 bacteria on the entire slide

AFB Microscopy

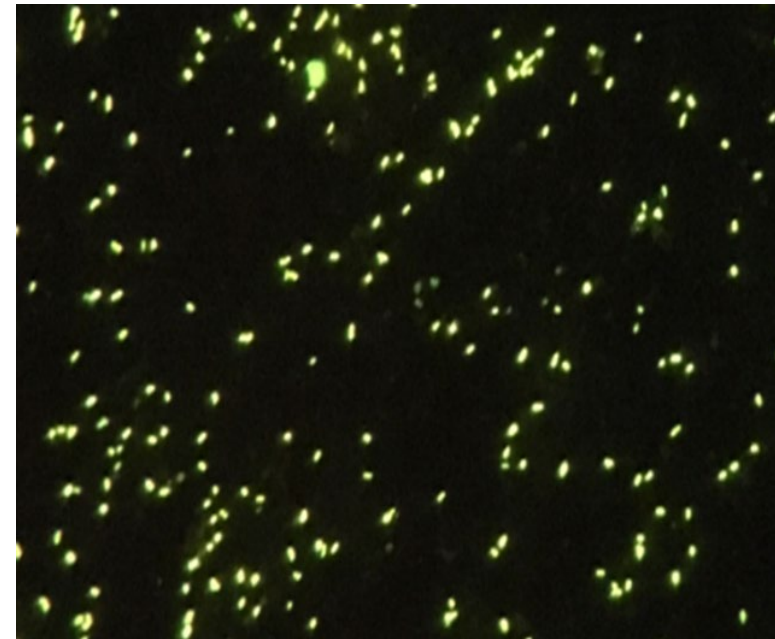
- AFB Positive result could indicate TB or some other mycobacteria (*M. avium*, *M. abscessus*, etc.)
 - PCR is needed to rule in or rule out TB
- AFB positive could indicate living or dead bacteria—patients on TB therapy sometimes have positive smears with negative cultures

AFB Microscopy

AFB Found, <1/field



AFB Found, >50/field



Sputum smears stained with Auramine O-phenol under high magnification.

TB PCR (Polymerase Chain Reaction)

- **Specimen TB PCR**—molecular test that detects MTBC DNA—very sensitive, can detect very small quantities, specific to TB
- **Results:** **Detected** (Positive) or **Not Detected** (Negative)
- IDOH automatically performs this test on smear positive sputa for new patients
- IDOH will perform this test on smear negative sputa upon request
- PCR can detect either live or dead bacteria, so this is most useful for testing patients with unknown TB status
- PCR is a different test than a TB probe, but the results are equivalent

M. Avium complex (MAC) PCR

- **Specimen MAC PCR**—molecular test that detects *M. avium* complex DNA—very sensitive, can detect very small quantities, specific to MAC
- **Results:** **Detected** (Positive) or **Not Detected** (Negative)
- Will only be run on smear positives that are TB PCR not detected
- Purpose is to help rule out TB for smear positive patients
- *M. avium* complex includes both *M. avium* and *M. intracellulare-chimaera* group

