REPORT No 11395

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EN 13258

MATERIALS AND ARTICLES IN CONTACT WITH FOODSTUFFS TEST METHODS FOR CRAZING RESISTANCE OF CERAMIC ARTICLES

Program: SQ-3540.V2

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1. FOREWORD

This report summarizes the results of the **SQ-3540.V2** proficiency testing program on the determination of crazing resistance of glazed ceramic tableware articles in contact with food. This program is conducted in a bilateral format, following the A.3.3 classification of the ISO 17043 standard ("Split-sample testing schemes").

South Quality conducted the testing program in August 2025 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 Ferrer
Statistic:	Lic. Manuel Tozaki
Supervision:	Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is determination of crazing resistance of glazed ceramic tableware articles in contact with food, using the following standard:

Standard
EN 13258: 2003

To verify this, batches of glazed clay casserole have been selected.

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

4. PARTICIPANT

Company:	**Bureau Veritas Consumer Products Services (Bangladesh) Ltd.**
Laboratory:	**Bureau Veritas Consumer Products Services (Bangladesh) Ltd.**
Country:	Bangladesh
Client ID:	S340
Contact person:	Mash-huda Akhter Deputy Senior Manager, Technical Service mashhuda.akhter@bureauveritas.com

5. HOMOGENEITY

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

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

The control process followed ISO Guide 35: 2017, clause 7.4.1.2. Stratified random sampling was employed, and samples were chosen using random number generation software.

The results of this test are presented below:

Size of each batch: **400 units** Tested samples from each batch: **100 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LGC3071	BATCH: LGC3072	BATCH: LGC3073
CRAZING RESISTANCE INDEX	YES	YES	NO

The samples for this program are taken from the selected batch identified as **LGC3071**.

For the indicated batch, 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:	LGC3071
Sample ID:	05
Characteristics:	Glazed clay casserole - 10 units

7. IMAGES

SAMPLES

8. ASSIGNED VALUES

BATCH	CRAZING RESISTANCE INDEX (HOURS)	SD
LGC3071	15	1.6

9. PARTICIPANT RESULTS (SEE APPENDIX)

CODE	CRAZING RESISTANCE INDEX (HOURS)
LGC3071-05	14

10. STATISTICS

The results must be treated as quantitative.

The comparison is made according B.3.1.3 of ISO 17043 and the appropriate technique is to compare participant results with the assigned values. The results can be compare using percent difference z ***score***.

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

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	CRAZING RESISTANCE INDEX (HOURS)		| z score |	PERFORMANCE RESULT
	PARTICIPANT RESULT	ASSIGNED VALUE		
LGC3071	14	15	**0.63**	**SATISFACTORY**

12. CONCLUSIONS

The overall performance on this **SQ-3540.V2** program from the participant laboratory **Bureau Veritas Consumer Products Services (Bangladesh) Ltd.**, is **SUFFICIENT** based on expected results.

