

What You Need to Know About Collecting Sputum

I. What is sputum?

- Sputum is the phlegm that we collect from TB cases and suspects.
- Sputum is different than saliva (spit).
 - Sputum comes from deep inside your lungs and is usually thick.
 - Saliva (spit) comes from your mouth and is thin and watery.
- To get an accurate test result, be sure to collect sputum, not saliva.

II. Why do we collect sputum?

- We collect sputum to test it for tuberculosis (TB) germs.
- Running laboratory tests on sputum is the best way to find out if a patient has TB disease.
- Sputum results tell us if the TB medicine is working.

III. How to do we collect sputum?

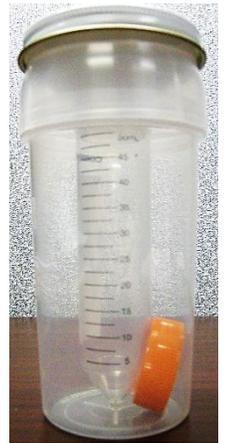
The Public Health Investigator (PHI) will:

1. Instruct the patient on how to collect the sputum sample.

SAMPLE INSTRUCTIONS

Take several deep breathes with your mouth open, cough several times. Cough up phlegm from your lungs. Do not place fingers inside the cup. Spit into the cup. Replace the outer lid and give it back to me.

2. Hand an **intact** sputum container to the patient. **This will prevent contamination.**
3. Instruct the patient to go outside or in the bathroom to produce sputum away from others. If needed, give the patient a brown paper bag so they can discreetly give the specimen to you.
4. The patient will spit into the cup to obtain a minimum of 5 mL of sputum (about a tablespoon). Instruct patient to wash their hands when they are done.



Intact Container

SPUTUM COLLECTION TIPS

- Early morning specimens are preferred for testing.
 - Advise the patient to brush their teeth and rinse their mouth with water as soon as they wake up prior to collecting a specimen.
 - **Do not use mouthwash. Collect the specimen before you eat or drink anything.**
- Advise the patient to sit down while collecting sputum so they don't fall if they get dizzy.
- If the patient is unable to cough up sputum:
 - Have them breathe in steam from a hot shower or use a nebulizer.
 - Call your supervisor.
- Take whatever sputum a patient can give you. It's better to leave with something than nothing.
- Clean your cooler weekly with disinfectant cleaner.

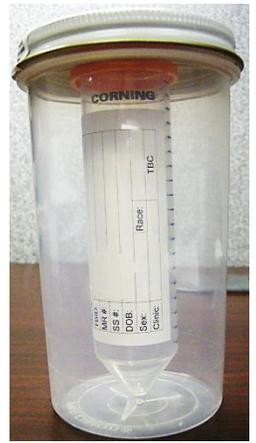
5. Put gloves on to break down the sputum container. Label the inner tube of the sputum container.



Disassembled Container

Name:	
TBID:	
MR #:	
SS #:	
DOB:	
Sex:	Race:
Clinic:	TBC

The label will have the patient's name, DOB, SSN#/TB ID#, and the clinic providing TB care.



Container w/ Specimen

6. Ensure that both tops of the sputum container are tightened firmly to avoid leakage.
7. Complete a Lab Request form and a Sputum Collection form. **See SAMPLES of each form below.**
8. Place the labeled container with the completed lab request form in a bio-hazard bag.
9. Place the specimen in a cooler. The sputum must be kept cool at all times.
10. Transport the specimen to the City of Houston (COH) Health Department lab as soon as possible. Clean your hands with hand sanitizer before and after handling the specimen.
11. Once you deliver the specimen to the COH lab, the lab technician will sign the completed Sputum Collection form.
12. Submit the completed Sputum Collection Form to your supervisor.

IV. How does the laboratory process this specimen?

See the [What You Need to Know About Testing Sputum Samples](#) series to learn more.

V. Results are in—how does this affect Case Registry, Nurse Case Managers, and the Field?

A. Case Registry will:

- a. Receive sputum results from the laboratory.
- b. Post sputum results to the patient’s file in TB Master in a timely manner.
- c. Report TB cases and suspects to the state based on specimen smear and culture results.

* Drugs not listed does not have sensitivity done

Example of Lab Sensitivities Report

■ = Resistant S = Susceptible

Date Collected	Specimen #	Specimen Type	Smear	Culture	Culture ID	Report Date	Isoniazid	Rifampin	Ethambutol	Streptomycin						
0/22/2012	M1234	Sputum	PS / 4+	PC	MTB-C	Not Done										
0/22/2012	M 2345	Sputum	PS / 4+	PC	MTB-C	1/15/201	S	S	S	S						

B. Nurse case managers will:

- a. Sign isolation release orders once a patient has met non-infectious criteria. **See SAMPLE below.**
 - ✓ Three consecutive negative smears
 - ✓ Two weeks of TB medication
 - ✓ Clinical improvement.
- b. Monitor/order sputum results to ensure culture conversion within 60 days of initiating TB treatment.
- c. Consult with Heartland National TB Center if a patient is resistant to one or more first-line TB medications to adjust the patient’s drug regimen.

