THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

UGANDA Supranational® Reference Laboratory

Timely Accurate Diagonostics for a TB-Free Africa

Training on LJ culture method

Module 5: Sample reception

DATE:

VENUE: SRL, Uganda

FACILITATOR:

Content outline

- Specimen collection
- Materials used in sample collection
- Specimen receipt and accessioning
- Specimen rejection

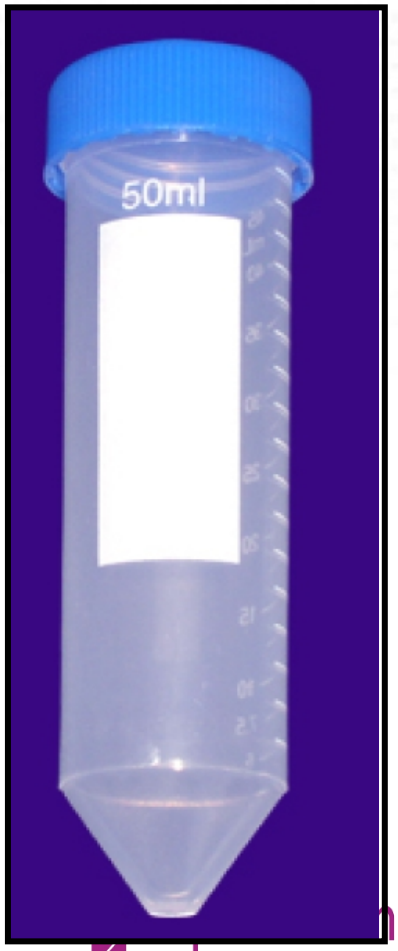
Specimen handling

- To obtain accurate results from TB culture procedures specimens must be:

1. Kept cool(2-8°C) and promptly transported to the laboratory
2. Analyzed for quality before testing
3. Processed as soon as possible after arrival at the culture laboratory
4. Incubated and monitored at rightful conditions

Containers for sputum collection

- Sterile, strong & unbreakable
- Leak proof, screw-capped with a water-tight seal
- Translucent or clear material
- Single use
- Easily-labelled walls
- Up to 50 ml capacity
  - 50 ml conical tubes ideal since they can be used for processing



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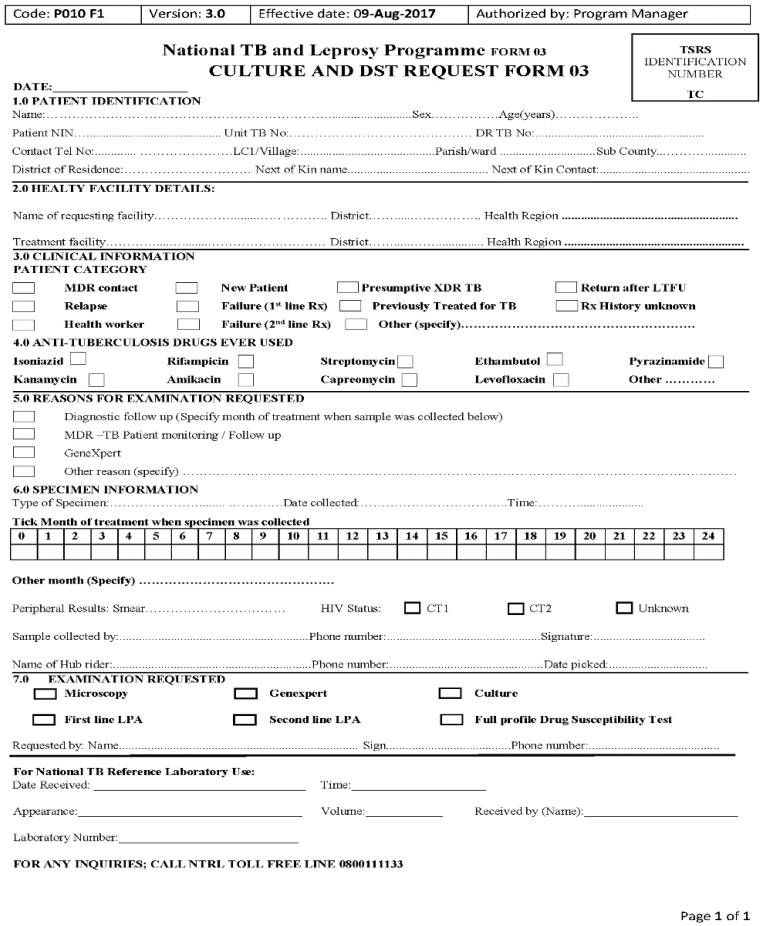
Role play (five minutes)