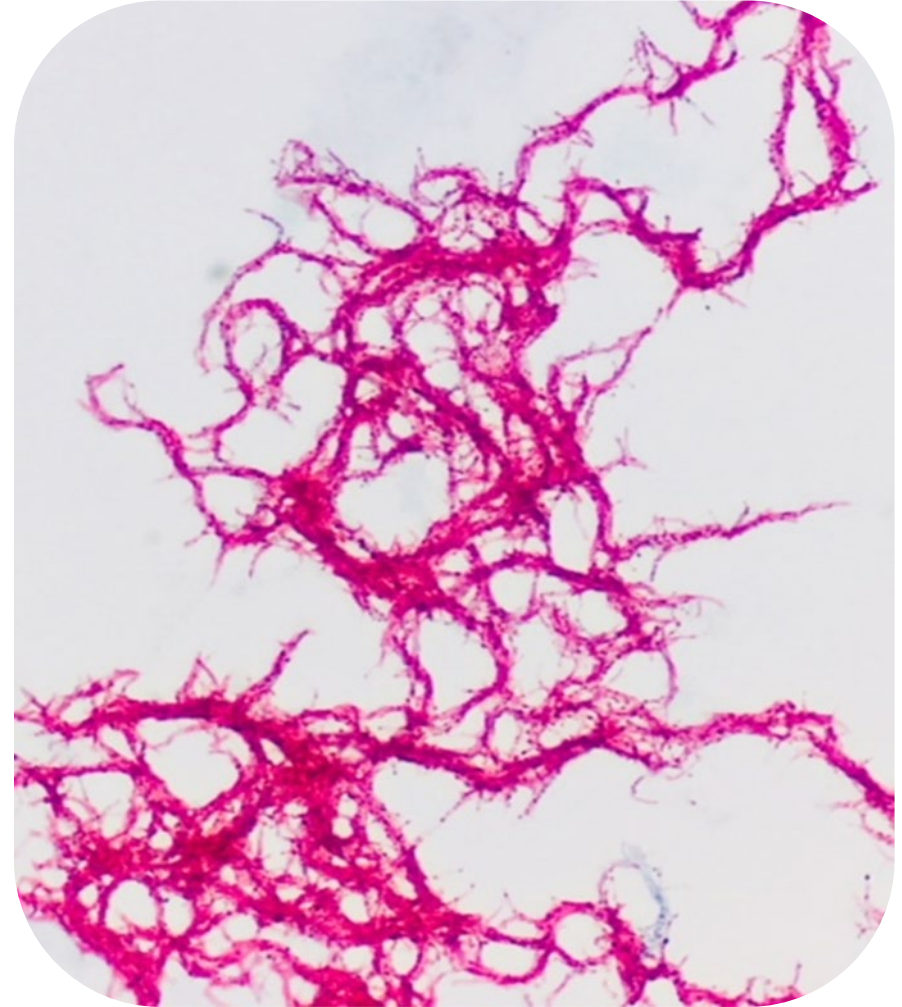
Mycobacterial Culture

- Two sets of media are inoculated for all specimens:
 - **M**ycobacterial **G**rowth **I**ndicator **T**ube—MGIT broth
 - Lowenstein-Jensen slant—LJ
- Both cultures are incubated for 6 weeks
- MGIT tubes are continually monitored for growth by MGIT 960 instrument
- Once growth is detected in either, additional testing is performed to identify the organism



Mycobacterial Culture

- Culture growth is checked to confirm the presence of mycobacteria—culture is smeared on a glass slide, stained, and examined under a microscope
- Presence of AFB could indicate TB, or another mycobacteria



MTBC from MGIT stained with Kinyoun stain under high magnification

Culture Identification – PCR

- **Positive cultures are first tested by Culture PCR to rule in or rule out TB**—same test as specimen PCR, but performed on the culture instead of the specimen
- **Results:** **Detected** (Positive) or **Not Detected** (Negative)
- All AFB positive cultures will be tested by both TB and MAC Culture PCR
- Lab Report will show each PCR test as a separate line



Culture Identification – MALDI-TOF MS

- MALDI-TOF MS is used to identify Non-Tuberculous Mycobacteria (NTMs)
- Matrix Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry
- Technology uses a laser beam to analyze the protein composition of bacteria and fungi
- Can be used to differentiate many species of Mycobacteria--library includes over 150 species
- More specific than other types of identification

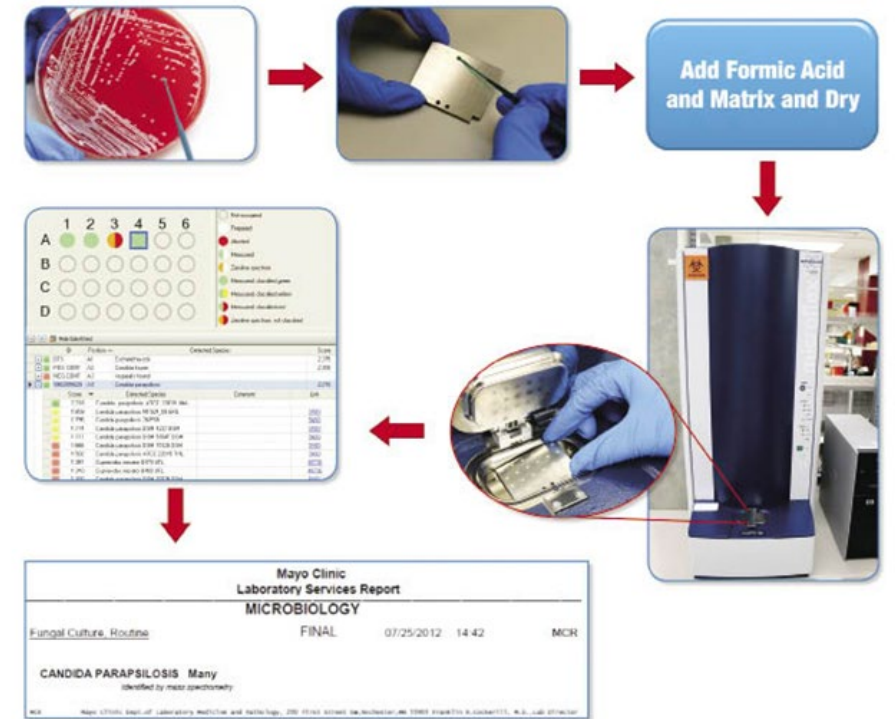


Figure 3. Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry Workflow

MALDI-TOF MS graphic from Bruker Corporation website

Culture Negative Results

- If no growth is observed in either the MGIT tube or the LJ slant, the culture is reported as negative
- **Result:** Final Conclusion: No Mycobacteria Isolated
- Culture negative results are finished after 6 weeks
 - Usually, this is exactly 6 weeks after the initial AFB smear date
- A culture negative indicates:
 - No mycobacteria were present in the sputa; or
 - Any AFB present were dead

Susceptibility Testing – Pyrosequencing

Pyrosequencing—molecular sequencing assay, detects mutations causing the majority of antibiotic resistance to RIF and INH

IDOH's pyrosequencing panel consists of three assays:

