

**THE PROVISION OF TESTING RELATED
INFORMATION**

CHAPTER 5.5

ANNEX A: PREMIER SERVICE TRAINING AT THE RTC-EAST

Project CFC/ICAC/33

**Commercial Standardization of
Instrument Testing of Cotton
with particular consideration of Africa**



This project is co-funded by the European Union
and the Common Fund for Commodities



PREMIER SERVICE TRAINING AT TANZANIA BUREAU OF STANDARDS

15-17 JUNE 2011

REPORT OF THE TRAINING

1.0 OPENING OF THE TRAINING.

The Premier Service Training was officially opened by Mr. Dominic H. Mwakangale-Director of Testing, Calibration and Packaging Services, Tanzania Bureau of Standards (TBS) on behalf of the Director General of TBS. He started by introducing himself followed by an individual introduction of all participants.

The training was officially opened at 12h00 and attended by trainees from Tanzania (11), Uganda (1), Kenya (1), Sudan (1), Zimbabwe (1) and Mozambique (1). The resource person Mr. Dhandapani Jayakumar was from Premier Evolvise pvt. Limited-India.

The list of the participants is hereto attached in *Annex I*

2.0 BRIEF INTRODUCTION OF PREMIER EVOLVIS PVT. LTD.

The resource person Mr. Dhandapani Jayakumar apologized to trainees for not arriving in time as there was a technical problem with the flight in Bombay-India so flight was canceled. Thereafter, he gave a brief introduction about **PREMIER EVOLVIS PVT. LTD** by saying Premier Evolvics is a part of the prestigious Premier Mills, with a turnover of USD 200mil, 85% of this is from exports. The full Premier range provides testing and monitoring instruments, systems and services that allow optimization of quality through each individual stage of textile production.



Photo showing trainees together with Trainer.



Photo showing Premier-ART Instrument.

3.0 OVERVIEW OF COTTON FIBRE TESTING

In his presentation, Mr. D. Jayakumar cited on the following areas;

- 3.1 Fibre properties measured by HFT/ART
 - 3.1.1 Length and Length Uniformity as well as its importance
 - 2.5% Span Length
 - 50% Span Length
 - Uniformity Ratio
 - 3.1.2 Strength and Elongation as well as its importance
 - Breaking strength
 - Breaking elongation
 - Strength measurement principles
 - 3.1.3 Micronaire as well as its importance
 - Low micronaire fibres
 - High micronaire fibres
 - Micronaire module
 - Micronaire principles
 - 3.1.4 Colour grade (by Rd and +b) as well as its importance
 - Causes of colour in cotton
 - Cotton Colour Grade Chart-American Upland Cotton
 - Colour module
 - 3.1.5 Trash grade (by Area%) as well as its importance
 - Trash measurement
 - Trash estimation in High Volume Instrument
 - Causes of variation in testing
 - 3.1.6 Maturity Ratio (empirical equation)
 - 3.1.7 Short Fibre Index (empirical equation)
 - 3.1.8 Influence of moisture content on fibre length
 - 3.1.9 Overall functional block diagram for ART.
 - 3.1.10 Block diagram of power distribution.
 - 3.1.11 Software.

- MS Windows-Operating System
 - Advantech PC-Mother board, CPU board drivers
 - MOXA PCB Software
 - IMAQ-frame grabber software
 - ART-software
 - Balesmart/other utilities
- 3.1.12 CPU block diagram.
- 3.1.13 Laboratory and sample conditions
- Laboratory: 65±2% RH, 20±2°C (27±2°C in tropical countries)
 - Samples: Equilibrium, standard and non-variable moisture content (6.75% – 8.25%).

4.0 Premier HVI Calibration Principles

Mr. D. Jayakumar explained the importance of calibration as well as following calibration principles. He insisted that, after calibration, the modules should be calibrated again whenever calibration standards are changed. Calibration should be performed for any of the following circumstances;

- According to a fixed schedule
- When the system has been repaired
- When instrument drifting is suspected

He said these calibration procedures do not require the use of a tool and no hardware adjustment is made to a specific electrical or mechanical module. Calibration cottons and the standard colour tiles supplied with the instrument must be used to calibrate and to check calibration.

Practical Calibration and trouble shooting of the ART instrument was done at Wakefield Inspection Services laboratory as it is seen in the photographs below.