- Demonstrate proper sputum collection practices including all the precautions and instructions to follow

• Requests form and specimen log



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National TB and Leprosy Programme FORM 03
CULTURE AND DST REQUEST FORM 03

TSRS IDENTIFICATION NUMBER
TC

DATE:_____

1.0 PATIENT IDENTIFICATION

Name:……Sex……Age(years)……

Patient NIN…… Unit TB No:…… DR TB No:……

Contact Tel No:…… LC1/Village:……Parish/ward ……Sub County……

District of Residence:…… Next of Kin name…… Next of Kin Contact:……

2.0 HEALTY FACILITY DETAILS:

Name of requesting facility…… District…… Health Region ……

Treatment facility…… District…… Health Region ……

3.0 CLINICAL INFORMATION
PATIENT CATEGORY

☐ **MDR contact** ☐ **New Patient** ☐ **Presumptive XDR TB** ☐ **Return after LTFU**
☐ **Relapse** ☐ **Failure (1st line Rx)** ☐ **Previously Treated for TB** ☐ **Rx History unknown**
☐ **Health worker** ☐ **Failure (2nd line Rx)** ☐ **Other (specify)**……

4.0 ANTI-TUBERCULOSIS DRUGS EVER USED

Isoniazid ☐ **Rifampicin** ☐ **Streptomycin** ☐ **Ethambutol** ☐ **Pyrazinamide** ☐
Kanamycin ☐ **Amikacin** ☐ **Capreomycin** ☐ **Levofloxacin** ☐ **Other** ……

5.0 REASONS FOR EXAMINATION REQUESTED

☐ Diagnostic follow up (Specify month of treatment when sample was collected below)
☐ MDR –TB Patient monitoring / Follow up
☐ GeneXpert
☐ Other reason (specify) ……

6.0 SPECIMEN INFORMATION

Type of Specimen:…… Date collected:……Time:……

Tick Month of treatment when specimen was collected

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24

Other month (Specify) ……

Peripheral Results: Smear…… HIV Status: ☐ CT1 ☐ CT2 ☐ Unknown

Sample collected by:……Phone number:……Signature:……

Name of Hub rider:……Phone number:……Date picked:……

7.0 EXAMINATION REQUESTED

☐ **Microscopy** ☐ **Genexpert** ☐ **Culture**
☐ **First line LPA** ☐ **Second line LPA** ☐ **Full profile Drug Susceptibility Test**

Requested by: Name…… Sign……Phone number:……

For National TB Reference Laboratory Use:

Date Received: _____ Time:_____

Appearance:_____ Volume:_____ Received by (Name):_____

Laboratory Number:_____

FOR ANY INQUIRIES; CALL NTRL TOLL FREE LINE 0800111133

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Specimen Log

Health Center_____

	Date	Number		Initials
specimens sent				
specimens received				

	Patient	Tick
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

6

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Critical collection and transport issues

- Containers should be clearly labeled on the side, not on the cap
- Identification number on each specimen container corresponds to the identification number on the specimen log
- Request forms must be separated from specimen container during packaging for transportation

Critical collection and transport issues cont'd

- Specimen transport log should include the requested data for each patient/sample
- Number of specimen containers in the shipment box should correspond to the number of names on the specimen log
- Date shipped and the name of the referring health center are included on the specimen log

Specimen receipt and accessioning
Reagents and Materials

- Pens; black/ blue and red
- Fine tip Markers
- Barcode label and scanner
- Gloves
- Sample racks
- Laboratory Request Form file
- LIMS
- Disinfectant (5% lysol, 70% ethanol)
- Rejectioncriteria and forms
- Biosafety cabinet level 2
- Bioharzard bags.