- **rpoB**—Rifampin
- **katG**—Isoniazid resistance (high level)
- **inhA**—Isoniazid resistance (low level)

Results: Mutation Detected (Positive)—likely antibiotic resistant

Mutation Not Detected (Negative)—approx. 90% chance the strain will be susceptible—culture DST needed for confirmation

Susceptibility Testing – Pyrosequencing

- The purpose of this assay is to detect MDR TB as early in infection as possible
- IDOH can perform this assay on TB PCR positive specimens or cultures
- Assay is typically performed once per TB patient
- Specimens can be submitted from other laboratories in Indiana upon request
- Specimens with mutations are typically forwarded to the CDC for additional testing

Culture Susceptibility Testing

After a culture has been identified as MTBC, susceptibility testing is performed for first line antibiotics (**RIPE**):

- **R**ifampin (1 $\mu\text{g}/\text{mL}$)
- **I**soniazid (0.1 $\mu\text{g}/\text{mL}$)
- **P**yrazinamide (100 $\mu\text{g}/\text{mL}$)
- **E**thambutol (5 $\mu\text{g}/\text{mL}$)

IDOH performs this test on the first positive culture for each TB patient.



Culture Susceptibility Testing

- MGIT tubes are inoculated with TB culture and antibiotics are added
- The tubes are then incubated for 10-14 days and monitored for growth

Results: **Susceptible**—no growth in the MGIT tube, indicating the antibiotic is effective against the TB strain

Resistant—growth in the MGIT tube, indicating that the TB strain can grow in the presence of the antibiotic t

- Resistant strains are sent to the CDC for further testing for second line antibiotics

TB Genotyping

- IDOH receives MTBC isolates from clinical laboratories throughout the state for genotyping
- One isolate from each TB patient is sent for genotyping
- National genotyping lab is the Michigan Department of Health
 - Molecular testing is used to compare strains of MTBC
 - Genotyping results aid IDOH TB Epidemiologist in creating links between patients to track how TB may be spreading





Ordering Testing and Timeline for Results



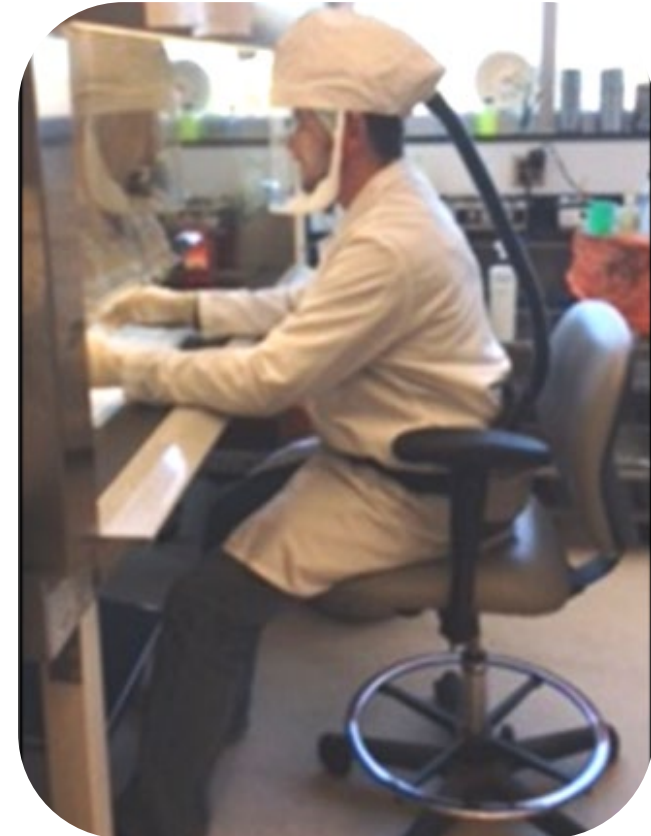
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What tests do I need to order?

- The lab will automatically perform a smear and culture for every specimen submitted
 - If the smear is positive, TB PCR will be performed (new patients only)
- Susceptibility testing and pyrosequencing will be performed once per TB patient
- PCR can also be performed on smear negative sputa upon special request—make sure to note this on the coversheet or in LimsNet as “MTB other” test
- When a culture grows, culture PCR will be performed

How long does it take for results?

- Acid Fast Microscopy (AFB Smear)—Day 1 (if received before 10 am)
- Specimen PCR—Day 2
- Pyrosequencing—within 7 days
- Culture PCR—within 3-4 weeks
- MALDI-TOF MS—within 4-5 weeks
- Drug Susceptibility Testing – within 6 weeks
- Negative Culture—42 days from smear date
- These times are approximate; dependent on how fast the strain grows and how many bacteria are present





QuantiFERON-TB Gold Plus



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What is QuantiFERON-TB Gold Plus?

- QFT is a type of IGRA (interferon-gamma release assay)—a blood test used to diagnose TB infection
- QFT can be used interchangeably with tuberculin skin tests, but offers several advantages:
 - Only one visit is required
 - Results may be easier to interpret
 - False positivity due to BCG is eliminated
- Cannot distinguish latent from active disease

Collection Methods Available

Single Tube—minimum
5 mL



4 Tube—1 mL in each
tube



Blood Collection Methods



Option 1: Draw at least 5 mL of blood into a single lithium heparin collection tube. Blood may be stored at room temperature for up to 24 hours or refrigerated for up to 53 hours prior to testing.

