THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

UGANDA Supranational® Reference Laboratory

*Timely Accurate Diagonostics for a TB-Free Africa*

# THE TB SAMPLE REFERRAL SYSTEM (TSRS) TRAINING

Module 6

TB sample packaging and transportation

xX$^{th}$ -xX$^{th}$ MONTH YEAR

NAME OF PRESENTER

# OUTLINE

- Concept of triple packaging
- Sample transportation
- Waste disposal

# Exercise (10 minutes)

1. How would you package a sputum sample to be transported from laboratory A to B for Xpert MTB/RIF assay?

# Triple Packaging system

- The triple packaging system is used for packaging specimens suspected to contain infectious substances.
- The packaging consists of three components (i.e. Triple) thus:

- A primary container

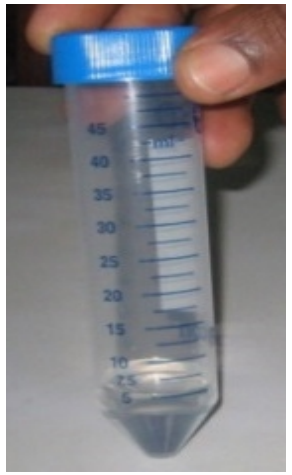
- A secondary package

- A tertiary package

# Triple Packaging system…cont

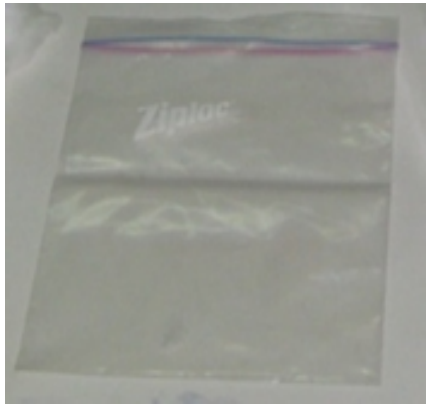
**Primary container**

1. A leak-proof sputum container is the **primary receptacle**



**Secondary package**

- 2. A leak-proof zip lock bag is the **secondary packaging**

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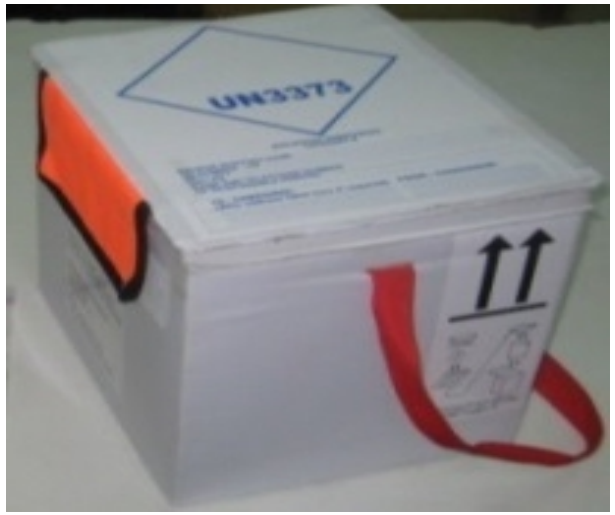
# Triple Packaging system…cont

3. The safety box is the tertiary outer packaging

Once packed as above, the sample is safe to for delivery to the testing laboratory
Tertiary box may contain ice packs,  should always be closed & kept away form sunlight.



# Sample packaging

- Each sample must be packaged individually in a separate secondary packaging
- One tertiary container can carry multiple samples as long as they can fit in the container
- Keep the request forms and any accompanying docs in a separate envelope

# Summary of packaging

Summary:

