

## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 1 of 14

### NSC BOYA KIMYEVİ MAD. SAN VE TIC. A.Ş

EYÜP SULTAN MAH. İMAM RABBANI CAD. BAYRAKTARLAR SOK. NO 4/3 SANGAKTEPE İSTANBUL

TEL: 02163115630

FAX: 02165615640

To the attention of **Onur KAYNAK**

The following sample(s) was (were) submitted and identified by/on behalf of the client as:

Sample No.	Sample Description
A	Coated Grill Plate - Black

Client's reference No. : TR 1078195  
 Buyer : Not Provided  
 Order No. : Not Provided  
 Division : Not Provided  
 Model/Style No. : Not Provided  
 Article No. : Not Provided  
 Age Grade : Not Provided  
 Manufacturer : Not Provided  
 Country of Origin : Not Provided  
 Country of Destination : Not Provided  
 Shipment Date : Not Provided  
 End Use : Not Provided  
 Sample Receiving Date : 17 February 2017  
 Resubmit Date : Not Provided  
 Test Performing Period : 17 February 2017 ~ 22 March 2017  
**Overall Conclusion** : **Pass**  
 Test Results : Please refer to the next page(s).

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.  
 Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 2 of 14

Test Parameters	Result
<b>Chemical tests</b>	<b>A1</b>
FCM-Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant A (Ethanol 10%)	M
FCM-Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant B (Acetic acid 3%)	M
FCM-Overall Migration of Total Non-volatile Substance in Plastic Materials - Simulant D1 (Ethanol 50%)	M
FCM - Soluble Heavy Metals in Aqueous Test Simulants (3% Acetic Acid)	M
FCM-Overall Migration of Total Non-volatile Substance in Plastic Materials – With % 95 Ethanol	M
FCM-Overall Migration of Total Non-volatile Substance in Plastic Materials – With Isooctane	M
FCM - Specific Migration of 21 Heavy Metals in Metal Article (EU) (5 g/L Citric Acid)	M
Specific migration of perfluorooctanoic acid	M

Doc.No.:CTSL-F-5;10-177NF / First Publish Date:27.05.2016/ Revision Date / No.:00.00.0000 / 0

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 3 of 14

Remarks	:	M = Meets client's requirement
		F = Below client's requirement
		I = Inconclusive
		* = No specified requirement
		# = For 2-composite mix with results exceeding one half of the relevant requirements or 3-composite mix with results exceeding one third of the relevant requirements, the composite sample may have the possibility of one or more components that can lead to a failure result, therefore, it is recommended to test on individual basis.
Notes:	Conclusions on meet/fail are based on the test result from the actual sampling of the received sample(s).	
	The composite sampling method is based on the client's special request and is a modification from the testing standard.	
	Residual sample can be returned to client if requested.	

The test results relate to the tested items only.  
Test reports without SGS seal and authorized signatures are invalid.  
Reported results do not include uncertainties.

Issued in Istanbul  
Signed for and on behalf of  
SGS Supervise Gözetme Etüd Kontrol Servisleri A.Ş.

Selen Harman  
Customer Services Team Leader

Yağız Barın  
Section Manager




"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).  
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.  
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 4 of 14

### Component List / List of Materials for Chemical Test

Sample No.	Sample Description	Material No.	Component	Material	Colour	
A	Coated Grill Plate	A1	Coated main	Metal	Black	

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

### Overall Migration with %3 Acetic Acid <sup>1</sup>

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN 1186-3:2002 aqueous food simulants by total immersion method;

Test Conditions: 4 hours at 100 °C (3<sup>rd</sup> Migration);

Simulant Used: 3% Acetic Acid (W/V) Aqueous Solution

	Result(s) (mg/dm <sup>2</sup> )
	<b>A1</b>
Trial 1	n.d.
Trial 2	n.d.
Trial 3	n.d.
Mean (Average)	n.d.
Conclusion	Pass

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with  
mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with

Detection Limit = 3 mg/dm<sup>2</sup>

Recommended Max. Limit= 10 mg/dm<sup>2</sup>

- Remark(s)=**
1. Recommended max. limit specified by Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.
  2. Analytical tolerance of aqueous simulants is 2mg/dm<sup>2</sup> or 12mg/kg
  3. Test condition & simulant were specified by client.
  4. The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  5. The volume of simulant used is 0,2 L
  6. The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  7. \* = Total food contact surface area of whole article (i.e. sealed container with cap, gaskets, stopper or similar sealing article) is applied in the calculation of the result according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Article 17
  8. ^ = Only food contact surface area of cap, gaskets, stopper or similar sealing article is applied in the calculation of the result