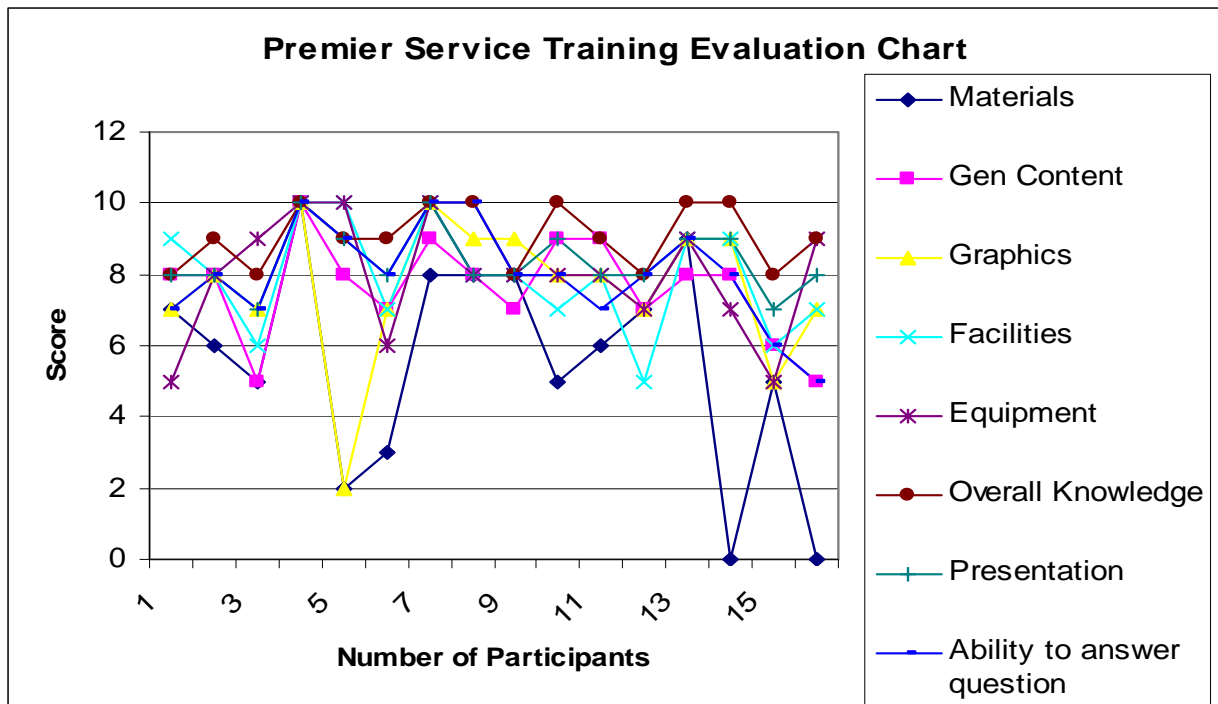


5.0 Premier Service training course evaluation

At the end of the training, participants were given evaluation form to evaluate the following aspects;

- 1) Training course: General content of the course, materials, manuals, graphics, training facilities and equipment available for training.
- 2) Instructor: Overall knowledge of the instrument, presentation of the topics and ability to answer questions.

NOTE: The scale was from 1 to 10 (10 being Best).



In addition to score marks, the following were comments/suggestions from participants with respect to training;

- Good coordination of the training was noted.
- Machine calibration and maintenance session was very impressive.
- Training time was not enough to capture all aspects especially theoretical part. It should be at least one week.
- More emphasis should be put on the practical application, data interpretation, trouble shooting and the new software applications.
- More training should be organized so as to ensure continuity and increase life time of Premier instruments as well as updating operators on the technology advancement.
- Another training to be organized so that participants will be given opportunity to explain the impact of this training.
- The maintenance part was not detailed enough as trouble shooting due to time limitations and as it is nown that Premier Instrument is not available at RTC East laboratory hence we spent more than one our to reach Wakefield Inspection lab at Kurasini-Dar es salaam where also there was no power due to power rationing in Tanzania.

6.0 Acknowledgement

We sincerely appreciate for the comprehensive knowledge we received from this training. We also express our appreciation to development partners, Common Fund for Commodities (CFC) and European Commission (EC) for their monetary support to training participants from regional laboratories. Furthermore, we thank the **PREMIER EVOLVIS PVT. LTD** for providing their resource person Mr. D. Jayakumar to come and share with us the huge knowledge he has in Premier instruments. Lastly, we thank Tanzania Bureau of Standards (TBS) for providing training facilities which made all participants felt comfortable.

**The list of the participants attended the Premier Service Training
conducted at RTC East/Southern Africa from 15-17 June 2011.**

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Abbreviations:

RTC: Regional Technical Centre for East and Southern Africa

TBS: Tanzania Bureau of Standards

TCB: Tanzania Cotton Board

WIS: Wakefield Inspection Services-Tanzania

CDO: Cotton Development Organization-Uganda

CoDA: Cotton Development Authority of Kenya

ARC: Agricultural Research Corporation of Sudan