Option 2: Collect 1 mL of whole blood directly into each of four QFT-Plus blood collection tubes and hold at room temperature for up to 16 hours prior to incubation.



www.quantiferon.com

Which collection method is better?

Single Tube

- It's one tube!
- More accurate results--4 tube draw requires specific and detailed pre-analytical processing that can impact the results

4 Tube

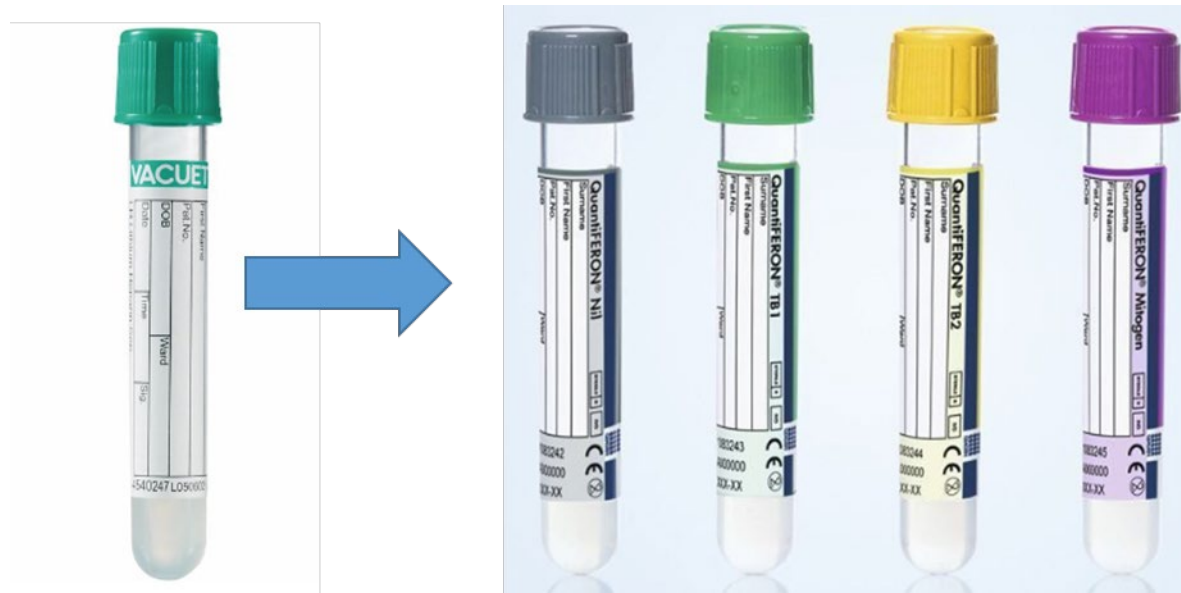
- More flexible hold times

Whichever option is used, it is important to strictly follow the sample handling instructions exactly.

Improper handling could lead to inaccurate results.

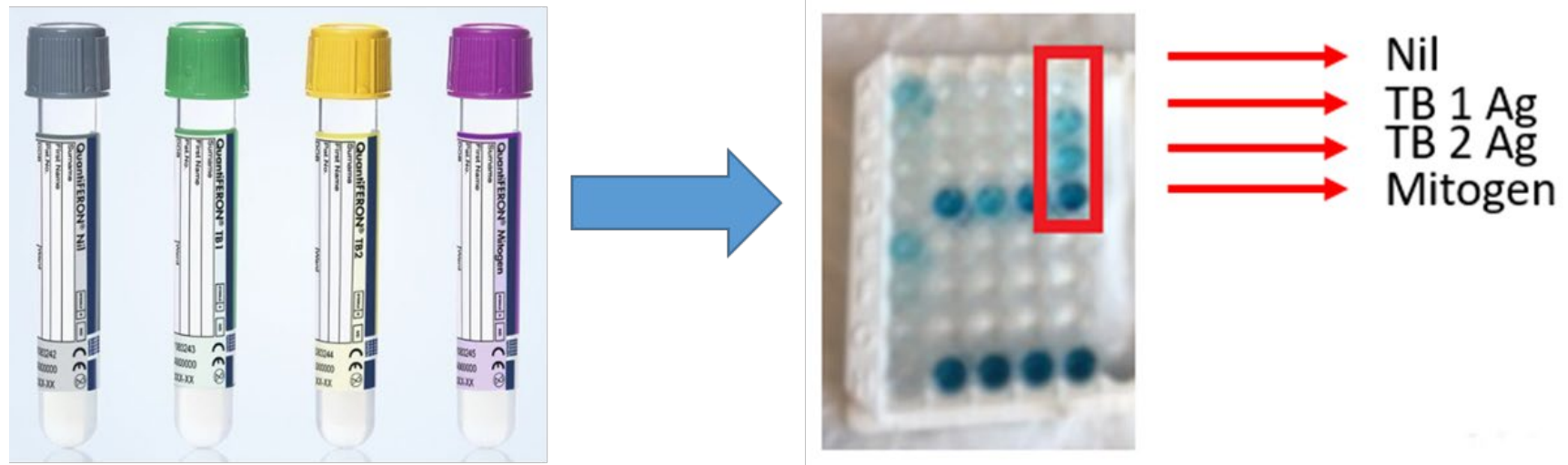
QFT lab testing

- Blood from lithium heparin tubes is transferred into QFT tubes when received at IDOH
- QFT tubes are shaken 10 times and incubated at 37 °C overnight
- After incubation, tubes are centrifuged to harvest plasma.



