

# TEST REPORT

<b><u>Applicant</u></b>	: Mid Ocean Hong Kong Ltd.
<b><u>Address</u></b>	: Unit 711-716, 7/F., Tower A, 83 King Lam Street Cheung Sha Wan, Kowloon, Hong Kong
<b><u>Sample description</u></b>	: MO2941 PP LUNCH BOX WITH SIDE BUCKLETS AND AIRTIGHT LID; MO2119 Lunch box in PP
<b><u>Model no.</u></b>	: MO2941; MO2119
<b><u>Sample received date</u></b>	: 19-Sep-2025
<b><u>Further information date</u></b>	: 23-Oct-2025
<b><u>Turn around time</u></b>	: 19-Sep-2025 To 23-Oct-2025
<b><u>Revised date</u></b>	: 23-Jan-2026

The following test item(s) was/were performed on selected sample(s) and/or component(s) confirmed by applicant

TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Phthalates Content	REACH Annex XVII, Entry 51 & 52	Pass
Polycyclic Aromatic Hydrocarbons (PAHs)	REACH Annex XVII, Entry 50	Pass
Total Cadmium Content	REACH Annex XVII, Entry 23	Pass
Total Lead Content	REACH Annex XVII, Entry 63	Pass
Overall Migration	(EU) No 10/2011 and its amendments	Pass
Overall Migration	Resolution ResAP (2004) 5	Pass
Specific Migration of Primary Aromatic Amines	(EU) No 10/2011 and its amendments	Pass
Bisphenol A (BPA) Content	EPA 3550C:2007, EPA 8321B:2007	Pass
Specific Migration of Heavy Metal	(EU) No 10/2011 and its amendments	Pass
Peroxide Value	LFGB Section 30 and 31, and BfR XV	Pass
Volatile Organic Matter	LFGB Section 30 and 31, BfR Recommendations XV	Pass
Specific Migration of Organotin (as tin)	French Arrêté du 25 Novembre 1992	Pass
Materials and articles in contact with food stuffs- Test method for the: resistance to microwave heating of ceramic, glass, glass-ceramic or plastics cookware	EN 15284:2007	Pass

*Samples are obtained by express delivery, Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. Unless otherwise stated from the customer, regulation or the standard specification, Eurofins will apply it in accordance with ILAC G8:09/2019-(binary statement for simple acceptance rule). If you happen to have any comments, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd. If you happen to have any complaints, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number.*



TEST REQUESTED	TEST METHOD/REGULATION	RESULT
Mechanical dishwashing resistance of utensils-Part 1: Reference test method for domestic articles	BS EN 12875-1: 2005	See Test Result
Mechanical dishwashing resistance of utensils-Part 2: Inspection of non-metallic articles	BS EN 12875-2:2002	See Test Result
Specific Migration of Heavy Metals(Ca, Mg, K, Na)	In House Method	See Test Result

Note : This report cancels and supersedes report number EFW525093868-CG-01 issued on Oct 23<sup>rd</sup>, 2025.  
Modification description: as per client's request, add test condition(10d at 40° C) and submit component No.1 for Overall Migration ((EU) No 10/2011 and its amendments) and Specific Migration of Primary Aromatic Amines tests, component No.2,3 for Overall Migration (Resolution ResAP (2004) 5), Specific Migration of Heavy Metal, Specific Migration of Organotin (as tin) and Specific Migration of Heavy Metals(Ca, Mg, K, Na) tests in the revised report.

**Eurofins (Shanghai) contact information**

**Customer service:** [Winnie.Dong@cpt.eurofinscn.com](mailto:Winnie.Dong@cpt.eurofinscn.com)

**Sales specialist:** [Lily.Li@cpt.eurofinscn.com](mailto:Lily.Li@cpt.eurofinscn.com)

\*\*\*\*\* FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) \*\*\*\*\*

Signed for and on behalf of  
Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd.