C. The Field will:

- a. Use N-95 respirators with smear positive patients until they have three consecutive negative smears.
- b. When initiating the first visit, collect 3 sputa from every TB case/suspect, regardless of pulmonary or extra-pulmonary TB suspicion/diagnosis.
 - Collect a specimen on the spot. Return to the collect an early morning specimen for the following two days.
 - Specimens must be collected 8 hours apart.
- c. If the patient remains smear positive, collect sputum at least twice weekly till AFB negative; then collect two additional sputa.
- d. Once patient has three consecutive negative smears, collect sputum monthly for the duration of treatment.
- e. If patient remains culture positive, ensure that sputum is collected prior to sixty (60) days from start of treatment.
- f. If the patient becomes smear positive again, repeat of the process of initial sputum collection.
- g. Contact investigations should proceed without delay for AFB+, cavitory chest x-ray TB suspects. AFB- CI activity can be delayed as appropriate (depending on clinical presentation, case load, etc).



Lab Request Form Sample

<p>Name: _____</p> <p>MR#: _____</p> <p>SS#: _____</p> <p>Date of Birth: _____</p> <p>Sex: _____</p> <p>Race: _____</p> <p>Clinic: _____</p> <p style="text-align: center;">LABEL OR PRINT</p>	<p>LAB REQUEST FORM</p>  <p>Houston Department of Health and Human Services</p> <p>Bureau of Laboratory Services Holcombe Blvd., Houston, Texas 77030 832-393-3927 Central Processing 832-393-3921 Health Center Support Labs 832-393-3929 Laboratory Support 832-393-3955/832-393-3903 Med. Microbiology/TB 832-393-3914 Serology/Virology 832-393-3983 Fax</p>
<p>Remember to label the form!</p>	
<p>ALL OF THE FOLLOWING INFORMATION IS REQUIRED</p>	
<p>Completed by _____ Date of Completion _____ Time of Completion _____</p> <p>Collected by _____ Date of Collection _____ Time of Collection _____</p>	
<p>SPECIMEN CENTRIFUGED? YES <input type="checkbox"/> NO <input type="checkbox"/> IF YES: START TIME OF CENTRIFUGATION _____</p>	
<p>_____ FAMILY PLANNING <input type="checkbox"/> STD <input checked="" type="checkbox"/> TB <input type="checkbox"/> MOBILE UNIT <input type="checkbox"/> OTHER _____</p>	
<p>Test Request: Please mark the appropriate box</p>	
<p>INDIVIDUAL TEST</p>	
<p style="text-align: center;">SEROLOGY/VIROLOGY</p> <p>6000 <input type="checkbox"/> RPR</p> <p>6008 <input type="checkbox"/> TP-PA</p> <p>6020 <input type="checkbox"/> RUBELLA</p> <p>6040 <input type="checkbox"/> MUMPS</p> <p>6050 <input type="checkbox"/> VZ</p> <p>6060 <input type="checkbox"/> MEASLES</p> <p>6190 <input type="checkbox"/> HERPES CULTURE</p> <p style="padding-left: 40px;">SOURCE _____</p> <p>6410 <input type="checkbox"/> HBS AG</p> <p>6430 <input type="checkbox"/> ANTI-HB_e</p> <p>6440 <input type="checkbox"/> ANTI-HB_{core}</p> <p>6415 <input type="checkbox"/> HCV EIA</p> <p>6419 <input type="checkbox"/> RAPID HEPATITIS C VIRUS</p> <p>6505 <input type="checkbox"/> RAPID HIV</p> <p>6509 <input type="checkbox"/> HIV 1/2 PLUS O EIA</p> <p>6320 <input type="checkbox"/> CHLAMYDIA</p> <p style="padding-left: 40px;">SOURCE _____</p>	<p style="text-align: center;">MEDICAL MICROBIOLOGY</p> <p>2106 <input type="checkbox"/> GC CULTURE</p> <p style="padding-left: 20px;"><input type="checkbox"/> ORAL <input type="checkbox"/> RECTAL</p> <p style="padding-left: 20px;"><input type="checkbox"/> URETHRAL <input type="checkbox"/> CERVICAL</p> <p style="padding-left: 20px;"><input type="checkbox"/> OTHER _____</p> <p><input type="checkbox"/> APTIMA GC/CT NUCLEIC ACID AMPLIFICATION TEST</p> <p>2344/2345 <input type="checkbox"/> URETHRAL 2342/2343 <input type="checkbox"/> URINE</p> <p>2340/2341 <input type="checkbox"/> CERVICAL 2346/2347 <input type="checkbox"/> VAGINAL</p> <p style="padding-left: 20px;"><input type="checkbox"/> OTHER _____</p>
	<p style="text-align: center;"><input checked="" type="checkbox"/> TB (MYCOBACTERIOLOGY)</p> <p>2406 <input checked="" type="checkbox"/> ACID FAST SMEAR (Fluorochrome Stain)</p> <p>2405 <input checked="" type="checkbox"/> PRIMARY AFB CULTURE</p> <p style="padding-left: 20px;"><input checked="" type="checkbox"/> SPUTUM (Natural)</p> <p style="padding-left: 40px;"><input type="checkbox"/> INDUCED</p> <p style="padding-left: 40px;"><input type="checkbox"/> OTHER _____</p>
	<p style="text-align: center;">IGRA (INTERFERON GAMMA RELEASE ASSAY)</p> <p>2412 <input type="checkbox"/> QuantiFERON® -TB Gold (In-tube)</p> <p>SPECIMEN INCUBATED? <input type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>START TIME: _____ TEMP: _____ DATE: _____</p> <p>BY: _____</p> <p>END TIME: _____ TEMP: _____ DATE: _____</p> <p>BY: _____</p>
<p>TOTAL NUMBER OF TUBES</p> <p>PLAIN RED _____ LAVENDER _____</p> <p>SST (YELLOW TOP) _____</p>	