QFT Lab testing

- Plasma is tested by ELISA
- ELISA gives a numerical result for each tube, in international units/mL (IU/mL)
- An interpretation is generated from the combination of results for the 4 tubes



Results Interpretation

Nil (IU/ml)	TB1 minus Nil (IU/ml)	TB2 minus Nil (IU/ml)	Mitogen minus Nil (IU/ml)*	QFT-Plus Result	Report/interpretation
≤8.0	≥0.35 and ≥25% of Nil	Any	Any	Positive [†]	<i>M. tuberculosis</i> infection likely
	Any	≥0.35 and ≥25% of Nil			
	<0.35 or ≥0.35 and <25% of Nil	<0.35 or ≥0.35 and <25% of Nil	≥0.50	Negative	<i>M. tuberculosis</i> infection NOT likely
	<0.35 or ≥0.35 and <25% of Nil	<0.35 or ≥0.35 and <25% of Nil	<0.50	Indeterminate [‡]	Likelihood of <i>M. tuberculosis</i> infection cannot be determined
>8.0 [§]	Any				

QuantiFERON Lab Report



INDIANA STATE DEPARTMENT OF HEALTH LABORATORIES
550 West 16th Street, Suite B, Indianapolis, IN 46202

Judith C. Lovchik, Ph.D, D(ABMM)
Laboratory Director
CLIA Certification - 15D0662599

Laboratory Report

Submitter: ABC Labs
IN

Patient Name:	QFT, Valid 31	ISDH Lab Number:	C19000057
Patient ID:		Date Collected:	02/21/2019
Birth Date:	02/21/1954	Date Received:	02/21/2019
Sample Type:	Other		

<u>Test</u>	<u>Result</u>
QuantiFERON TB1 Ag	2.19 IU/ml
QuantiFERON TB2 Ag	3.92 IU/ml
Mitogen	9.27 IU/ml
Nil	0.01 IU/ml
QuantiFERON-TB Gold Plus	POSITIVE

Result Interpretation

M. tuberculosis infection likely

Average time for results: 2-3 days

Refrigerated Shipping Labels

- Blood tubes should be placed in a biohazard bag with absorbent material
- Bag and ice packs should be placed in cooler box
- Cooler box is placed in outer box
- Outer box is placed in the UPS bag



Ordering QFT in LimsNet

- The same test name *Tuberculosis* is used for both sputum collections and QFT tests
 - Test types:
 - 1) Specimen (AFB Smear and Culture)
 - 2) Mycobacteriology Isolate
 - 3) **QuantiFERON-TB**
- When one of these is selected, it will gray out the non-applicable items for each test type
- Reason for test
- Specimen information

Billing and Pricing

- QFT is a billable test for IDOH:
 - LHDs may provide valid insurance billing information for each patient tested OR
 - LHDs will be billed \$20 per test
- This billing strategy will allow IDOH to recover the cost of the QFT tubes/ELISA test kits

What is the most common reason for QFT rejection?

- Not enough blood in the tube—lab needs a minimum of **5 mL**
- Exceeded transit times—shipped the day before a state holiday or delayed UPS delivery
- Other collection error





LimsNet



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What is LimsNet?

- IDOH Lab's electronic specimen submission system—eliminates paper submission forms
- No need to fill out submission forms in triplicate—use patient lookup feature for multiple sputum collections
- Results are available more quickly
- Testing delays due to incomplete patient/submitter information are virtually eliminated
- Submitters are able to view, print and save laboratory reports as PDF files at their convenience
- 99% of TB specimens are submitted via LimsNet

How do I sign up for LimsNet?

- Contact the LIMS helpdesk at LimsAppSupport@isdh.in.gov
- Provide your name, contact info, organization, IP address



<https://eportal.isdh.in.gov/limsnet/login.aspx>
se

Entering a Specimen: LimsNet Patient Information Screen

1. Log into LimsNet.
2. Choose the test type from the drop-down menu.
3. Enter the patient's **Clinic ID** number.
4. Click **Lookup Info** to populate patient demographics. **Note:** this feature will not work for the first specimen for this patient ID.
5. Select **AFB Smear and Culture** or **QuantiFERON**.
6. Be sure to complete all items marked in red.
7. Click **Save**.
8. Repeat for additional specimens.

