

REPORT No 11944

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ISO 3175-2

**PROFESSIONAL CARE, DRYCLEANING AND
WETCLEANING OF FABRICS AND GARMENTS
- PROCEDURE FOR TESTING PERFORMANCE WHEN
CLEANING AND FINISHING USING TETRACHLOROETHENE -**

Program: SQ-1124.V3

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1. FOREWORD

This report summarizes the results of the **SQ-1124.V3** proficiency testing program for determination of performance when cleaning and finishing using tetrachloroethene. This program is carried out in a bilateral format, following the “split-sample” design described in clause A.4.2 of ISO/IEC 17043: 2023 (Alternative interlaboratory comparisons).

South Quality conducted the testing program in May 2026 with the aim of assessing the laboratory's ability to competently perform the designated tests.

2. ORGANIZATION

Program Coordinator: Lic. Esther Casas
Assistant Technician: Berenice Ferrel
Statistics: Lic. Manuel Tozaki
Supervision: Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is to determine performance when cleaning and finishing using tetrachloroethene, using the following standard:

Standard
ISO 3175-2: 2017

To verify this, batches of garments and fabrics have been chosen.

Participants in this program have not been previously informed about the expected behavior of the samples they receive.

4. PARTICIPANT

Company: **CENTRO TESSILE COTONIERO E ABBIGLIAMENTO SPA**
Laboratory: **CENTRO TESSILE COTONIERO E ABBIGLIAMENTO SPA**
Country: Italy
Client ID: E515
Contact person: Carola Tondelli
Protective Performances Laboratories
interlaboratori@centrocot.it

5. HOMOGENEITY

Several batches were prepared identically by the staff at South Quality.

Subsequently, a homogeneity study was conducted with an ISO/IEC 17025 accredited laboratory.

The control process followed ISO 33405: 2024, clauses 7.4.1.1 / 7.4.1.2. Stratified random sampling was applied, and samples were selected using random number generation software.

The results of this test are presented below:

Size of each batch: **50 units**

Tested samples from each batch: **10 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LT3259	BATCH: LT3260	BATCH: LT3261
Dimensional stability	YES	NO	YES

Size of each batch: **25 units**

Tested samples from each batch: **5 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LT3523	BATCH: LT3524	BATCH: LT3525
Colour change	YES	YES	YES

The samples for this program are taken from the selected batches identified as **LT3259** and **LT3525**.

For the indicated batches, the values determined in the homogeneity study are utilized as the assigned values.

The analysis of the test data indicated that the selected samples exhibited sufficient homogeneity for the program. Therefore, the results of participants identified as outliers cannot be attributed to sample variability.

6. SAMPLE INFORMATION

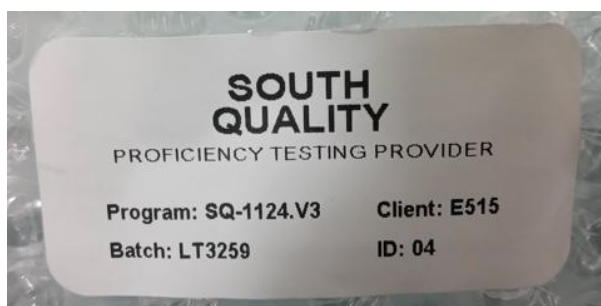
The following samples were sent for testing:

Batch:	LT3259
Sample ID:	04
Characteristics:	Women's jacket - Size M

Batch:	LT3525
Sample ID:	05
Characteristics:	Pink fabric - 50 x 40 cm

7. IMAGES

SAMPLES



8. ASSIGNED VALUES

BATCH: LT3259		
MEASUREMENT POSITION	DIMENSIONAL CHANGE (%)	SD
Collar length	-1.7	0.3
Side length	-1.6	0.2
Shoulder seam length	-1.5	0.4
Center back length	-2.2	0.2
Underarm seam length	-0.4	0.2
Front length	-2.8	0.2
Back width	-0.7	0.5
Body width	-0.9	0.3
Sleeve width	0.9	0.2
Sleeve bottom width	-2.3	0.4

BATCH: LT3525	
DETERMINATION	RESULT
Colour change	4-5

9. PARTICIPANT RESULTS (SEE APPENDIX B)

CODE: LT3259-04	
MEASUREMENT POSITION	DIMENSIONAL CHANGE (%)
Collar length	-2.0
Side length	-1.5
Shoulder seam length	-1.5
Center back length	-2.0
Underarm seam length	-0.5
Front length	-3.0
Back width	-0.5
Body width	-1.0
Sleeve width	1.0
Sleeve bottom width	-2.5

CODE: LT3525-05	
DETERMINATION	RESULT
Colour change	4-5

10. STATISTICS

The results must be treated as quantitative.

According to B.4.1.3 of ISO/IEC 17043: 2023 the appropriate technique is to compare participant results with the assigned values.

