



**INTERNATIONAL COTTON ADVISORY COMMITTEE**  
**1629 K Street NW, Suite 702, Washington, DC 20006 USA**

**Commercial Standardization of Instrument Testing of Cotton  
(CSITC)**

**Round Test Instructions  
And Optional Measurements Instructions**

Any questions regarding the procedure can be emailed to

- Axel Drieling of the Bremen Fibre Institute (FIBRE) at [drieling@faserinstitut.de](mailto:drieling@faserinstitut.de) or
- Gretchen Deatherage / Steve Grantham of the USDA Cotton Program at [cotton.standards@ams.usda.gov](mailto:cotton.standards@ams.usda.gov) / [gretchen.deatherage@usda.gov](mailto:gretchen.deatherage@usda.gov)

**a) Round Test Instructions (mandatory)**

Participating laboratories shall follow the testing procedures and practices adopted by CSITC including:

- Laboratory conditioning (21 degrees C and 65 percent relative humidity) according to ASTM D 1776
- Instrument Calibration (USDA Universal Short and Long calibration cottons, USDA Universal Micronaire cottons, USDA color tiles)

Four samples identified as 1, 2, 3 and 4 are enclosed and each shall be tested on five different days.

All four cotton samples shall be tested each test day in accordance with the procedures outlined below. The testing laboratories are expected to adhere to industry accepted practices as established in ASTM D5867, in the USDA's publication "Guidelines for HVI Testing" and the CSITC Task Force / ITMF "Guideline on Standardized Instrument Testing of Cotton" – which is available on CSITC.org and ITMF.org and ICAC.org.

The selected instruments for the procedure shall be calibrated with USDA Universal Short and Long cottons, USDA Universal Micronaire cottons, and USDA color tiles.

A specific set of USDA calibration cotton standards (CCS) can be obtained with the round trial samples (see registration forms). The CCS set is available only to active CSITC Round Trial participants and when ordered is shipped in the same shipping package as the quarterly round trial samples.

For the RT participation and for daily testing, the same calibration material and procedure must be used. The calibration cotton is not specific for the RT participation.

A test shall consist of

- 1 micronaire measurement,
- 2 combs for the length/uniformity index/strength measurement and
- 2 color readings for Rd and +b.

All tests shall be performed in the instrument's operational mode where tests are performed on all measurements simultaneously. A total of 6 tests are to be performed on each sample for each day.

Temperature and relative humidity measurement levels should be checked prior to testing on each day. Please record this information in the "Temp" and "RH" spaces provided.

It is each lab's responsibility to upload test results directly to the CSITC database. We strongly encourage the use of the online database system (see additional "Database Introduction" information provided) accessible via [www.csitc.org](http://www.csitc.org) for submission of the results. Data can be submitted to the online database system by either using the data file directly from the testing instrument ("Direct Upload"), or by uploading the Excel recording form prepared as detailed below ("Excel Upload"), or by manually keying in the data ("Manual Upload").

#### Direct Upload

- The use of the given Excel recording files is not necessary.
- The Direct Upload will save time for each laboratory and will avoid typing errors.
- Please regard that for testing the bale IDs should be keyed into the testing instrument like mentioned in the Online Database Instruction (S1D1T1 format).
- Data will be uploaded at <http://csitc.org> . Data may be uploaded daily or with all data.
- For all details, see the "Database Introduction" file.

#### Excel Upload

- In case of any problems or uncertainties in completing direct data upload, please continue according to the known procedure, as detailed below.
- All readings shall be recorded on the current Excel spreadsheet forms that are provided with the e-mail for starting each new Round Trial, and at <http://csitc.org> → CSITC Round Trials → Public Information → Files for the current RT participation. Please use only the latest version of these Excel Files and no older versions from previous RTs.
- Data submitted on modified versions of the recording sheets will not be acceptable and will result in omission of the data from analysis. Each test reading shall be recorded in the designated space on the appropriate form. Referring to the enclosed electronic spreadsheet form, please note that the spreadsheet contains six pages. Pages can be selected by clicking on the red tabs at the bottom of the spreadsheet. The first page is a questionnaire to be completed by each laboratory. The other pages are the data recording forms (one form for each cotton sample; please leave the page for the fifth cotton unfilled). "Temp" and "RH" spaces are provided on the "Cotton 1" page of the recording sheet. No data recording spaces on the form for cotton 1 to cotton 4 shall be left blank. All individual test readings must be recorded. Providing only one reading representing the average of individual tests will not be acceptable and will result in omission of the data from analysis. Retesting of individual tests to improve results will not be representative of actual testing performance and is therefore prohibited.
- The Excel recording sheets shall not be modified in any way other than filling in the answers and test results. The recording sheets will not accept numeric data entries that are not within the accepted measurement ranges. Each instrument measurement factor (i.e., micronaire, strength, length, etc.) has its own accepted measurement range. For example, strength measurements must be within 15.0 to 60.0 g/tex to be accepted by the recording sheet. Also, the recording sheets will accept length in either inches or mm's if the length in inches is no shorter than 0.7 inches and the length in mm's is no greater than 43 mm's. Please take care to avoid typing mistakes during the data input. All data will be evaluated, including typing errors.
- Laboratories shall use a separate Excel file for each instrument. This includes filling out a separate questionnaire for each instrument. Instead of filling the questionnaire, the answers can be directly filled into the database system.
- After completion, the recording sheet is ready for upload at <http://csitc.org> . For all details, see the "Database Introduction" file.