Entering a Specimen: Step No. 1: LimsNet Patient Information Screen

321 unsubmitted tests Jessica Gentry Site: ABC TESTING SITE
Log new test: Tuberculosis Submit Tests Packages Test Results Personalized Settings
Log Off

Mycobacteriology Test Request Form

INDIANA STATE DEPARTMENT OF HEALTH LABORATORIES
[Specimen Collection, Packaging & Shipping Instructions](#)

Patient Information	
Patient's Clinic ID Number:	<input type="text"/> Lookup Info
Patient's First Name:	<input type="text"/> Middle Init: <input type="text"/>
Patient's Last Name:	Date of Birth(mm/dd/yyyy): <input type="text"/>
Street Address: <input type="text"/>	
City:	State: <input type="text"/> ZIP: <input type="text"/>
County: <input type="text"/> <input type="text"/>	Sex: <input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Other <input type="radio"/> Unknown

Test Type	
Sample Type:	<input checked="" type="radio"/> Specimen (AFB Smear and Culture) <input type="radio"/> Mycobacteriology Isolate <input type="radio"/> QuantiFERON-TB
ReasonForTest:	<input type="radio"/> Pulmonary Tuberculosis, unspecified <input type="radio"/> Observation for suspected TB <input type="radio"/> Contact with or exposure to TB <input type="radio"/> Contact Investigation <input type="radio"/> Immigration Medical Exam <input type="radio"/> Employment/Administrative Testing <input type="radio"/> Targeted Testing <input type="radio"/> Suspicion for TB Disease

Specimen Information	
Collection Date: <input type="text"/>	Tests Requested: <input type="checkbox"/> MTB Complex rule in/rule out <input type="checkbox"/> MTB Complex susceptibility testing <input type="checkbox"/> MTB Complex genotyping <input type="checkbox"/> MTB Other
Collection Time: Hr: <input type="text"/> Min: <input type="text"/> AM/PM: <input type="text"/>	Other: <input type="text"/>

Entering a Specimen: Step No. 2: Submit tests Screen

1. Click **Submit Tests** button.
2. Check the box next to the specimens you intend to ship. **Note:** Multiple specimens can be shipped in the same package as long as they are the same test type.
3. Enter the UPS Tracking Number.
4. Click **Submit Checked samples**.
5. Print LimsNet cover sheet to send with specimens.

Entering a Specimen: Step No. 2: Submit tests Screen

286 unsubmitted tests. Jessica Gentry Site: ABC TESTING SITE
Log new test: --- Select One --- **Submit Tests** Packages Test Results Personalized Settings
[Log Off](#)

Unsubmitted Samples

Select All

Send	Edit	Delete	Date Created	Collection Date	Patient ID	First Name	Last Name	Test Type	User Name	Provider Code
<input type="checkbox"/>	Edit	Delete	1/24/2018 8:37 AM	1/24/2018	123	test1	test1	Virology	sithra	990
<input type="checkbox"/>	Edit	Delete	7/12/2017 8:45 AM	7/4/2017	123	Test	Test	Tuberculosis	sithra	990
<input type="checkbox"/>	Edit	Delete	5/25/2017 9:38 AM	5/25/2017	174560	asdfasdf	asdfads	HIV/Hep V10	sithra	990
<input type="checkbox"/>	Edit	Delete	4/13/2017 9:42 AM	4/11/2017	545	Mister	Man	CT/GC V10	avayl	990
<input type="checkbox"/>	Edit	Delete	2/1/2017 9:13 AM	1/30/2017	123	a	a	Blood Lead	hfu	990
<input type="checkbox"/>	Edit	Delete	11/23/2016 8:59 AM	1/23/2017	123	test	test	CT/GC V10	hfu	990
<input type="checkbox"/>	Edit	Delete	2/8/2016 11:15 AM	2/1/2018	A228571			Rabies	sithra	990
<input type="checkbox"/>	Edit	Delete	2/8/2016 10:48 AM	2/8/2016	123	test	test	CT/GC V10	sithra	990
<input type="checkbox"/>	Edit	Delete	1/7/2016 3:21 PM	1/7/2016	123	test	test	CT/GC V10	sithra	990
<input type="checkbox"/>	Edit	Delete	6/24/2015 8:06 AM	6/2/2015	123	test	test	CT/GC V10	sithra	990

1 2 3 4 5 6 7 8 9 10

Records Per Page: 10

Carrier: Tracking Number:

Submit Checked Samples
[Packaging Instructions](#)



LimsNet Cover Sheet

LimsNet Samples
Requested
By
ABC TESTING SITE

Package ID: 246627
Submitter Org: ABC TESTING SITE
Submitter ID: 990
Submitter Name: Jessica Gentry
Phone: (317)921-5500

C18002648

First Name	Last Name	Pat ID	Date of Birth
Sleeping	Beauty	123456	5/5/1925

Test Requested	Collection Date	Sample ID
Tuberculosis	01/18/2018 08:00 AM	

Mailing Address:
Indiana State 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 THIS SHIPMENT - Thank you.

- Once "Submit Checked samples" is clicked, the LimsNet cover sheet should pop up automatically as a PDF that can be printed.
- This is the only form that is needed and should be shipped in the UPS bag with the specimens.