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



### Overall Migration with %10 Ethanol<sup>1</sup>

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN 1186-3:2002 aqueous food simulants by total immersion method;

Test Conditions: 4 hours at 100 °C (3<sup>rd</sup> Migration);

Simulant Used: 10% Ethanol (V/V) Aqueous Solution

#### Result(s) (mg/dm<sup>2</sup>)

	<u>A1</u>
Trial 1	n.d.
Trial 2	n.d.
Trial 3	n.d.
<b>Mean (Average)</b>	n.d.
<b>Conclusion</b>	<b>Pass</b>

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with  
mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with

**Detection Limit =** 3 mg/dm<sup>2</sup>

**Recommended Max. Limit=** 10 mg/dm<sup>2</sup>

- Remark(s)=**
1. Recommended max. limit specified by Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.
  2. Analytical tolerance of aqueous simulants is 2 mg/dm<sup>2</sup> or 12 mg/kg
  3. Test condition & simulant were specified by client.
  4. The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  5. The volume of simulant used is 0,2 L
  6. The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  7. \* = Total food contact surface area of whole article (i.e. sealed container with cap, gaskets, stopper or similar sealing article) is applied in the calculation of the result according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Article 17
  8. ^ = Only food contact surface area of cap, gaskets, stopper or similar sealing article is applied in the calculation of the result

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-documents.htm](http://www.sgs.com/terms_e-documents.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.  
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

### Overall Migration with %50 Ethanol<sup>1</sup>

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN 1186-3:2002 aqueous food simulants by total immersion method;

Test Conditions: 4 hours at 100 °C (3<sup>rd</sup> Migration);

Simulant Used: 50% Ethanol (V/V) Aqueous Solution

	Result(s) (mg/dm <sup>2</sup> )
	<u>A1</u>
Trial 1	n.d.
Trial 2	n.d.
Trial 3	n.d.
Mean (Average)	n.d.
Conclusion	Pass

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with  
mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with

**Detection Limit =** 3 mg/dm<sup>2</sup>

**Recommended Max. Limit=** 10 mg/dm<sup>2</sup>

- Remark(s)=**
1. Recommended max. limit specified by Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.
  2. Analytical tolerance of aqueous simulants is 2 mg/dm<sup>2</sup> or 12 mg/kg
  3. Test condition & simulant were specified by client.
  4. The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  5. The volume of simulant used is 0,2 L
  6. The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  7. \* = Total food contact surface area of whole article (i.e. sealed container with cap, gaskets, stopper or similar sealing article) is applied in the calculation of the result according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Article 17
  8. ^ = Only food contact surface area of cap, gaskets, stopper or similar sealing article is applied in the calculation of the result

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



### Overall Migration with %95 Ethanol<sup>1</sup>

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN 1186-14:2002 substitute test.

Test Conditions: 4 hours at 100 °C (performed at 60 °C 6 hours) (3<sup>rd</sup> Migration);

Simulant Used: 95% Ethanol

	Result(s) (mg/dm <sup>2</sup> )
	<b>A1</b>
Trial 1	n.d.
Trial 2	n.d.
Trial 3	n.d.
Mean (Average)	n.d.
Conclusion	Pass

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with  
mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with  
\* Further verification by vegetable oil is recommended for compliance confirmation if the material of the sample is not Nylon, PVC, Organic Coating, Hard and Rigid Plastics, PS, SAN, ABS, Melamine.

Detection Limit = 3 mg/dm<sup>2</sup>

Recommended Max. Limit= 10 mg/dm<sup>2</sup>

- Remark(s)=**
1. Recommended max. limit specified by Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.
  2. Analytical tolerance of fatty food simulants is 3 mg/dm<sup>2</sup> or 20 mg/kg
  3. Test condition & simulant were specified by client.
  4. # = Reduction factor of 3 is applied according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III, reference number 06.01 and the end use of product is specified by client.
  5. The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  6. The volume of simulant used is 0,2 L
  7. The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  8. \* = Total food contact surface area of whole article (i.e. sealed container with cap, gaskets, stopper or similar sealing article) is applied in the calculation of the result according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Article 17
  9. ^ = Only food contact surface area of cap, gaskets, stopper or similar sealing article is applied in the calculation of the result

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 9 of 14

### Overall Migration with Isooctane<sup>1</sup>

Test Method: With reference to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III and Annex V for selection of condition and EN 1186-1:2002 for selection of test methods; EN 1186-14:2002 substitute test.