#### Manual Upload

- Manual upload of single data is only a temporary solution in case that you have problems with the two other solutions.
- Data will be uploaded at <http://csitc.org> .
- For all details, see the "Database Introduction" file.

#### E-mailing of results

- Only in case of major problems please contact Fibre Institute Bremen, including the filled Excel recording sheet(s). Mail address is [drieling@faserinstitut.de](mailto:drieling@faserinstitut.de)

The introduction and more documents explaining how to use the database can be found on [www.csitc.org](http://www.csitc.org)  
--> CSITC Round Trials --> Public Information --> Explanations for RT Use

In accordance with the ICAC CSITC enrollment guidelines, results will only be accepted for four instruments per CSITC sample set issued.

To be included in the data analysis, results must be submitted to the database by the specified deadline.

The evaluation will be done for each instrument separately. Participants submitting results will receive

- An official recognition of their participation
- A numeric score indicating the level of performance relative to the average of all participant results, a) combining all properties, and b) for each of the 6 properties
- A detailed analysis by instrument regarding accuracy and precision to analyze measurement related problems.

The Bremen Fibre Institute in Bremen, Germany, and the USDA AMS Cotton Program in Memphis, Tennessee, U.S, will distribute the round trial samples and provide data analyses. Participation in the CSITC Round Trial is anonymous and individual results will only be given to the individual participant.

In order to enhance the value of participation, the Task Force on CSITC has agreed to allow the publication of a list with the names of participating test centers, with the requirement that no performance results linked to any test center will be divulged. Test centers who did not wish to be listed as participants in the CSITC Round Trials and chose to remain anonymous, are not included in this list.

However the ICAC reserves the right

- to publish the list of overall combined results without disclosing the participant's name or any other indication of their origin
- to publish summarized analyses and evaluations – with a level of details that doesn't allow to identify any laboratory.

Disclaimer: - The ICAC accepts no responsibility for errors or omissions, which in the unlikely event might occur with shipment of samples, return and analysis of the results, and the conclusions drawn or implied by the results. The evaluation and/or grading based on the results offers no commercial guarantees as to the current and future standing of the participating laboratory.

## **b) Instructions for voluntary participation in testing optional measurements**

The CSITC Round Test provides participants with the opportunity to voluntarily submit data for optional measurements. Data for the following optional measurements are being accepted:

- Trash
  - Trash percent area
  - Trash particle count
- Short Fiber Index (SFI)
- Maturity

Data submitted for the optional measurements will be analyzed and differences to the inter-laboratory average results will be calculated.

For the Trash results, the laboratories will get information about their deviations and will (starting in RT 2016-3) additionally get evaluation grades like for the mandatory results. Nevertheless, the Trash evaluation will not be included in the overall laboratory scoring process.

For the SFI and Maturity results, the laboratories will get information about their deviations, but no evaluation grades.

Lab identities will be kept completely confidential. The purpose of collecting optional results is for the CSITC Task Force to begin considering the possibility of future inclusion of these measurements into the CSITC Round Test.

Participating laboratories shall follow the testing procedures and practices adopted by CSITC as stated in the CSITC Round Test Instructions above.

Temperature and relative humidity measurement levels should be checked prior to testing on each day. Please record this information in the "Temp" and "RH" spaces provided.

**Sample Testing and Data Collection:**

**Important:** A separate testing session must not be performed for the optional measurements. Optional measurements are measured at the same time as strength, length and uniformity index; therefore data for the optional measurements shall be collected during the normal testing procedure used for performing the CSITC Round Test.

We strongly encourage the use of the online database system (see additional "Database Introduction" information provided) accessible via [www.csitc.org](http://www.csitc.org) for submission of the results. Data can be submitted to the online database system by either using the data file directly from the testing instrument ("Direct Upload"), or by uploading the Excel recording form prepared as detailed below ("Excel Upload"), or by manually keying in the data ("Manual Upload").

Data upload is similar to the description in the RT Instructions above.

For Excel Upload please regard:

- A separate recording form is available strictly for the collection of the optional measurement data. This file is an EXCEL file named CSITC RT Optional Measurements Recording. "Temp" and "RH" spaces are provided on the "Cotton 1" page of the recording sheet. Only the optional measurement data should be recorded into the Optional Measurements form. Use the standard CSITC Round Test data collection form for submitting the standard CSITC Round Test data.
- Laboratories shall use a separate Excel file for each instrument. This includes filling out a separate questionnaire for each instrument.