Viewing Results Step No. 1: Test Results Screen

The screenshot shows a web interface for viewing test results. At the top, a blue navigation bar contains the text "286 unsubmitted tests.", "User: jgentry", and "Site: ABC TESTING SITE". Below this, there are links for "Log new test: --- Select One ---", "Submit Tests", "Package", "Test Results" (circled in red), and "Personalized Settings". A "Log Off" link is also present. The main content area is titled "Search Test Results" and contains several search filters: "Collection Date" with "From" and "To" date pickers (12/20/2017 and 1/19/2018), "Patient Name" with "First" and "Last" name pickers, "Patient ID" and "Opscan" with ID pickers, "Testtype" with a dropdown menu (All test types), and "Site" with a dropdown menu (ABC TESTING SITE (990)). Below these filters is a "Status" section with radio buttons for "Unshipped", "In Transit", "Pending", "Released", and "All statuses" (which is selected). At the bottom left, a "Search" button is circled in red.

1. Click on **Test Results** to view the status of your specimens.
2. Enter patient data or use collection date to search past few weeks.
3. Click **Search**.

Viewing Results Step No. 2: LimsNet Report Screen

207 unsubmitted tests. Jessica Gentry Site: ABC (ISDH) Test Clinic
Log new test: --- Select One --- Submit Tests Packages Test Results Personalized Settings Log Off

Search Test Results

New Search

Open Reports in a new window
 Open Reports in this window

Select	Report	Status	Date Created	Collection Date	Patient ID	First Name	Last Name	Test Type	Staff ID	Provider Name
		In Transit	4/1/2011 10:04 AM	3/28/2011	1	EditMode	Jones34	Tuberculosis	ig	ABC TESTING SITE
		In Transit	4/1/2011 9:51 AM	3/27/2011	1	EditMode	Jones34	Tuberculosis	ig	ABC TESTING SITE
		Unshipped	3/27/2011 11:26 AM	3/24/2011		harry	vardon	Blood Lead	rb	ABC TESTING SITE
		In Transit	3/11/2011 2:48 PM	3/2/2011	123	Davee	McNally	Tuberculosis	ig	ABC TESTING SITE
		Unshipped	3/2/2011 10:27 AM	3/1/2011	123123	Nick	Wood	Blood Lead	sk	ABC TESTING SITE
<input type="checkbox"/>	View	Released	1/31/2011 10:48 AM	1/31/2011	123456	TEST SCREENING 1	SYPHILIS	Syphils	ig	ABC TESTING SITE
<input type="checkbox"/>	View	In Transit	2/4/2011 10:35 AM	1/31/2011	HI11111	Maryjane	Prenantlady	Blood Lead	mh	ABC TESTING SITE
<input type="checkbox"/>	View	Released	1/31/2011 10:54 AM	1/30/2011	123456	TEST SCREENING 7	SYPHILIS	Syphils	ig	ABC TESTING SITE
<input type="checkbox"/>	View	Released	1/31/2011 10:52 AM	1/30/2011	123456	TEST SCREENING 4	SYPHILIS	Syphils	ig	ABC TESTING SITE
<input type="checkbox"/>	View	Released	1/31/2011 10:52 AM	1/30/2011	123456	TEST SCREENING 2	SYPHILIS	Syphils	ig	ABC TESTING SITE

1 2 3 4 5 6 7 8 9 10 ...

Records Per Page: 10

View Selected Reports

1. The **Status** column indicates the status of testing.
2. Click **View** to open the lab report as a PDF.
3. Preliminary reports will be available for smear, PCR, MALDI-TOF, and susceptibility results when available.

How do I add new tests to my account?

- Contact the helpdesk to request the test type needed
- Available tests:

Blood Lead	TB	Arbovirus (human)
Bacterial VPDs	HIV/Hep	Rabies
Antibiotic Resistance (AR)	Outbreak Serology	Enterics
CTGC	Tuberculosis	
Syphilis	Virology	

- Note: some tests may be restricted based on organization type

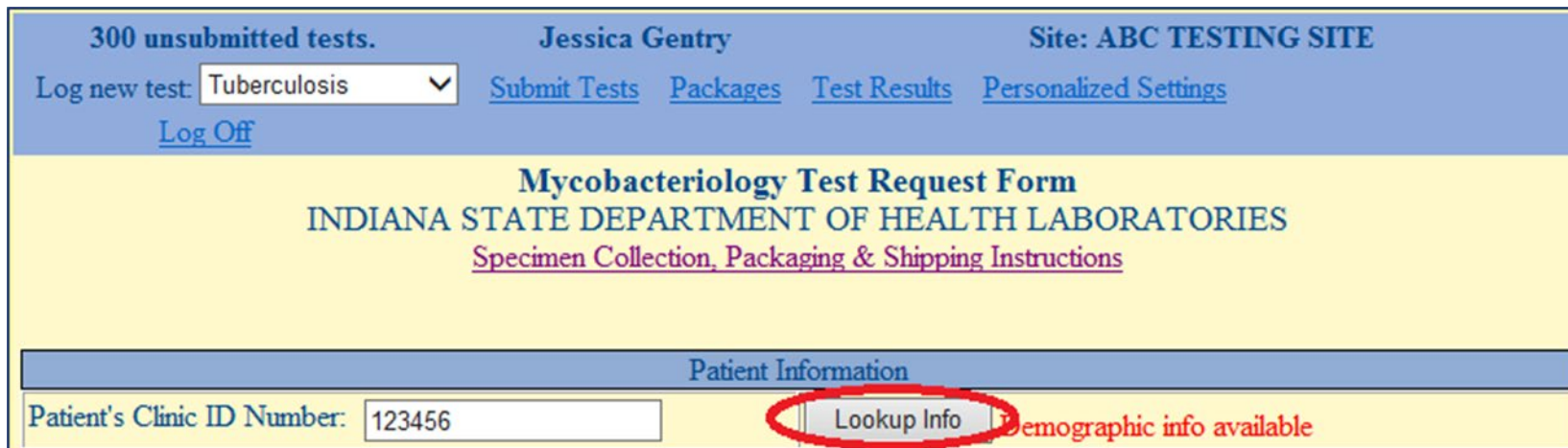
How do I add a new user?