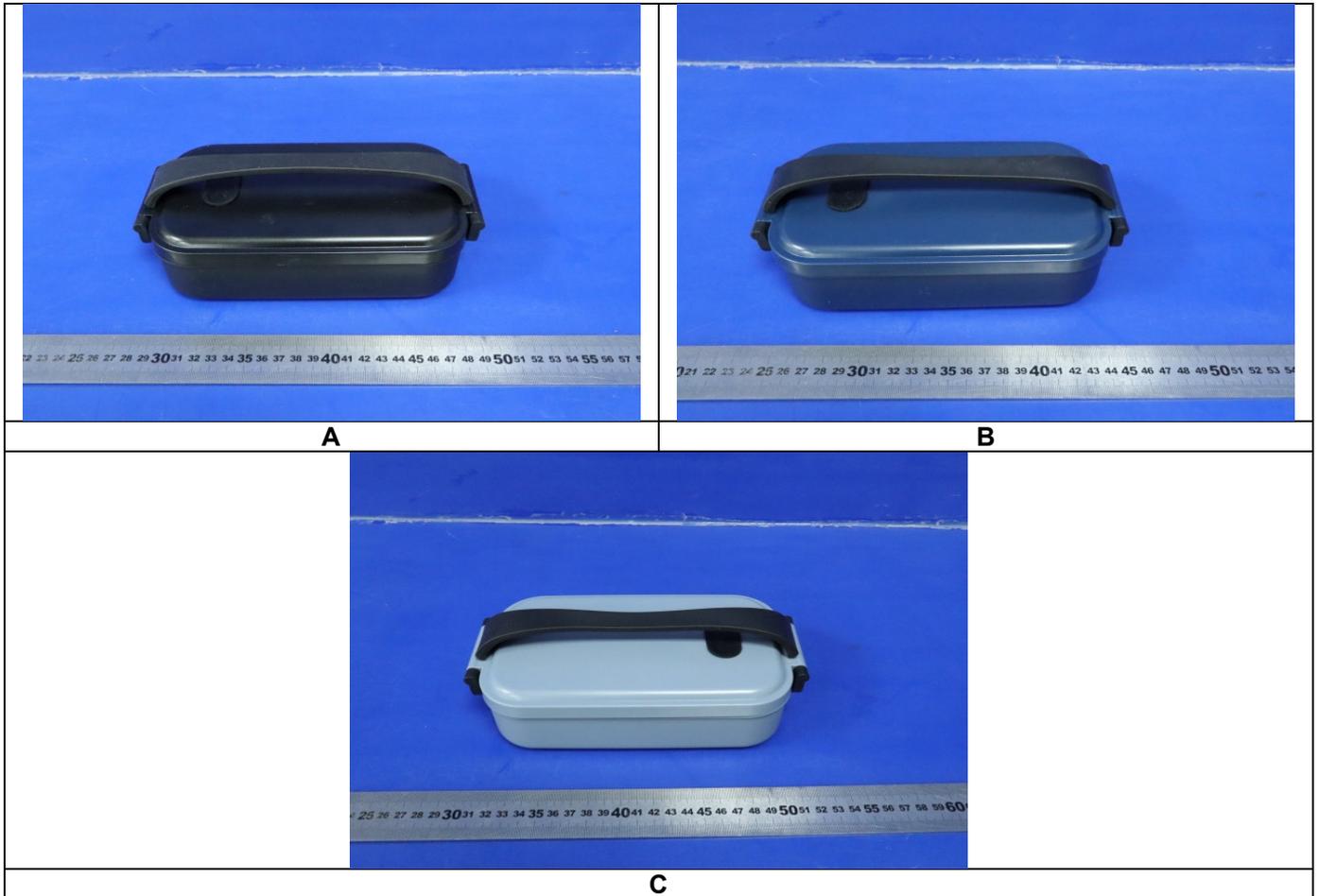


Rain Chen  
Hardline Division Director



*Samples are obtained by express delivery, Results obtained refer only to samples, products or material received in Laboratory, as described in point related to sample description, and tested in conditions shown in present report. Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd ensures that this job has been performed according to our Quality System and complying contract and legal conditions. Unless otherwise stated from the customer, regulation or the standard specification, Eurofins will apply it in accordance with ILAC G8:09/2019-(binary statement for simple acceptance rule). If you happen to have any comments, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number. Reproduction of this document is only valid if it is done completely and under the written permission of Eurofins MTS Consumer Product Testing (Shanghai) Co., Ltd. If you happen to have any complaints, please do it by sending email to [info.sh@cpt.eurofinscn.com](mailto:info.sh@cpt.eurofinscn.com) and referring to this report number.*

**SAMPLE PHOTO(S)**



**EFW525093868-CG-01+REV 1**

\*\*\*TO BE CONTINUED\*\*\*

## **REFERENCE SAMPLE PHOTO(S)**



The reference samples have not been tested in current report, but according to customer's request, the pictures have also been included. For sample tested in current report, please refer to "Sample photo".

