



TESTEX®

proven since 1846

Swiss textile testing  
and certification

Organisation of  
Round Robin Tests



# TESTEX Round robin tests – successful quality assurance tool

Regularly performed comparative tests enable quality officers and management to place the results of the laboratory performing the tests in a wider framework. In particular, round robin tests with international participation are becoming increasingly important with advancing globalisation.

Textile laboratories at finishing and making-up plants, institutes, universities, dyestuff and auxiliaries manufacturers, machinery and apparatus manufacturers or department store chains test textile products with the instruments and equipment at their disposal. Whether these tests are carried out on intermediate or finished products is of secondary importance. Through its work, each testing laboratory can therefore have a direct or indirect influence on textile quality, especially to prevent damage claims and complaints.

It is therefore important to ensure that the test results obtained are accurate and informative, in order to prevent incorrect conclusions.

### Further arguments in favour of participation in round robin tests are:

- Support for the in-house quality assurance system
- Confidence-building measures for in-house results
- External information for determining measurement uncertainty
- Preventing damage claims and complaints
- Creating a basis for correctly establishing where one stands internally and externally
- Confidence-building measures in contacts with third parties (customers, suppliers)
- Systematic production control
- Cost savings (no repeat tests)
- Reproducibility and comparability of the results



# TESTEX Round robin tests – proving their worth since 1983

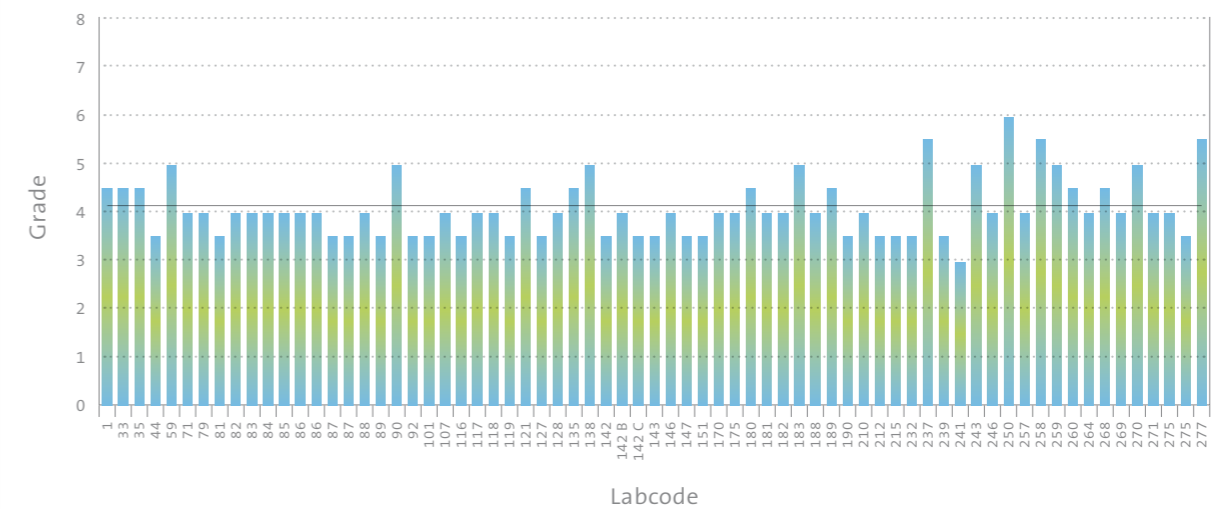
TESTEX has organised round robin tests for many years in the fields of yarn, colour fastness, fabric properties and function, and is accredited under ISO 17043 since 2011.

The test results are recorded centrally, quoting a laboratory code number, and thus evaluated neutrally in a report. In addition to the statistical evaluation, the report also includes a graphic presentation to provide participants with a rapid review of where their own test results stand compared to the total of all results. Experience has shown that deviations of one grade, i.e. a deviation of  $\pm 1.5s$ , are usually within the tolerance range. Values with a wider deviation are marked with an x. It is advisable for the relevant laboratories to check the whole testing procedure in detail to identify the cause of the deviation. This shows how the evaluation of the round robin tests can be used as an internal quality control tool.