Test Conditions: 4 hours at 100 °C (performed at 60 °C 4 hours) (3<sup>rd</sup> Migration);

Simulant Used: Isooctane

	Result(s) (mg/dm <sup>2</sup> )
	<b>A1</b>
Trial 1	n.d.
Trial 2	n.d.
Trial 3	n.d.
Mean (Average)	n.d.
Conclusion	Pass

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with  
mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with  
\* Further verification by vegetable oil is recommended for compliance confirmation if the material of the sample is not Nylon, PVC, Organic Coating, Hard and Rigid Plastics, PS, SAN, ABS, Melamine.

Detection Limit = 3 mg/dm<sup>2</sup>

Recommended Max. Limit= 10 mg/dm<sup>2</sup>

- Remark(s)=**
- Recommended max. limit specified by Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments.
  - Analytical tolerance of fatty food simulants is 3mg/dm<sup>2</sup> or 20mg/kg
  - Test condition & simulant were specified by client.
  - # = Reduction factor of 3 is applied according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Annex III, reference number 06.01 and the end use of product is specified by client.  
The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with.  
The volume of simulant used is 0,2 L
  - The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with.
  - \* = Total food contact surface area of whole article (i.e. sealed container with cap, gaskets, stopper or similar sealing article) is applied in the calculation of the result according to Commission Regulation (EU) No 10/2011 of 14 January 2011 Article 17
  - ^ = Only food contact surface area of cap, gaskets, stopper or similar sealing article is applied in the calculation of the result

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.  
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 10 of 14

### Specific Migration of 21 Heavy Metals in Metal Article (EU)<sup>1</sup>

Test Method: SGS In House Test Method RSTS-CHEM-603-1 (with reference to EN13130-1:2004), Analysis was performed by ICP-MS.

Test Conditions: 4 hours at 100 °C (3<sup>rd</sup> Migration)

Simulant Used: 5 g/L Citric Acid Aqueous Solution

	Result(s) (mg/kg)		Reporting Limit (mg/kg)	7 x Specific Release Limit (SRL) (mg/kg)	SRL (mg/kg)
	A1				
	1 <sup>st</sup> + 2 <sup>nd</sup> Migration	3 <sup>rd</sup> Migration			
Aluminium (Al)	0,22 mg/kg	n.d.	0,2	35	5
Antimony (Sb)	n.d.	n.d.	0,02	0,28	0,04
Arsenic (As)	n.d.	n.d.	0,001	0,014	0,002
Barium (Ba)	n.d.	n.d.	0,25	8,4	1,2
Beryllium (Be)	n.d.	n.d.	0,005	0,07	0,01
Cadmium (Cd)	n.d.	n.d.	0,002	0,035	0,005
Chromium (Cr)	n.d.	n.d.	0,1	1,75	0,25
Cobalt (Co)	n.d.	n.d.	0,01	0,14	0,02
Copper (Cu)	n.d.	n.d.	0,1	28	4
Lead (Pb)	n.d.	n.d.	0,005	0,07	0,01
Lithium (Li)	n.d.	n.d.	0,02	0,336	0,048
Iron (Fe)	n.d.	n.d.	0,25	280	40
Manganese (Mn)	n.d.	n.d.	0,25	12,6	1,8
Mercury (Hg)	n.d.	n.d.	0,002	0,021	0,003
Molybdenum (Mo)	n.d.	n.d.	0,02	0,84	0,12
Nickel (Ni)	n.d.	n.d.	0,05	0,98	0,14
Silver (Ag)	n.d.	n.d.	0,03	0,56	0,08
Thallium (Tl)	n.d.	n.d.	0,0001	0,0007	0,0001
Tin (Sn)	n.d.	n.d.	5	700	100
Vanadium (V)	n.d.	n.d.	0,005	0,07	0,01
Zinc (Zn)	n.d.	n.d.	1	35	5