\*\*\*TO BE CONTINUED\*\*\*

## COMPONENT LIST

Component No.	Component	Sample No.
1	Black PP box body	A
2	Semi-transparent silicone ring	A,B,C
3	Black silicone plug	A,B,C
4	Black TPR handle	A,B,C
5	Black PP body	A
6	Blue PP body	B
7	Grey blue PP body	C

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Phthalates Content

Test Request: Phthalates content as specified in entry 51&52 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Commission Regulation (EU) 2018/2005.

Test Method: EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result			
					2	3	4	5+6+7
Di-n-butyl phthalate (DBP)	84-74-2	%	-	0.005	ND	ND	ND	ND
Benzylbutyl phthalate (BBP)	85-68-7	%	-	0.005	ND	ND	ND	ND
Diethylhexyl phthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	ND	ND
Di-iso-butyl phthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	ND	ND
Sum of DEHP+DBP+BBP+DIBP	-	%	0.1	-	ND	ND	ND	ND
Di-n-octyl phthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	ND	ND
Diisononyl phthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	ND	ND
Diisodecyl phthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	ND	ND
Sum of DNOP, DINP, DIDP	-	%	0.1	-	ND	ND	ND	ND

### Remarks:

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

MDL = method detection limit

ND = Not detected less than MDL

"-"= Not Regulated

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its latest amendment.

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2019:01 PAK.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result		
					2	3	4
Benzo(a)anthracene	56-55-3	mg/kg	0.5	0.1	ND	ND	ND
Chrysene	218-01-9	mg/kg	0.5	0.1	ND	ND	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	0.5	0.1	ND	ND	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	0.5	0.1	ND	ND	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	0.5	0.1	ND	ND	ND
Benzo(a)pyrene	50-32-8	mg/kg	0.5	0.1	ND	ND	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.5	0.1	ND	ND	ND
Benzo(e)pyrene	192-97-2	mg/kg	0.5	0.1	ND	ND	ND

**Remarks:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Polycyclic Aromatic Hydrocarbons (PAHs)

Test Request: Polycyclic Aromatic Hydrocarbons (PAHs) content as specified in entry 50 of Annex XVII of REACH Regulation (EC) No 1907/2006 and its latest amendment.

Test Method: Solvent extraction and quantification by gas chromatography-mass selective detection (GC-MS) with respect to AfPS GS 2019:01 PAK.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result
					5+6+7
Benzo(a)anthracene	56-55-3	mg/kg	1	0.1	ND
Chrysene	218-01-9	mg/kg	1	0.1	ND
Benzo(b)fluoranthene	205-99-2	mg/kg	1	0.1	ND
Benzo(j)fluoranthene	205-82-3	mg/kg	1	0.1	ND
Benzo(k)fluoranthene	207-08-9	mg/kg	1	0.1	ND
Benzo(a)pyrene	50-32-8	mg/kg	1	0.1	ND
Dibenzo(a,h)anthracene	53-70-3	mg/kg	1	0.1	ND
Benzo(e)pyrene	192-97-2	mg/kg	1	0.1	ND

#### Remarks:

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

### Total Cadmium Content

Test Request: Total cadmium content as specified in Commission Regulation (EU) 2016/217 amending entry 23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EPA 3050B:1996, EPA 3052:1996, EN 1122:2001 Method B, acid digestion method was used and total cadmium content was determined by ICP-OES.

Test Item(s)	Unit	Limit	MDL	Result			
				2	3	4	5+6+7
Cadmium (Cd)	mg/kg	100	5	ND	ND	ND	ND

#### Remark:

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Total Lead Content

Test Request: Total lead content as specified in entry 63 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 2015/628.  
Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996, acid digestion/ microwave digestion method was used, analysis was performed by ICP-OES.