At the end of the year, every laboratory receives a participation confirmation document in the form of a certificate. Participation forms for all round robin tests can be downloaded at [www.testex.com](http://www.testex.com).

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Change in colour, knitted sample grassgreen



# TESTEX Round robin tests – Yarn and Colour Fastness

## GARNRUNDTEST (Yarn)

TESTEX has been organising this round robin test since 1983. In 2010 more than 70 members were registered for this round robin test. More than 65% of the participants are located in Europe and 26% in Asia. This test takes place twice a year, in March and September, and costs CHF 500.– per year.



### The following parameters can be tested:

- Yarn count
- Yarn twist
- Tenacity CRE 20 sec, CRE 500 mm/min, CRE 5000 mm/min
- Tenacity USTER TENSOJET
- Lea Test
- Evenness
- Optical evenness
- Yarn hairiness count
- Hairiness index
- Yarn friction

Testing material: yarn on cops or cones (mostly cotton)

## RUNDTEST COLOUR FASTNESS

This round robin test was brought into being in 2000. Over 100 production laboratories, institutes, universities and dyestuffs manufacturers from 34 nations worldwide take part. This test takes place three times a year, in February, June and October, and costs CHF 690.–.



### The following parameters can be tested:

- Fastness to washing; ISO 105-C06/C25 and ISO 105-C08
- Fastness to perspiration; ISO 105-E04
- Fastness to water; ISO 105-E01
- Fastness to rubbing; ISO 105-X12
- Fastness to dry cleaning; ISO 105-D01
- Fastness to light; ISO 105-B02
- Paper pattern for visual assessment and/or using a colour measurement system

Testing material: 6 samples of woven or knitted fabrics (already cut) or yarn, 2 samples of paper pattern for assessment only

# TESTEX Round robin tests – Fabric properties and Function

## RUNDTEST FABRIC PROPERTIES

Over 90 participants from all over the world take part in this round robin test, which was established in 2005. The majority (58%) of the participants are institutes or are engaged in R&D, 24% are factory labs or manufacturers and 13% of the participants are governmental organisations or universities. This round robin test takes place once a year (in April) and costs CHF 480.–.

### The following parameters can be tested:

- Weight and construction of fabric
- Tensile properties - strip method, ISO 13934-1
- Tensile properties - Grab method, ISO 13934-2
- Tear force, Elmendorf method, ISO 13937-1
- Tear force, trouser-shape method, ISO 13937-2
- Tear force, wing-shape method, ISO 13937-3
- Bursting strength, ISO 13938-2
- Seam slippage strength, ISO 13936-1 and ISO 13936-2
- Abrasion resistance - Martindale, ISO 12947-2
- Pilling propensity - Martindale, ISO 12945-2
- Pilling propensity - Pilling box, ISO 12945-1
- Dimensional change at washing, ISO 5077/6330

Testing material: Fabrics (woven and knitted)

## RUNDTEST FUNCTION

Knowledge of and possibilities for testing the physiological properties of textiles have increased considerably in recent years. The measurable requirements of the material used for personal protective clothing, so-called PPE, have also increased. This inspired TESTEX to launch a new round robin test – entitled FUNCTION – in 2010. The 25 first-time

participants were almost exclusively testing institutes. This round robin test takes place once a year (in August) and costs CHF 350.–

### The following parameters are tested:

- Resistance to water penetration, EN 20811 (ISO 811)
- Water vapour resistance EN 31092 (ISO 11092)
- Thermal resistance EN 31092 (ISO 11092)
- Permeability to air ISO 9237
- Colour measurement background material EN 471:2003+A1
- Electrostatic properties: surface resistivity & charge decay, EN 1149-1 & EN 1149-3
- Burning behaviour - Measurement of flame spread ISO 6941

A wide range of testing material qualities is necessary in order to ensure the most realistic scenario. Each material is chosen for its superior applicability based on practical experience and usage on the market.



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