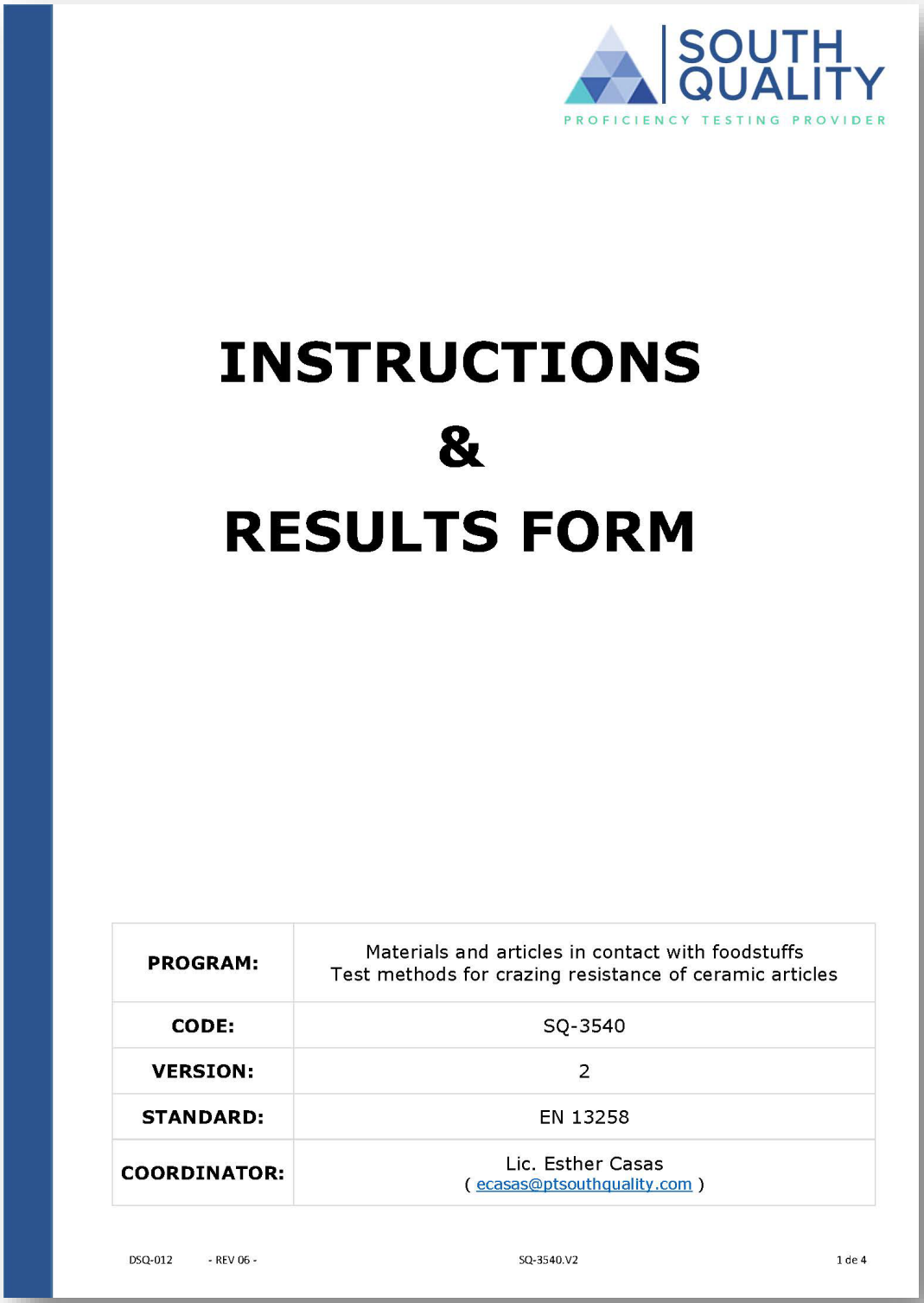
The criteria used for the evaluation of the overall performance is the following:

- **SUFFICIENT** performance: No unsatisfactory result was obtained.
- **ALMOST SUFFICIENT** performance: A questionable result was obtained.
- **INSUFFICIENT** performance: An unsatisfactory result was obtained.

APPENDIX

PARTICIPANT RESULTS

(Results form)



SOUTH QUALITY
PROFICIENCY TESTING PROVIDER

INSTRUCTIONS
&
RESULTS FORM

PROGRAM:	Materials and articles in contact with foodstuffs Test methods for crazing resistance of ceramic articles
CODE:	SQ-3540
VERSION:	2
STANDARD:	EN 13258
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

DSQ-012 - REV 06 - SQ-3540.V2 1 de 4

1 - **General**

This document serves as a guide for managing the results of the **SQ-3540.V2** program.

Results must be typed, not handwritten.

2 - **Standard**

EN 13258: 2003

3 - **Tests involved**

TEST
Determination of crazing resistance of glazed ceramic tableware articles in contact with food (Method A)

4 - **Samples**

CODE	SAMPLE	QUANTITY
LGC3071-05	Glazed clay casserole	10

5 - **Notes**

a) Being a bilateral program, there is no deadline for submitting results.
b) The tables in this document may be modified by the participant, if desired, to include data or observations.
c) The samples are to be handled as routine lab samples, with all testing, documentation, and reporting adhering to **EN 13258**.
d) Samples must be retained until the end of the program, which concludes with the submission of the final report.
e) To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.
f) Once this document is completed, it must be converted into a PDF file and sent to the program coordinator.

6 - **Test results**

Test date:	10-08-2025

Method:	A

Code	Cycle No	a = Time T (hours)	b= No of Failures at time T	(a) x (b)
LGC3071-05	1	2	0	0
	2	4	0	0
	3	6	0	0
	4	8	0	0
	5	10	0	0
	6	12	0	0
	7	14	0	0
Survivors		14	10	140
Total			10	140

Crazing Resistance Index (hours):	140:10 =14 (hours) plus

OBSERVATIONS

PHOTOGRAPHS

----- END OF REPORT -----