Test Item(s)	Unit	Limit	MDL	Result			
				2	3	4	5+6+7
Lead (Pb)	mg/kg	500	10	ND	ND	ND	ND

**Remark:**

According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.

mg/kg = milligram per kilogram  
MDL = method detection limit  
ND = Not detected, less than MDL

### Overall Migration

Test Request: To determine the Overall Migration for compliance with Commission Regulation (EU) No 10/2011 and its amendments relating to plastic materials and articles intended to come into contact with foodstuffs.  
Test Method: According to appropriate method of EN1186-3:2022 method 1a, method 2, method 5 for evaporable simulants, EN 1186-2:2022 method 1 for fatty food simulants.

Simulant Used	Time	Temperature	Unit	Limit	Result		
					1		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
50% Ethanol	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

Simulant Used	Time	Temperature	Unit	Limit	Result		
					1		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
50% Ethanol	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

**Remark:**

mg/dm<sup>2</sup> = milligram per square decimeter  
Analytical tolerance of evaporable simulants is 2 mg/dm<sup>2</sup>  
Analytical tolerance of fatty food simulant (olive oil) is 3 mg/dm<sup>2</sup>  
Test condition & simulant were specified by client.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Overall Migration

Test Request: In accordance with Council of Europe Resolution ResAP (2004) 5.

Test Method: According to appropriate method of EN1186-3:2022 method 1a, method 2, method 5 for evaporable simulants, EN 1186-2:2022 method 1 for fatty food simulants.

Simulant Used	Time	Temperature	Unit	Limit	Result		
					2		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
50% Ethanol	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

Simulant Used	Time	Temperature	Unit	Limit	Result		
					2		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
50% Ethanol	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

Simulant Used	Time	Temperature	Unit	Limit	Result		
					3		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	2h	70° C	mg/dm <sup>2</sup>	10	5.0	3.5	3.3
50% Ethanol	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	2h	70° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

Simulant Used	Time	Temperature	Unit	Limit	Result		
					3		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
3% Acetic Acid	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
50% Ethanol	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0
Oil	10d	40° C	mg/dm <sup>2</sup>	10	<3.0	<3.0	<3.0

### Remark:

mg/dm<sup>2</sup> = milligram per square decimeter

Analytical tolerance of evaporable simulants is 2 mg/dm<sup>2</sup>

Analytical tolerance of fatty food simulant (olive oil) is 3 mg/dm<sup>2</sup>

Test condition & simulant were specified by client.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Migration of Primary Aromatic Amines

Test Request: Specific migration of primary aromatic amines as specified in Commission Regulation (EU) No 10/2011 and its amendments.  
 Test Method: With reference to EN 13130-1:2004 for sample preparation, analysed by LC-MS/MS.  
 Simulant Used: Acetic Acid 3%  
 Test Condition: 2h at 70° C

Test Item(s)	CAS No.	Unit	Limit	MDL	Result		
					1		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
1,3-phenylenediamine	108-45-2	mg/kg	0.002	0.002	ND	ND	ND
2,4,5-trimethylaniline	137-17-7	mg/kg	0.002	0.002	ND	ND	ND
2-methoxy-5-methylaniline	120-71-8	mg/kg	0.002	0.002	ND	ND	ND
2-naphthylamine	91-59-8	mg/kg	0.002	0.002	ND	ND	ND
3,3-dichlorobenzidine	91-94-1	mg/kg	0.002	0.002	ND	ND	ND
3,3-dimethoxybenzidine	119-90-4	mg/kg	0.002	0.002	ND	ND	ND
3,3-dimethylbenzidine	119-93-7	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylene-bis-(2-chloro-aniline)	101-14-4	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylenedianiline	101-77-9	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylenendi-o-toluidine	838-88-0	mg/kg	0.002	0.002	ND	ND	ND
4,4-oxydianiline	101-80-4	mg/kg	0.002	0.002	ND	ND	ND
4,4-thiodianiline	139-65-1	mg/kg	0.002	0.002	ND	ND	ND
4-amino-azobenzene	60-09-3	mg/kg	0.002	0.002	ND	ND	ND
4-aminobiphenyl	92-67-1	mg/kg	0.002	0.002	ND	ND	ND
4-chloroaniline	106-47-8	mg/kg	0.002	0.002	ND	ND	ND
4-chloro-o-toluidine	95-69-2	mg/kg	0.002	0.002	ND	ND	ND
4-methoxy-m-phenylenediamine	615-05-4	mg/kg	0.002	0.002	ND	ND	ND
4-methyl-m-phenylenediamine	95-80-7	mg/kg	0.002	0.002	ND	ND	ND
5-nitro-o-toluidine	99-55-8	mg/kg	0.002	0.002	ND	ND	ND
benzidine	92-87-5	mg/kg	0.002	0.002	ND	ND	ND
o-aminoazotoluene	97-56-3	mg/kg	0.002	0.002	ND	ND	ND
o-anisidine	90-04-0	mg/kg	0.002	0.002	ND	ND	ND
o-toluidine	95-53-4	mg/kg	0.002	0.002	ND	ND	ND
1,4-phenylenediamine	106-50-3	mg/kg	-	0.002	ND	ND	ND
2,4-dimethylaniline	95-68-1	mg/kg	-	0.002	ND	ND	ND
2,6-dimethylaniline	87-62-7	mg/kg	-	0.002	ND	ND	ND
aniline	62-53-3	mg/kg	-	0.002	ND	ND	ND
2,2'-methylenedianiline	6582-52-1	mg/kg	-	0.002	ND	ND	ND
2,4'-methylenedianiline	1208-52-2	mg/kg	-	0.002	ND	ND	ND
Total of other Primary Aromatic Amines	-	mg/kg	0.01	-	ND	ND	ND