- Contact the LIMS helpdesk at LimsAppSupport@isdh.in.gov
- Provide the user's name, contact info, organization, IP address
- Help Desk may require email or fax from supervisor to validate user.
 - This is to ensure the user is assigned to the correct account

LimsNet Tip No. 1

Patient's Clinic ID Number—use this feature to autofill patient demographics when more than one specimen will be submitted for the same patient

- Enter an ID number for the first specimen
- Enter this number for the next specimen and click **Lookup Info**



The screenshot displays the LimsNet interface for a Mycobacteriology Test Request Form. At the top, it shows '300 unsubmitted tests.', the user 'Jessica Gentry', and the site 'ABC TESTING SITE'. Below this, there are navigation links for 'Submit Tests', 'Packages', 'Test Results', and 'Personalized Settings', along with a 'Log Off' link. The main heading is 'Mycobacteriology Test Request Form' from the 'INDIANA STATE DEPARTMENT OF HEALTH LABORATORIES', with a link to 'Specimen Collection, Packaging & Shipping Instructions'. The 'Patient Information' section contains a 'Patient's Clinic ID Number' field with the value '123456' and a 'Lookup Info' button circled in red. To the right of the button, it says 'Demographic info available'.

LimsNet Tip No. 2

- Specimen Collection, Packaging & Shipping Instructions link
- The instructions provided will match the test type selected in the drop down



The screenshot displays the LimsNet user interface. At the top, a blue header bar contains the text "300 unsubmitted tests", the user name "Jessica Gentry", and the site name "Site: ABC TESTING SITE". Below this, a navigation bar includes a "Log new test" dropdown menu currently set to "Tuberculosis", and several links: "Submit Tests", "Packages", "Test Results", and "Personalized Settings". A "Log Off" link is also present. The main content area has a yellow background and features the title "Mycobacteriology Test Request Form" and the text "INDIANA STATE DEPARTMENT OF HEALTH LABORATORIES". A link for "Specimen Collection, Packaging & Shipping Instructions" is highlighted with a red oval, matching the link mentioned in the text above.

LimsNet Tip No. 3

If the coversheet doesn't pop up as a PDF, you can retrieve it in the **Packages** screen.

300 unsubmitted tests. Jessica Gentry Site: ABC TESTING SITE
Log new test: --- Select One --- Submit Tests **Packages** Test Results Personalized Settings
Log Off

Package Status

	<u>PackageID</u>	<u>Assay</u>	<u>ShipDate</u>	<u>Carrier</u>	<u>TrackingNumber</u>	<u># Samples</u>	
Select	227131	Tuberculosis	3/7/2017			1	Cover Page
Select	226135	HIV/Hep V10	2/20/2017			2	Cover Page
Select	225544	Measles/OS Other - Panel	2/10/2017			1	Cover Page

LimsNet Tip No. 4

Email Alerts—if you wish to receive an email each time there is a new result, you can select this in the **Personalized Settings** tab, under **Change my Personal Information**

The screenshot displays the LimsNet user interface. At the top, it shows '300 unsubmitted tests.', the user's name 'Jessica Gentry', and the site name 'Site: ABC TESTING SITE'. Below this is a navigation bar with a dropdown menu for 'Log new test: --- Select One ---' and several links: 'Submit Tests', 'Packages', 'Test Results', and 'Personalized Settings' (circled in red). A 'Log Off' link is also present. The main content area is titled 'Profile Settings' and contains three links: 'Change My Password', 'Change My Personal Information' (circled in red), and 'Change My Password Recovery Question'. Below these links, a note states '*All fields are required'. The form fields are: 'First Name:' with the value 'Jessica', 'Last Name:' with the value 'Gentry', and 'Email Address:' with the value 'jgentry@isdh.in.gov'. The 'Subscribe To Email Notifications:' checkbox is checked and circled in red. An 'Update My Information' button is located at the bottom of the form.

What's the status of my specimen?



When should I call the Lab?

- If you have a question
- If you need testing expedited
- If you have a special test request
- If you need help interpreting a lab report
- If you need help finding lab results
- If you have a patient at a hospital and want to arrange for testing at IDOH

Questions?

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