The lab request form must have the specimen collection date/time.

Sputum Collection Form Sample

Houston Department of Health and Human Services
 Bureau of Tuberculosis Control
SPUTUM COLLECTION, VISION SCREENING, WEIGHT & PROVIDER UPDATE

Name of Staff Submitting Information _____ Date _____

Last Name	Date of Birth
First Name	Medical Record Number
Middle Name	SSN #

Provider Verification - Obtain Information at 1st visit EACH month

Same Provider
 Change in Provider

Name of MD providing TB Care _____

Address _____

Last TB visit date _____ Next TB appt. date _____

Must be filled out

Weight: Weight on Current MD Orders _____ lbs. NEW Weight _____ lbs.

Supervisor Review (Sign next to recommendation) : YES, NEW MD Orders needed _____
 NO, NEW MD Orders NOT needed _____

Not on Ethambutol
 (Due at 1st visit EACH month if patient on Ethambutol)

Visual Screening

Enter Date: Month/Day/Year		Right Eye	Left Eye	Both Eyes	Red/Green
	No Glasses	20/	20/	20/	
	With Glasses	20/	20/	20/	

Fill out if patient is unavailable ONLY

Complete if patient not available for collection of sputum specimen by TB field staff

Hospitalized: Hospital Name/dates hospitalized _____

In Harris County Jail: Dates/Spin # _____

In TDC: Dates/Spin # _____

In Other Jail: Name/Location/Dates/Spin # _____

Died: Date/Source of Information _____

Bacteriology

Observe sputum collection for cases/suspects at 1st DOT visit EACH Month. Follow guidelines for non-pulmonary Cases.

	Date Collected	Specimen Source	Diagnosis
<input type="checkbox"/> Sputum Specimen Collected			
<input type="checkbox"/> Extrapulmonary (No Specimen recommended)			
<input type="checkbox"/> Refused			
<input type="checkbox"/> Unable to Produce (No nebulizer)			
<input type="checkbox"/> Unable to Produce (Nebulizer used)			
<input type="checkbox"/> Supervisor Review (Signature) if sputum not collected			
<input type="checkbox"/> UTL (Unable to locate Patient)			

City Lab/Clinic Use Only

Verification of Specimen Delivered for Processing

Specimen delivered to LAB/CLINIC _____

Date _____

Received by _____

Case Registry Use Only

Date Received in Case Reg. _____

Received by _____

Fill out if patient is available

Lab technician receiving the specimen will fill this out.

Release from Home Isolation Form Sample

**HOUSTON DEPARTMENT OF HEALTH AND HUMAN SERVICES
Release from Home Isolation Form**

Patient Name _____ DOB _____

- Symptoms have improved
- Treatment compliance adequate treatment for at least 2 to 3 weeks
- Patient has three consecutive negative sputum smears collected on different days.

Medical Providers Name

Date and Time Home Isolation if lifted _____

Nurse Case Manager _____