

Recognition of Instruments / Methods by the ICCTM: Criteria and Procedure

Background

During the meeting of the ITMF International Committee on Cotton Testing Methods (ICCTM) in Bremen in March 2010 it was decided that the ICCTM will no longer “approve” or “recommend” any instruments or test methods, as these words imply a commercial and scientific endorsement that the ICCTM is not in a position to provide. Instead, ICCTM will from 2010 on “recognize” those instruments and methods that are beneficial for the cotton value added chain.

Principally the following 3 distinct areas for recognition are agreed upon:

- Testing for spinning mill purpose and related purposes
 - Prototype recognition
 - Method/instrument recognition
- Instrument cotton classification – currently not considered
- Reference testing – currently not considered

For testing for spinning mill purpose, the Committee presented the following procedure:

The recognition is especially targeted on test methods for mill and research use. It does not cover reference test methods and does not cover the instrument classification of cotton. For both, specific criteria have to be applied.

For officially recognizing an instrument or test method, the inventor / instrument manufacturer has to provide information that allows the International Committee on Cotton Testing Methods (ICCTM) to assess its usefulness and benefits.

The recognition is divided into a prototype recognition, where it is not possible to deliver data from comparisons between instruments of the same type, and a full instrument or method recognition, which definitely needs additional results from instrument comparisons of multiple testing units.

The key criterion for the recognition of an instrument by the ICCTM is the performance of the test method, which implies

- either the measurement of new cotton characteristics, which are important for cotton processing or for quality assessment of cotton and its products
- or better resolution / less uncertainty / less influences compared to existing methods,
- or a direct user benefit such as reduced operating time without reducing the resolution.

As the different users (research, cotton production, trading, processing/spinning) have different performance criteria, the ICCTM does not provide fixed quantifiable criteria or a fixed format of the information, but demands sufficient information that allows the Committee members and the potential users to evaluate the instrument based on their own criteria.

Useful information to be delivered for a spinning mill for the purpose of Prototype Recognition

- Short description of the instrument and test procedure
- Key description of the usefulness of the test method
- Description of the result parameters and their definition
- Measured samples per time and amount of material needed
- Correlation to existing methods and/or reference methods
- Basic influences on the test result level
- Measurement resolution

- Repeatability based on one instrument

Additional information to be delivered for the purpose of Method/ Instrument Recognition for use in a spinning mill and/or research purposes

- Sufficiently detailed test procedure
- Accuracy based on reference methods or widely accepted test methods
- Precision (repeatability and reproducibility) based on Round Trial results with sufficient instruments
- Measurement uncertainty compared to the necessities of the different users (processing, research)
- Laboratory based influences (operator, air conditioning)
- Maintenance (time, costs, service available)

Finally the customer purchasing the instrument and/or method should, based on the information provided for the ICCTM recognition, be able to decide if a test method is valid for his application.

The first two instruments were recognized during the ICCTM Meeting in Bremen in March 2012.

Criteria

For instrument recognition by ITMF the applicant (instrument manufacturer) should implement all the following sections in the recognition application.

Please keep all numbered sections in this order and with same title nomination.

Bullet point topics are optional. Additional explanations are given in italics.

1. Instrument
 - Instrument (manufacturer, type)
 - Target type of recognition: Testing for spinning mill and related purposes
 - Prototype or full recognition
2. General Description
3. Target Group
4. Function Principle
5. Usefulness / Benefits
6. Application Range of Testing (kind of fibres, preparation, result range)
 - Range for Recognition
 - Additional Range
7. Result parameters and definitions
 - Recognized parameters
 - Other parameters
 - Printout example (tables and graphs)
 - (Name calculation of the result parameters)
 - (If applicable name given Standard Test Method like ASTM for parameter definition)
8. Testing procedure
 - Recommended number of tests
 - Description
 - Necessary surrounding
9. Testing preparation time, sample preparation time and testing time
 - Based on the number of tests mentioned in chapter 8: total time, time for each step
 - Possible addition: time for single tests

10. Reference method, reference materials
 - Reference Method
 - Calibration material (*which, from where*)
 - How to calibrate
11. Applicable Standard Test Methods (and limitations in use)
12. Test Result Repeatability / Reproducibility
 - *with summary at the end of each topic*
 - 12.1. Repeatability of the basic systems / basic test
 - 12.2. Repeatability on same specimen
 - *On the same day*
 - *On different days (preferably min 10 days)*
 - 12.3. Repeatability on similar test material
 - *Have to cover the whole testing range for each property*
 - *Sufficient repetitions (based on number of tests defined in sections 8 and 9)*
 - *Cover different days*
 - *Give variation between tests according to sections 8 and 9, and give variation between days*
 - 12.4. Reproducibility
 - *Best based on round trials*
 - *More than one sample, trying to cover the range*
 - *Preferably at least 5 instruments in different labs*
 - 12.5. Summary: Resolution Discrimination for different samples
 - *(based on the given number of repetitions!)*
13. Comparison to Reference Method
 - *Give reasons for systematic deviations / influences*
14. Comparison to other test methods in Round Trials
15. Manufacturer-independent Check
16. External influences / Measurement uncertainty
 - *(e.g. humidity, operator influence, sampling, cross contamination)*
 - *Quantification*
 - *Trying to cover the range*
17. Maintenance, Service
18. Additional Information
 - *Option for additional information deemed appropriate by the manufacturer*
19. Technical Data / Instrument Settings
20. Manufacturer contact for information
 - *Responsible person / contact details*
 - *Company and general contact information*
21. Responsible ITMF ICCTM Coordinator
 - *To be filled by the ICCTM Coordinator*
 - *Name, e-mail*
 - *Status of Recognition*
22. Additional information for peer reviewers
 - *Criteria being used, Benefit given, was all needed information given*

Procedure

- The interested party contacts one of the ICCTM Executive Committee members for a specific instrument.
- From the ICCTM Executive Committee, one coordinator is appointed for this specific instrument. Where necessary, he is assisted by a second person, who needn't be member of the Executive Committee. The coordinator sends the criteria to the interested party. The Executive Committee will decide, if sufficient time is given for the recognition procedure prior to the next meeting.

- The interested party supplies a first draft. The coordinator gives recommendations for additions / changes.
- In a second step, the next draft version is distributed to all coordinators (except persons from companies in direct competition for this instrument type). Recommendations for additions / changes are collected and given to the interested party.
- In a third step, the next draft version is sent to the full ICCTM committee by e-mail at least 10 weeks in advance to the full ICCTM meeting, allowing 4 weeks for review, 1 week for forwarding, 3 weeks for corrections.
- In a fourth step, the final draft is dispatched at least 2 weeks time prior to decision
- The ICCTM Committee will decide on the recognition. The decision can either be
 - A recognition
 - A recognition provided that any modifications agreed in the meeting are included
 - No recognition (not impeding a later recognition process)
- Costs for the recognition have to be borne by the instrument manufacturer.

After approval of full committee the instrument manufacturer can use this as a statement.

- A certificate will be supplied by ITMF
- The approved documentation of the manufacturer will be available on the ITMF website
- The manufacturer is allowed to use the ITMF ICCTM logo for this instrument type.

Confidentiality: The instrument manufacturer and the coordinator may agree on a confidentiality agreement for the first steps of the recognition procedure, for instance excluding certain members. Nevertheless, there will be no confidentiality from first dispatch to full group on (step 3).

The recognition is valid for the given and approved version of the instrument. For new versions, the Committee has to be asked for either the continued recognition or a necessary new recognition process.