

REPORT No 11979

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EN 1186-9

MATERIALS AND ARTICLES IN CONTACT WITH FOODSTUFFS OVERALL MIGRATION INTO AQUEOUS FOOD SIMULANTS BY ARTICLE FILLING

Program: SQ-1580.V4

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1. FOREWORD

This report summarizes the results of the **SQ-1580.V4** proficiency testing program on the determination of the overall migration from one surface only of plastics articles in the form of containers. This program is conducted 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 June 2026 with the aim of assessing the laboratory's ability to competently perform the designated tests.

2. ORGANIZATION

Program Coordinator: Eng. Erika Brest
Assistant Technician: Mateo Giovanni
Statistics: Lic. Manuel Tozaki
Supervision: Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is to determine the overall migration from one surface only of plastics articles in the form of containers, using the following standard:

Standard
EN 1186-9: 2002

For verification, batches of plastic articles have been selected.

Participants in this program have not been previously informed about the expected values or value ranges of the samples they receive.

4. PARTICIPANT

Company: **ACLAB**
Laboratory: **ACLAB**
Country: Morocco
Client ID: F293
Contact person: Jihane Sakar
Responsable Metrologie et Essai Interlaboratoire
essais.interlaboratoire@gmail.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 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: **150 units**

Tested samples from each batch: **30 units**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE ANALYZED SAMPLES		
	BATCH: LCH2848	BATCH: LCH2849	BATCH: LCH2850
Overall migration (M)	YES	NO	YES

Samples for this program are taken from selected batch identified as **LCH2848**.

For the batch indicated, the values determined in the homogeneity study are used as assigned values.

Analysis of this test data indicated that the selected samples were sufficiently homogeneous for the program and 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:	LCH2848
Sample ID:	13
Characteristics:	Plastic thermo mug (Reusable) - 280 ml - 5 units

7. IMAGES



8. ASSIGNED VALUES

BATCH	OVERALL MIGRATION RESULT	
	<i>M</i> (mg/dm ²)	SD
LCH2848	0.31	0.022

9. PARTICIPANT RESULTS (SEE APPENDIX B)

CODE	OVERALL MIGRATION RESULT (<i>M</i>) (mg/dm ²)
LCH2848-13	0.34

10. STATISTICS

The results must be treated as quantitative.

According to B.4.1.3 of ISO 17043 the appropriate technique is to compare participant results with the assigned values. The results can be compared using **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	OVERALL MIGRATION RESULT (M) (mg/dm ²)		z score	PERFORMANCE RESULT
	PARTICIPANT RESULT	ASSIGNED VALUE		
LCH2848	0.34	0.31	1.4	SATISFACTORY

12. CONCLUSIONS

The overall performance on this **SQ-1580.V4** program from the participant laboratory **ACLAB**, 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:	Materials and articles in contact with foodstuffs Overall migration into aqueous food simulants by article filling
CODE:	SQ-1580
VERSION:	4
STANDARD:	EN 1186-9
COORDINATOR:	Eng. Erika Brest (ebrest@ptsouthquality.com)

1 - General

This document serves as a guide for managing the results of the **SQ-1580.V4** program.

2 - Standard

EN 1186-9: 2002

3 - Tests involved

TEST
Determination of the overall migration from one surface only of plastics articles in the form of containers Overall migration (<i>M</i>)

4 - Samples

CODE	SAMPLE	QUANTITY
LCH2848-13	Plastic thermo mug (Reusable) - 280 ml	5

5 - Notes

- a) Being a bilateral program, there is no deadline for submitting results.
- b) The participant must submit the results using the usual report employed by their laboratory.
- c) The samples are to be handled as routine lab samples, with all testing, documentation, and reporting adhering to **EN 1186-9**.
- 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.

6 - Test conditions

PARAMETER	VALUE
Temperature	70°C
Duration	2 h
Simulant	A

PHOTOGRAPHS

APPENDIX B

PARTICIPANT RESULTS (TEST REPORT)



Rapport N° : /26-PC

Casablanca le 25/06/2026

Madame, Monsieur,

Suite à votre demande de contrôle de conformité, veuillez trouver ci-joint le rapport relatif à l'échantillon reçu au sein de nos laboratoires et nous vous remercions de nous avoir consultés.

Bien à vous.

Demandeur	interlab
Déclarant	SQ-1580
Code d'échantillon	73/05/2026
N° de Facture	-
Date de réception des échantillons	Le 7/2026
Essai Demandée	Evaluation de la conformité selon la norme obligatoire NM 11.4.006 (2014)
Nombre de pages	2
Remarques	RAS

NB :

Les essais couverts par l'accréditation sont identifiés essais couverts par le symbole (*).
 L'ensemble des essais sont réalisés au site du laboratoire ACLAB.
 Les résultats ne s'appliquent qu'à l'échantillon tel que reçu au laboratoire.
 Les résultats ne se reportent qu'objets soumis aux essais.
 Les résultats ne peuvent être extrapolés à un lot.
 Le rapport ne peut être reproduit que sous sa forme intégrale.
 La déclaration de la conformité ne tient pas compte de l'incertitude.
 La durée de conservation des échantillons est de deux semaines.



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ACLAB : Lot N° 182, Zone Industrielle – Mohammedia
 ICE : 001715050000092 - Patente : 31590749 - IF : 15237310 - RC : 24015 - CNSS : 4391504 Tél : 0523 320 495
 Fax : 0523 303 103 - GSM : 0666 127 332 - E-mail : aclaboratoire@gmail.com - web : www.aclaboratoire.ma

Ref : F00011PPTM1 - V01 - Date : 05/01/2024



Rapport N° : /26-PC

Description de l'échantillon :

Voir illustration



1- Jugement de Conformité

Le prélèvement présente dans le présent rapport est **conforme** aux exigences de la norme EN 1186-9

Résultats

2- Migration globale dans l'eau

Mesure de la migration globale NM EN 1186-9 (2014)			
Méthode d'essai :		Migration globale par remplissage	
Température : 40°C		Simulant : l'eau	Durée :
Caractéristiques	Eprouvette 1	Eprouvette 2	Eprouvette 3
Valeurs individuelles de la migration globale en mg/dm ²	0,388	0,3395	0,291
Valeur moyenne en mg/dm ²	0,34		
Spécifications	Valeurs individuelles	Trois valeurs comprises dans la tolérance analytique	
	Valeur moyenne		
		≤ 10 (mg/dm ²)	

Responsable Technique
Mme ZAMZAM Meriem



Responsable Laboratoire
Mr CHAHI Marouane



Fin du rapport

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Ref : FORMPRETMA_V04 : Date: 05/01/2024

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