- a) For the determination of **COLOUR CHANGE** the comparison is made through the difference ***D*** (B.1 - ISO/IEC 17043: 2023).

$$D = (x - X)$$

x is the participant's result

X is the assigned value

The performance evaluation is carried out with the following criteria:

$|D| < 1$ indicates "satisfactory" performance and generates no signal;

$|D| = 1$ indicates "questionable" performance and generates a warning signal;

$|D| > 1$ indicates "unsatisfactory" performance and generates an action signal;

- b) For the determination of **DIMENSIONAL CHANGE**, the comparison is made through the ***z score*** (B.3 - ISO/IEC 17043: 2023).

$$z = \frac{x - X}{\hat{\sigma}}$$

x is the participant's result

X is the assigned value

$\hat{\sigma}$ is the standard deviation

The performance evaluation of each sample is carried out with the following criteria:

$|z| \leq 2.0$ indicates "satisfactory" performance and generates no signal;

$2.0 < |z| < 3.0$ indicates "questionable" performance and generates a warning signal;

$|z| \geq 3.0$ indicates "unsatisfactory" performance and generates an action signal;

11. EVALUATION OF PERFORMANCE

BATCH: LT3259				
EVALUATION POINT	DIMENSIONAL CHANGE (%)		z score	PERFORMANCE RESULT
	PARTICIPANT RESULT	ASSIGNED VALUE		
Collar length	-2.0	-1.7	1.0	SATISFACTORY
Side length	-1.5	-1.6	0.5	SATISFACTORY
Shoulder seam length	-1.5	-1.5	0.0	SATISFACTORY
Center back length	-2.0	-2.2	1.0	SATISFACTORY
Underarm seam length	-0.5	-0.4	0.5	SATISFACTORY
Front length	-3.0	-2.8	1.0	SATISFACTORY
Back width	-0.5	-0.7	0.4	SATISFACTORY
Body width	-1.0	-0.9	0.3	SATISFACTORY
Sleeve width	1.0	0.9	0.5	SATISFACTORY
Sleeve bottom width	-2.5	-2.3	0.5	SATISFACTORY

BATCH	COLOUR CHANGE		D	PERFORMANCE RESULT
	PARTICIPANT RESULT	ASSIGNED VALUE		
LT3525	4-5	4-5	0	SATISFACTORY

12. CONCLUSIONS

The overall performance of this **SQ-1124.V3** program from the participant laboratory **CENTRO TESSILE COTONIERO E ABBIGLIAMENTO SPA**, is **SUFFICIENT** based on expected results.

The criteria used for evaluating the overall performance are as follows:

- **SUFFICIENT** performance: No unsatisfactory/questionable results were obtained.
- **ALMOST SUFFICIENT** performance: No unsatisfactory results were obtained, but one questionable result was found.
- **INSUFFICIENT** performance: An unsatisfactory result or two questionable results were obtained.

APPENDIX A

INSTRUCTIONS



INSTRUCTIONS

PROGRAM:	Professional care, drycleaning and wetcleaning of fabrics and garments - Procedure for testing performance when cleaning and finishing using tetrachloroethene
CODE:	SQ-1124
VERSION:	3
STANDARD:	ISO 3175-2
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

1 - General

This document is a guide for managing the results of the **SQ-1124.V3** program.

2 - Standard

ISO 3175-2: 2017

3 - Tests involved

TEST
Determination of performance when cleaning and finishing using tetrachloroethene

4 - Samples

CODE	SAMPLE	QUANTITY
LT3259-04	Women's jacket - Size M	1
LT3525-05	Pink fabric - 50x40 cm	1

5 - Notes

- Being a bilateral program, there is no deadline for submitting results.
- The participant must submit the results using the usual report employed by their laboratory.
- The samples are to be handled as routine lab samples, with all testing, documentation, and reporting adhering to ISO 3175-2.
- Samples must be retained until the end of the program, which concludes with the submission of the final report.
- To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.

6 - Test conditions

CODE	DRYCLEANING PROCEDURES	TEST CYCLES	FINISHING TREATMENT
LT3259-04	NORMAL	3	METHOD C
LT3525-05	SENSITIVE	3	METHOD A

7 - Parameters to determine

CODE	PARAMETERS
LT3259-04	DIMENSIONAL STABILITY (ISO 3759)
LT3525-05	COLOUR CHANGE (ISO 105-A02)

PHOTOGRAPHS

APPENDIX B

PARTICIPANT RESULTS (TR #26RA06051)



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Test Report **26RA06051**
of **11/06/2026**

Spett.
CENTRO TESSILE COTONIERO E ABBIGLIAMENTO SPA
P.zza Sant'Anna 2
21052 BUSTO ARSIZIO (VA)

BILATERAL TEST - CODE: SQ-1124

Samples and identifications

26LA09305

Receipt date: **29/04/2026**

Sample receiving date: **29/04/2026**

Description

Description: **Women's jacket - Size M, CODE LT3259-04**

Sampling carried out by: **customer**

26LA09305/01

Sample 26LA09305 - After 3 cycles of dry washing

26LA09306

Receipt date: **29/04/2026**

Sample receiving date: **29/04/2026**

Description

Description: **Pink fabric - 50x40 cm, CODE LT3525-05**

Sampling carried out by: **customer**

26LA09306/01

Sample 26LA09306 - After 3 cycles of dry washing

This Test Report consists of the following results

- 35156 Textiles, Protective clothing. Dry cleaning
- 25122 Textiles. Dimensional change in dry cleaning of garment
- 10155 Visual evaluation

Results contained in this report refer only to tested manufactures.