**Conclusion** Pass Pass

Note(s): n.d. = not detected  
°C = degree Celsius

mg/kg = milligram per kilogram of foodstuff in contact with

mg/dm<sup>2</sup> = milligram per square decimeter of foodstuff in contact with

- Remark(s)=
1. According to Council of Europe Resolution CM/Res(2013)9, the result from 3<sup>rd</sup> migration shall comply with the Specific Release Limit (SRL) and the sum of 1st and 2nd migration shall not exceed seven times of SRL for repeated use articles
  2. Test condition & simulant were specified by client
  3. Acidic foodstuff is not considered for compliance (for aluminum and aluminum alloy)

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic-format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



**TEST REPORT**

Job No./Report No TR1078195

Date:22 March 2017 Page 11 of 14

4. The ratio of surface area to volume ratio is 12,83 dm<sup>2</sup> per 1 kg of foodstuff in contact with
5. The volume of simulant used is 1,2 L.

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 12 of 14

### FCM, Determination of Soluble Heavy Metals in Test Simulants<sup>1</sup>

Test Method: SGS In House Test Method RSTS-CHEM-602-1 (with reference to EN13130-1:2004). Analysis was performed by ICP-OES.  
Simulant Used: 3% Acetic Acid (W/V) Aqueous Solution  
Test Conditions: 4 hours at 100 °C (3<sup>rd</sup> Migration)

Test Item	Result(s) (mg/kg)	Detection Limit (mg/kg)	Recommended Max. Limit (mg/kg)
	A1		
	n.d.	0,25	1
Specific Migration of Barium	n.d.	0,01	0,05
Specific Migration of Cobalt	n.d.	0,25	5
Specific Migration of Copper	n.d.	0,25	48
Specific Migration of Iron	n.d.	0,5	0,6
Specific Migration of Lithium	n.d.	0,25	0,6
Specific Migration of Manganese	n.d.	0,5	25
Specific Migration of Zinc	Pass		

#### Conclusion

**Note(s):** n.d. = not detected  
°C = degree Celsius  
mg/kg = milligram per kilogram of foodstuff in contact with

**Remark(s)=**

1. Recommended max, limit is according to Commission Regulation (EU) No 10/2011 of 14 January 2011 with amendments,
2. Test condition & simulant were specified by client,
3. The volume of simulant used is 1,2 L,
4. The ratio of surface area to volume ratio is 6 dm<sup>2</sup> per 1 kg of foodstuff in contact with
5. The ratio of surface area to volume ratio is 15,4 dm<sup>2</sup> per 1 kg of foodstuff in contact with

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



## TEST REPORT

Job No./Report No TR1078195

Date:22 March 2017 Page 13 of 14

\*\*\*

<b>Overall assessment</b>	<b>pass</b>
The content of the parameter tested is below their respective limit.	

### Summary of results

Test	Result
specific migration of perfluorooctanoic acid	pass

**Note:**

Conclusions on pass/fail are based on the test result from the actual sampling of the received sample(s).  
 Conclusions are based on the relevant requirements; measurement uncertainties are not taken into account. Only results above the relevant detection limit are taken into account for the calculation of sums.  
 Test was conducted on composite of random parts of the item as per client's request and the test result is the overall result.  
 The composite sampling method is based on the client's special request and could be a modification from the testing standard.  
 For 2-composite mix with results exceeding one half of the relevant requirements or 3-composite mix with results exceeding one third of the relevant requirements, the composite sample may have the possibility of one or more components that can lead to a failure result, it is recommended to test on individual basis.

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.  
 Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.

## Analytical results

### Specific migration of perfluorooctanoic acid

#### Test Method

Migration: DIN 13130-1; measurement: LC-MS/MS

Simulant	3 % acetic acid
Duration	4 hours
Temperature	100 +/- 2°C
Approach	6 dm <sup>2</sup> /L

<u>Teilprobe(n) / Subsample(s)</u>	Einheit / Unit	<u>Ergebnis / Result</u>
Perfluorooctansäure / perfluorooctanoic acid	mg/dm <sup>2</sup>	<sup>1</sup> < 0.002
Beurteilung / Conclusion		bestanden / pass

**Kundenanforderung:** max. 0,005 mg/dm<sup>2</sup>

**Client's requirement:** max. 0.005 mg/dm<sup>2</sup>

\*\*\*\*\* These tests have been performed at SGS INSTITUT FRESENIUS GmbH as subcontracted.



\* \* \* End of Test Report \* \* \*

"This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm).

Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only."

In this Test Report tests marked (1) are included in the IAS Accreditation Scope of this Laboratory. Opinions and interpretations expressed herein are outside the scope of IAS Accreditation.