Receipt of incoming specimens

1. Inspect the courier box for signs of leakage

2. Open the courier box inside a biosafety cabinet

3. Open carefully and check for cracked or broken specimen containers.

4. Check specimen labels with individual identifications on request forms and correspondence on the specimen log

5. Disinfect the inside of the delivery box before sending it back to referring facility

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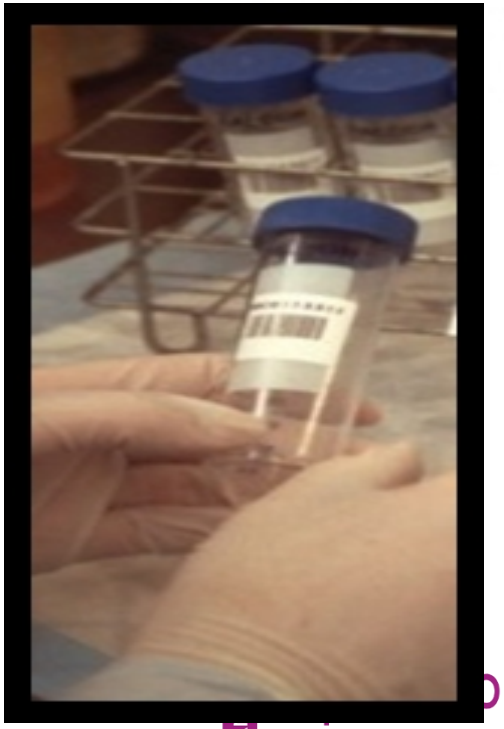
Quality assessment of sputum specimens

- Characteristics of a good sputum specimen
  - Mucoid or mucopurulent appearance
  - Minimum amounts of saliva
  - Optimal volume: 3–5 ml
  - No soil or food particles