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

Simulant Used: Acetic Acid 3%

Test Condition: 10d at 40° C

Test Item(s)	CAS No.	Unit	Limit	MDL	Result		
					1		
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
1,3-phenylenediamine	108-45-2	mg/kg	0.002	0.002	ND	ND	ND
2,4,5-trimethylaniline	137-17-7	mg/kg	0.002	0.002	ND	ND	ND
2-methoxy-5-methylaniline	120-71-8	mg/kg	0.002	0.002	ND	ND	ND
2-naphthylamine	91-59-8	mg/kg	0.002	0.002	ND	ND	ND
3,3-dichlorobenzidine	91-94-1	mg/kg	0.002	0.002	ND	ND	ND
3,3-dimethoxybenzidine	119-90-4	mg/kg	0.002	0.002	ND	ND	ND
3,3-dimethylbenzidine	119-93-7	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylene-bis-(2-chloro-aniline)	101-14-4	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylenedianiline	101-77-9	mg/kg	0.002	0.002	ND	ND	ND
4,4-methylenendi-o-toluidine	838-88-0	mg/kg	0.002	0.002	ND	ND	ND
4,4-oxydianiline	101-80-4	mg/kg	0.002	0.002	ND	ND	ND
4,4-thiodianiline	139-65-1	mg/kg	0.002	0.002	ND	ND	ND
4-amino-azobenzene	60-09-3	mg/kg	0.002	0.002	ND	ND	ND
4-aminobiphenyl	92-67-1	mg/kg	0.002	0.002	ND	ND	ND
4-chloroaniline	106-47-8	mg/kg	0.002	0.002	ND	ND	ND
4-chloro-o-toluidine	95-69-2	mg/kg	0.002	0.002	ND	ND	ND
4-methoxy-m-phenylenediamine	615-05-4	mg/kg	0.002	0.002	ND	ND	ND
4-methyl-m-phenylenediamine	95-80-7	mg/kg	0.002	0.002	ND	ND	ND
5-nitro-o-toluidine	99-55-8	mg/kg	0.002	0.002	ND	ND	ND
benzidine	92-87-5	mg/kg	0.002	0.002	ND	ND	ND
o-aminoazotoluene	97-56-3	mg/kg	0.002	0.002	ND	ND	ND
o-anisidine	90-04-0	mg/kg	0.002	0.002	ND	ND	ND
o-toluidine	95-53-4	mg/kg	0.002	0.002	ND	ND	ND
1,4-phenylenediamine	106-50-3	mg/kg	-	0.002	ND	ND	ND
2,4-dimethylaniline	95-68-1	mg/kg	-	0.002	ND	ND	ND
2,6-dimethylaniline	87-62-7	mg/kg	-	0.002	ND	ND	ND
aniline	62-53-3	mg/kg	-	0.002	ND	ND	ND
2,2'-methylenedianiline	6582-52-1	mg/kg	-	0.002	ND	ND	ND
2,4'-methylenedianiline	1208-52-2	mg/kg	-	0.002	ND	ND	ND
Total of other Primary Aromatic Amines	-	mg/kg	0.01	-	ND	ND	ND

**Remark:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

Total of other primary aromatic amines are 1,4-phenylenediamine (CAS No.:106-50-3),2,4-dimethylaniline(CAS No.:95-68-1), 2,6-dimethylaniline(CAS No.:87-62-7), aniline (CAS No.:62-53-3), 2,2'-methylenedianiline(CAS No.:6582-52-1), 2,4'-methylenedianiline(CAS No.:1208-52-2).

