
Welcome to the CSITC Round Trials

Congratulations on taking the first step toward more reliable cotton fibre testing: enrolling in the CSITC Round Trials (RTs)! This document will explain the things you need to know to begin the process and get the most benefit from your participation. Contact information is included at the end to answer any questions not addressed by this paper.

When Do the Round Trials Happen?

There are four RTs each year, one per quarter. Please note that all enrolled laboratories should participate in four consecutive quarters (unless the facility is shut down during the offseason). Your participation begins at the opening of the next quarter. The schedule for each quarter is:

- 1st week of the 1st month: Starting e-mail and sample dispatch
- Last day of the 2nd month: Deadline for uploading results
- Last week of the 3rd month: Electronic dispatch of the instrument analysis reports and the Round Trial certificates.

In addition, laboratories will get two certificates at the end of each year, the first confirming your participation and the second providing overall evaluation result (OERs) for all of your instruments in each quarter.

What Do the Tests Measure?

The RTs evaluate all of the below parameters to determine the OER:

- Micronaire
- Strength
- Length (UHML) in inch or mm
- Length Uniformity
- Colour Rd
- Colour +b

These additional optional parameters will be analysed if provided, but are not included in the OER:

- Trash area
- Trash count
- Short Fibre Index
- Maturity



Where Do I Get Samples, and How Many Tests per Instrument?

You will be sent cotton samples from pretested, homogeneous cotton bales (usually of US origin) that have similar quality and preparation to USDA Calibration Cotton. A sample set usually consists of four samples.

The tests should be performed only on high volume instrument (HVI) or similar equipment. All instrument manufacturers and models are eligible, as long as they are testing based on USDA Universal Cotton Calibration Standards and provide the according result parameters.

Although a sample set can be used for up to four instruments in a single laboratory, it is recommended to not use a sample set for more than two instruments to ensure accurate results. Each sample is tested on an instrument six times per day for five days, for a total of 30 tests per sample.

If it was requested, USDA will be sending calibration material along with the RT samples. In order to reflect the actual daily performance, it is important that the same calibration material be used during the RT testing as well as for everyday testing.

Where Do I Log In, Upload Data, and Get More Information?

All of the information you need to participate in the RTs is provided on www.csitc.org, which is also the site where you will log in and upload your data. Evaluation reports for all years a laboratory participated in the RTs are available indefinitely for download on www.csitc.org.

General information about the RTs can be found on the International Cotton Advisory Committee (ICAC) website, www.icac.org/csitc, including:

- Registration forms
- Annual CSITC Round Trial participation lists
- CSITC Round Trial general evaluation reports
- CSITC Task Force information
- Testing and test result interpretation Guidelines

Before being uploaded, test results are either entered in the provided Excel sheets, or can be directly exported from instruments with suitable export files (only Uster HVI and Premier ART models). The Excel templates you receive must not be modified in any way, other than entering the requested information and results.

Prior to final submission, test results in the database still can be edited, added or deleted on www.csitc.org. In case of problems with the upload, you may send the Excel sheets with the results to Axel Drieling at Bremen Fibre Institute (drieling@faserinstitut.de).



How Does the Evaluation Process Work?

Instruments are evaluated individually; there is no 'summary' evaluation for a laboratory. Analysis of the accuracy of results — in other words, were the results 'right' — are the basis of the evaluation. Analysis of the precision of the results — the variation of the instrument's results between tests — is also provided.

The final outcome is the OER, which is based on the accuracy of the measurements for Mic, Str, UHML, LU, Rd, +b. The OER reflects the overall performance of the instrument in a single number.

How Is the OER Calculated?

Instruments are evaluated individually; there is no 'summary' evaluation for a laboratory. For each sample and each property, the deviation from the reference value is calculated.

The average absolute deviation of all four samples is divided by a scale value, which allows for the calculation of a general result that can be compared between the different parameters. For all evaluation results, the lower the number the better, with 0 being the perfect result.

The OER is the average of the evaluations of the six parameters (Mic, Str, UHML, LU, Rd, +b). Typically, the OER for instruments is between 0.15 and 1.0. The median evaluation result of all participating instruments is usually at 0.35 to 0.40. This means that if the OER of your instrument is lower than the median, your instrument is among the top 50% of instruments in terms of accuracy.

The reference results for the comparison are derived from the inter-laboratory average of all instruments after deleting the outliers — being the best possible reference. They are periodically compared to USDA established results.

In addition, a within-limits evaluation is given, comparing the deviation of your instrument with typical commercial trade limits.



How Do I Get the Results, and Who Can See Them?

All reports are sent to participants via e-mail, and the results are completely confidential — given only to the laboratory's designated contacts. A detailed instrument evaluation report, including the instrument test results and detailed analyses as well as the instrument evaluation, is provided. In addition, laboratories will receive certificates showing their participation and OER. A general report, showing inter-laboratory variations and the general performance in the RT — without any data that can be related to specific laboratories or instruments — will be made public.

After the RT has ended and the evaluation has been made, no subsequent results can be included for analysis. Nevertheless, the database systems does provide a 'do it yourself' evaluation file that allows every laboratory to calculate its own evaluation for any additional testing.

Each laboratory and each instrument gets a new code for each Round Trial. The syntax of the reports with the labs and instruments is 'GL19-3-xxx-yy', which is explained below:

- GL = Global Round Trial
- 19 = Year 2019
- 3 = RT 3 in 2019
- xxx = laboratory number (this will change for every round trial)
- yy = instrument number in the laboratory (specific to each serial number; this is not changed with the RTs)

Participation is not mean to be 'one and done'. Registration will be renewed and an invoice will be sent for the coming year unless that laboratory opts out. If a laboratory's participation is being sponsored by an instrument manufacturer, ICAC will contact the laboratory at the end of the sponsored period about continuing their participation.

Where Do I Go for More Information?

For registration and payment, contact ICAC:

- General: csitcsecretariat@icac.org
- Direct: Ms. Yana Pomerants (yana@icac.org)

For result analysis, report dispatch, and general and technical questions, contact the Bremen Fibre Institute (FIBRE):

- General: csitc-rt@faserinstitut.de
- Direct: Mr. Axel Drieling, (drieling@faserinstitut.de)

For sample dispatch and, if requested, calibration sample dispatch, contact USDA-AMS:

- General: cotton.standards@ams.usda.gov with "CSITC" in the subject line.
- Direct: Mr. James L. Knowlton, james.knowlton@usda.gov, or Ms. Gretchen Deatherage, gretchen.deatherage@ams.usda.gov