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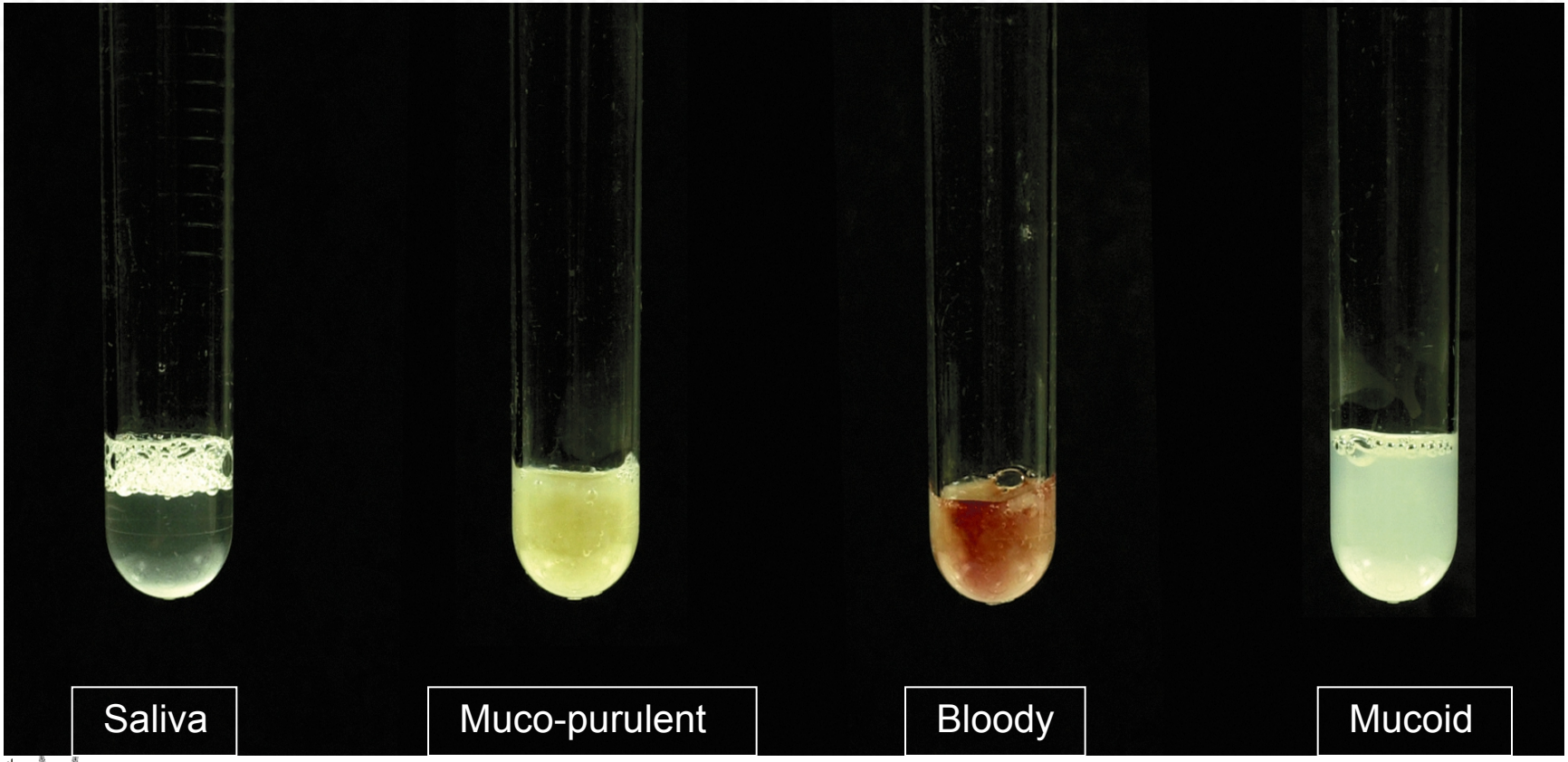
Assessing quality of sputum specimens



Reception procedure

- Check sample and make sure that the unique identifiers on the sample containers match with request form

- Record date & time received, initials of tech, sample appearance and sample volume on the requisition form.

Sample accessioning

- Enter patient details into the laboratory's **LIMS** (electronic or paper based) and assign the sample a laboratory number

NOTE:

- Ensure to include process control samples whenever sample are received

Sample Rejection Criteria

1. Sample collected in an inappropriate container
2. Sample container is broken, damaged, or leaking.
3. Sample container is not labeled or there is not enough information on the container to match with the laboratory request form.
4. Patient details on both request form and sample container not in agreement
5. Sample was not accompanied by a request form and cannot be traced to reconcile
6. Empty container
7. Wrong sample delivered for the test

Assessment

1. Identify 2 safety precautions taken during sample reception
2. What are some of the key points to take note of when receiving samples for LJ Culture method?
3. Identify 4 conditions/ situations under which a specimen may be rejected

Sample Reconciliation

- This involves inconsistency between sample ID label and request form,or when the sample(s) was/were delivered without request form(s) but can be traced.

- In this situation, one should notify the requester using the available communication channels on the request form for RECONCILIATION.

Summary points

- Acceptable containers for sputum collection include those having up to 50ml capacity, are single use, sturdy, screw-cap and translucent
- At a minimum, specimens should be labeled with the patient name, identifier, and date collected
- Good quality sputum specimens are those having a minimum volume of 3ml and purulent particles
-
- Specimens should be transported under cold-chain conditions
- Unpack specimens in a certified BSC

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