



Commercial Standardisation of
Instrument Testing of Cotton

What You Need to Know about the CSITC Round Trials

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CSITC Round Trials

In 2003, the International Cotton Advisory Committee (ICAC) created the Task Force on Commercial Standardisation of Instrument Testing of Cotton (CSITC) as it was agreed that the industry needed to standardise instrument test results as the basis for a universal accepted way to measure the quality characteristics of cotton. The stakeholders agreed to create the CSITC Round Trials, which officially began in 2007 with four primary goals:

1. Control variation in testing instruments by comparing the test results of each laboratory to reference results for the given samples.
2. Enable labs to continuously monitor their results and deviations, thus ensuring a consistent and accurate test result level for their instrument(s).
3. Provide detailed analyses that will help the laboratories to improve — for example, by contacting the instrument manufacturer in case of problems.
4. Giving each instrument an Overall Evaluation Result (OER), which verifies the ability of a laboratory and its equipment to offer consistently good performance.

How Do the Round Trials Work?

There are four Round Trials each year. CSITC officials send out a set of four samples to participating laboratories during the first week of each quarter; each sample must be tested six times daily for five days. Laboratories then upload their instrument results to www.csitc.org by the last day of the second month of each quarter (28/29 February; 30 May; 31 August and 30 November). Round Trial evaluation results are then sent to the labs during the last two weeks of each quarter.

Confidentiality Is Assured

The results for each laboratory remain completely confidential — no one other than the laboratory and its registered contacts will see any laboratory/instrument test results or evaluation results. A general report about the interlaboratory result variation and distribution of instrument evaluations is published to demonstrate the accuracy and precision of cotton testing data, but individual results are never published. Laboratories can even opt to not be listed as a Round Trial participant if they choose.

How and When Do I Register?

Laboratories can register at any time, and they will begin the process at the beginning of the next quarter. Participation is expected for four quarters per year, unless the laboratory is closed for one quarter or more. Payment is per sample set, and up to four individual instruments can be evaluated.

What Types of Equipment Can Be Included?

The Round Trials are for high-volume instrument (HVI) testing equipment, or similar instruments. All manufacturers and models are eligible (Uster HVI 1000, Spectrum, 900; Premier ART, HFT; MAG HVT, etc.), as long as they are testing based on USDA Universal Cotton Calibration Standards and parameters. The tested parameters include:

- Micronaire
- Strength
- Length (UHML), length uniformity
- Colour (Rd and +b)
- Trash area and count (optional)
- Short Fibre Index (optional)
- Maturity (optional)

How Are Results Evaluated?

Several analyses are provided with each Round Trial for each property, including accuracy (are the results 'right'?) and precision (how much variability between each test). Six properties — micronaire, strength, UHML, LU, Rd, +b — are used to provide an overall evaluation that reflects the performance of the instrument with a single number.

Who Operates the Round Trials?

There are three organisations that manage CSITC Round Trials: ICAC, the Bremen Fibre Institute (FIBRE) and USDA-AMS. ICAC handles registration and payment; FIBRE analyses results, sends out the reports and responds to general and technical questions; and USDA dispatches the samples. Upon request, USDA can send calibration material as well. In order to reflect the actual daily performance, the same calibration material should be used for the Round Trial as well as for everyday testing.