

FACILITATOR GUIDE

Training on Proficiency Testing Scheme (GeneXpert DTS)

Module 5: Equipment used for DTS

Acknowledgements

This Module was prepared by NTRL training team.



OBJECTIVE: To understand the purpose of the various equipment used in preparation of genexpert PT materials (DST) as well as acquire the skills for better equipment maintenance.

MATERIALS:

1. Handouts,
2. Slides
3. Computer
4. Over head projector
5. Flip chart
6. Markers and pens
7. Note books
8. Exercise sheets

TIMELINE: 45 Minutes

METHODOLOGY:

1. Lecture
2. Individual exercise

ADVANCE PREPARATION:

1. Printing notes
2. Familiarize oneself with the topic and slides
3. Ensure that the exercise sheets are pre-printed prior to the presentation
4. Prepare at least 2 different facilitators to take the class through the practical session

FACILITATORS STEP-BY STEP INSTRUCTIONS:

1. Welcome and Introduction
2. Present module overview
3. Issue out the exercise sheets to each participant
4. Recap presentation using the exercises
5. Ask if there is any question.
6. Distribute handouts
7. Practical session: The class can be divided in into groups if the participants are more that 4.

FACILITATORS NOTES

Equipment needed in the molecular laboratory

The facilitator should recap for the trainers indicating that the 1st essential component to consider is the laboratory lay out since it determines how the work will flow and also how the different equipment will be placed.

The equipment is placed in different area based on the process of the technique from sample / Isolate selection, Incubation, inactivation, inactivation verification, storage, Result analysis and interpretation.

The following equipment are needed are the different stages

Sample / Isolate selection

-Refrigerators, freezers, Biosafety cabinets

Incubation

-Centrifuge, MGIT machine, incubators, automatic pipettes, vortex, and also other materials that include, Falcone tubes, Pasteur pipettes, wire loops, pipette tips,

Inactivation

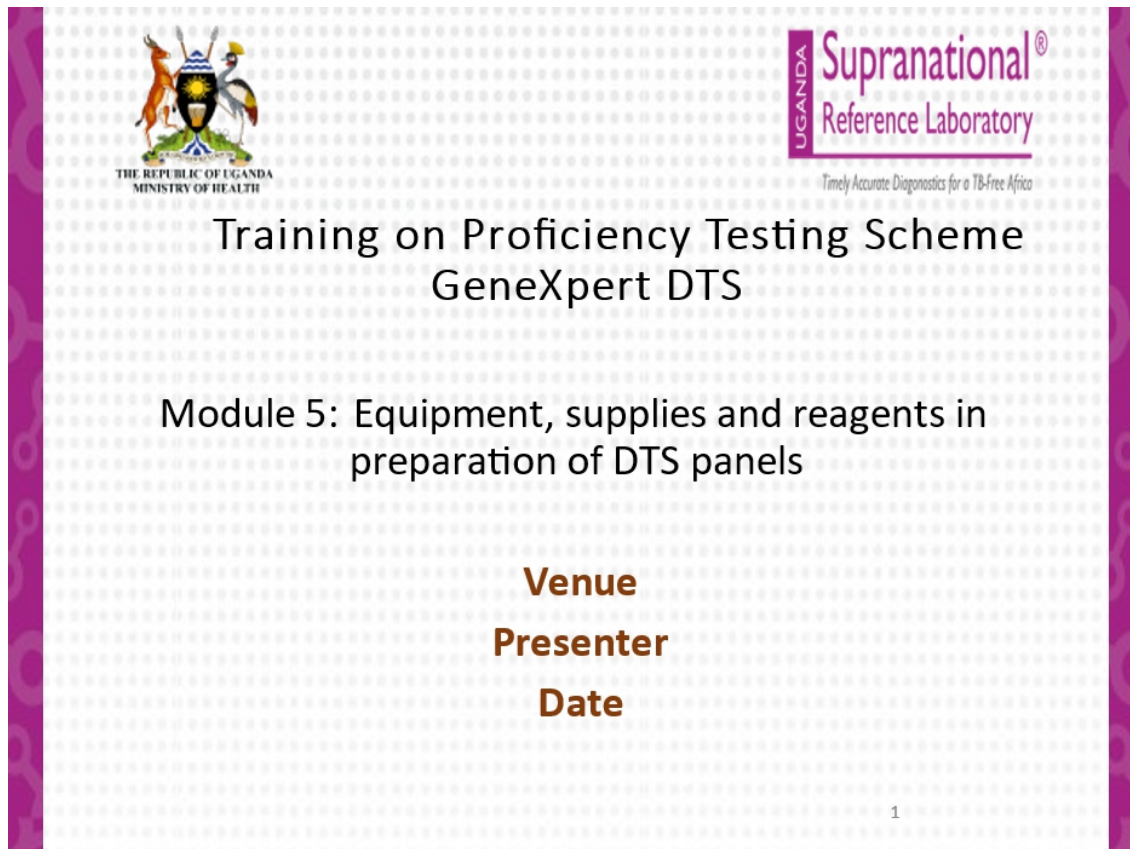
-Hot air oven, autoclave and water bath

Use and maintenance of equipment

The trainer should clearly elaborate on the main factors to consider before installation, during and after installation of the equipment to ensure the equipment functions for the purpose it procured and these include

- Procurement of the wright equipment for the intended purpose' /use
- Availability of adequate space and favorable environmental condition for placement of the equipment
- Equipment verification at the time of installation
- Availability of equipment user manuals at the bench
- Training of personnel to use the equipment
- Development of standard operating procedures for individual equipment
- Clearly adhere to daily, monthly and annual Maintenance activities
- Have troubleshooting and corrective action procedures in case of equipment failure.
- Use of recommended disinfectants to be used when cleaning the equipment

SLIDE OF POWERPOINT PRESENTATION



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Training on Proficiency Testing Scheme GeneXpert DTS

Module 5: Equipment, supplies and reagents in preparation of DTS panels

Venue

Presenter

Date

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SITUATION ANALYSIS/ EXERCISES

- 1) Tabulated sheet detailing the exercise for the session.
- 2) Practical session in the laboratory should be interactive and a hands-on approach where the participants are allowed to observe the maintenance.
- 3) Begin by allowing the participants to prepare the disinfectants then document them on the appropriate logs prior to their use.
- 4) Select at least 2 major equipment (genexpert machine, biosafety cabinet, hot air oven, incubators) and demonstrate to the participants the recommended maintenance procedures for that equipment.

ASSESSMENT REVIEW

1. List all the important equipment required to prepare genexpert PT panels.
2. List atleast five general rules of use and maintenance of equipment.

REFERENCES

- GLI TB training package
(<http://www.stoptb.org/wg/gli/trainingpackages.asp>)