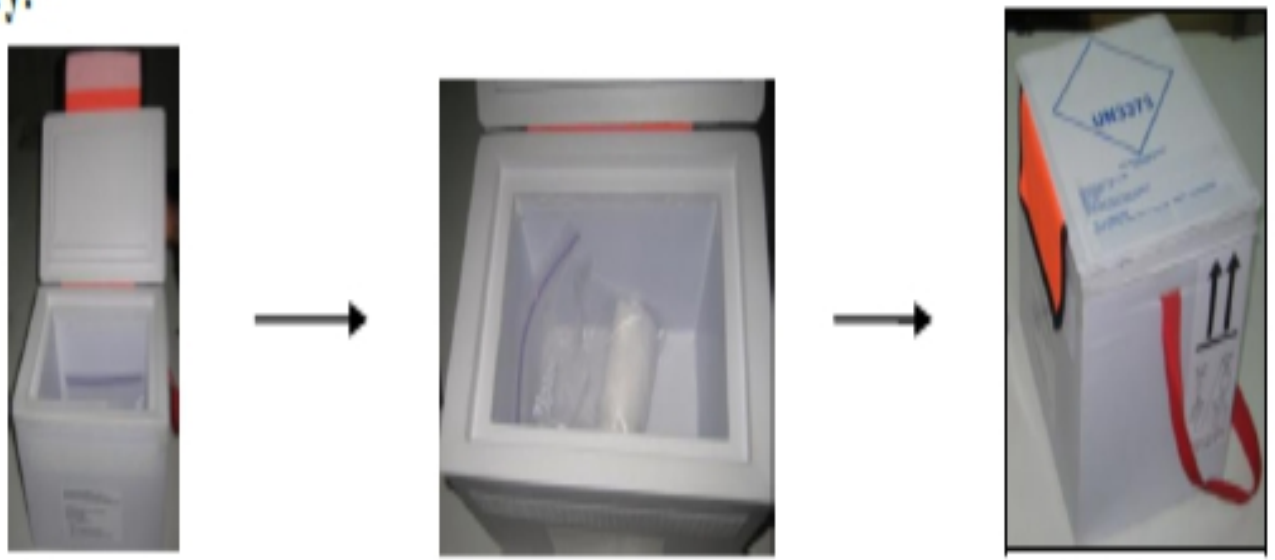


Figure 4: *Left*: an open safety box; *Middle*: after inserting the sputum container; *Right*: after sealing the box.

# Sample transportation

- **Specimen should reach the testing facility within 72hours of collection and should be refrigerated while waiting for shipment**

- Transport specimens for culture to the NTRL in as short time as practical to avoid overgrowth by contaminating indigenous microbial flora.

- The total number of primary sputum containers in the box must correspond to that of the accompanying Request forms.

# Sample transportation cont'd

- The ID on @ sputum container must correspond to that on request form.
- The accompanying request form must contain the requested information for each of the participant.
- Packaged samples are picked by the Hub rider and delivered to the hub or testing facility.

# Sample transportation cont'd

- Incase there are samples for referral to a reference lab, they are transported to Post office.

Note: packages shall not be opened while on transit to avoid exposure to the public

# Waste disposal

- All possible contaminated materials and infectious waste should be collected in vinyl bags and burned or incinerated at the site following the recommended MoH waste disposal guidelines

- Incase of accidents during transportation, damaged packages are wrapped in vinyl bags and taken to the nearest health facility for proper disposal as above.

- Details of damaged packages are recorded and communicated to both requesting personnel and NTRL shipping coordinator

# Safety label on Shipment box

- Sputum and other specimens suspected to contain infectious mycobacteria or other infectious agents are classified as ‘’Infectious substance, Category B’’.

- The proper shipping name labeled on containers with such specimens is “BIOLOGICAL SUBSTANCE, CATEGORY B”.

# Safety label on Shipment box…cont

- Infectious substances in Category B are assigned to a specific UN number: UN 3373.
- Label the safety box with the words “BIOLOGICAL SUBSTANCE, CATEGORY B” and the UN number: UN 3373
- Biohazard label and orientation marks are not required (not necessary).

# Assessment

1. What do you understand by triple packaging?
2. How do you handle wastes generated during sample packaging
3. What is the standard TAT in days for transporting samples between the peripheral lab and the central lab?

# Summary

- Triple packaging is the minimum requirement for packaging samples for transportation.
- Samples should be transported to testing sites as soon as possible on collection
- Proper shipping name should be labeled on containers depending on national and international guidelines

# References


- GLI TB training package http://www.stoptb.org/wg/gli/trainingpackages.asp
- Global tuberculosis report 2019, https://apps.who.int/iris/bitstream/handle/10665/329368/9789241565714-eng.pdf?ua=1
- The Handbook - Laboratory Diagnosis of Tuberculosis by Sputum Microscopy http://www.stoptb.org/wg/gli/assets/documents/TB%20MICROSCOPY%20HANDBOOK_FINAL.pdf
- TUBERCULOSIS LABORATORY BIOSAFETY MANUAL https://apps.who.int/iris/bitstream/handle/10665/77949/9789241504638_eng.pdf?sequence=1

# Acknowledgments

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