Deviations from the test method which could be contained in the Test Report may influence the results, therefore the Laboratory declines all responsibility.

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Tests results for samples

26LA09305 Women's jacket - Size M, CODE LT3259-04

Textiles, Protective clothing. Dry cleaning

Test method	UNI EN ISO 3175-2:2018+ EC 1:2020
Conditioning	(20 ± 2)°C - (65 ± 4)%R.H.
Cycle	normal (30 ± 3)°C
Solvent	perchloroethylene
Finish treatment	C (steam press at 100°C): 2 seconds steam, 5 seconds suction
Number of tests carried out	3
Test began on:	06/05/2026
Test ended on:	18/05/2026

Results of sample

UM

Result

Treatments have been performed as preparation to the following test.

Note

Washing procedure results accredited only if performed in combination with an accredited test method after washing.

Results contained in this report refer only to tested manufacts.
 Deviations from the test method which could be contained in the Test Report may influence the results, therefore the Laboratory declines all responsibility.
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26LA09305/01

Sample 26LA09305 - After 3 cycles of dry washing

Textiles. Dimensional change in dry cleaning of garment

Test method	UNI EN ISO 3175-1:2018+UNI EN ISO 3175-2:2018 + EC 1:2020 + UNI EN ISO 3759:2011 + UNI EN ISO 5077:2008
Standard atmosphere for conditioning	(20±2)°C - (65±4)%R.H.
Test equipment	Dry cleaning
Cycle	normal
Solvent	perchloroethylene
Temperature	(30 ± 3)°C
Finish treatment	C (steam press at 100°C):2 seconds steam, 5 seconds suction
Number of tested specimens	1
Number of tests carried out	3
Test began on:	06/05/2026
Test ended on:	19/05/2026

Results of sample	UM	Result
Dimensional change of the collar length	%	-2.0
Dimensional change of total side length	%	-1.5
Dimensional change of the shoulder point	%	-1.5
Dimensional change of the center back length	%	-2.0
Dimensional change of the length seam under sleeve	%	-0.5
Dimensional change of the length shoulder seam	%	-3.0
Dimensional change of the back width	%	-0.5
Dimensional change of the width	%	-1.0
Dimensional change of the sleeve width	%	+1.0
Dimensional change of the bottom sleeve width	%	-2.5
Extended uncertainty U=	%	0.5

Note

The sign (-) indicates shrinkage in the length (warp or wales) or width (weft or courses) direction.

The sign (+) indicates elongation in the length (warp or wales) or width (weft or courses) direction.

The extended uncertainty U associated with the test results was calculated with a coverage factor of $k = 2$ and a level of confidence of approximately 95%.

Results contained in this report refer only to tested manufactures.

Deviations from the test method which could be contained in the Test Report may influence the results, therefore the Laboratory declines all responsibility.

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26LA09306 Pink fabric - 50x40 cm, CODE LT3525-05

Textiles, Protective clothing. Dry cleaning

Test method	UNI EN ISO 3175-2:2018+ EC 1:2020
Conditioning	(20 ± 2)°C - (65 ± 4)%R.H.
Cycle	sensitive (30 ± 3)°C
Solvent	perchloroethylene
Finish treatment	A (no finishing)
Number of tests carried out	3

Test began on: **06/05/2026** Test ended on: **18/05/2026**

Results of sample	*	UM	Result
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Treatments have been performed as preparation to the following test.

Note

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Results contained in this report refer only to tested manufacts.

Deviations from the test method which could be contained in the Test Report may influence the results, therefore the Laboratory declines all responsibility.

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26LA09306/01

Sample 26LA09306 - After 3 cycles of dry washing

Visual evaluation

Test method Visual assesment according to ISO 105-A02

Specimens After washing

Test began on: 19/05/2026 Test ended on: 19/05/2026

Results of sample	*	UM	Result
Change in colour		index	4-5
with (extended uncertainty) U=		index	0.5

Note

Assessment carried out by comparison with grey scales according to UNI EN 20105-A02:1996

GRADE 5 no change in colour

GRADE 1 strong change in colour

The extended uncertainty U associated with the test results was calculated with a coverage factor of $k = 2$ and a level of confidence of approximately 95%.

(*): no accredited by Accredia

Sampling carried out by customer: results refer to the sample as received; data and information indicated in the description field are given by customer for which it will be responsible

Issue Date
11/06/2026

**Department Specialist -
Finishing and washing test
department**
Sara Lusi

Sara Lusi

End of Test Report n° 26RA06051

Results contained in this report refer only to tested manufacts.

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