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Bisphenol A (BPA) Content

Test Request: Bisphenol A content as per client' s request.

Test Method: With reference to EPA 3550C:2007, EPA 8321B:2007, analysis was performed by LC-MSMS.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result		
					1	2	3
Bisphenol A	80-05-7	mg/kg	0.05	0.05	ND	ND	ND

### Remarks:

As per client's request, only the appointed materials have been tested.

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Migration of Heavy Metal

Test Request: To determine the Specific Migration of Heavy Metal for compliance with Commission Regulation (EU) No 10/2011 and its amendments relating to plastic materials and articles intended to come into contact with foodstuffs.

Test Method: With reference to Regulation (EU) No 10/2011 and its amendments for selection of test condition, and EN 13130-1:2004 for test preparation method, analysis was performed by ICP-MS.

Simulant Used: 3% Acetic Acid

Test Condition: 2h at 70° C

Test Item(s)	Unit	Limit	MDL	Result		
				1		
				1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Barium (Ba)	mg/kg	1	0.25	ND	ND	ND
Cobalt (Co)	mg/kg	0.05	0.01	ND	ND	ND
Copper (Cu)	mg/kg	5	0.25	ND	ND	ND
Iron (Fe)	mg/kg	48	0.25	ND	ND	ND
Lithium (Li)	mg/kg	0.6	0.5	ND	ND	ND
Manganese (Mn)	mg/kg	0.6	0.05	ND	ND	ND
Zinc (Zn)	mg/kg	5	0.5	ND	ND	ND
Aluminium	mg/kg	1	0.1	ND	ND	ND
Nickel (Ni)	mg/kg	0.02	0.01	ND	ND	ND
Antimony (Sb)	mg/kg	0.04	0.01	ND	ND	ND
Arsenic (As)	mg/kg	ND	0.01	ND	ND	ND
Cadmium (Cd)	mg/kg	ND	0.002	ND	ND	ND
Chromium (Cr)	mg/kg	ND	0.01	ND	ND	ND
Europium (Eu)	mg/kg	-	0.01	ND	ND	ND
Gadolinium (Gd)	mg/kg	-	0.01	ND	ND	ND
Lanthanum (La)	mg/kg	-	0.01	ND	ND	ND
Terbium (Tb)	mg/kg	-	0.01	ND	ND	ND
Sum of lanthanide substances	mg/kg	0.05	-	ND	ND	ND
Lead (Pb)	mg/kg	ND	0.01	ND	ND	ND
Mercury (Hg)	mg/kg	ND	0.01	ND	ND	ND

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

Simulant Used: 3% Acetic Acid

Test Condition: 10d at 40° C

Test Item(s)	Unit	Limit	MDL	Result		
				1		
				1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Barium (Ba)	mg/kg	1	0.25	ND	ND	ND
Cobalt (Co)	mg/kg	0.05	0.01	ND	ND	ND
Copper (Cu)	mg/kg	5	0.25	ND	ND	ND
Iron (Fe)	mg/kg	48	0.25	ND	ND	ND
Lithium (Li)	mg/kg	0.6	0.5	ND	ND	ND
Manganese (Mn)	mg/kg	0.6	0.05	ND	ND	ND
Zinc (Zn)	mg/kg	5	0.5	ND	ND	ND
Aluminium (Al)	mg/kg	1	0.1	ND	ND	ND
Nickel (Ni)	mg/kg	0.02	0.01	ND	ND	ND
Antimony (Sb)	mg/kg	0.04	0.01	ND	ND	ND
Arsenic (As)	mg/kg	ND	0.01	ND	ND	ND
Cadmium (Cd)	mg/kg	ND	0.002	ND	ND	ND
Chromium (Cr)	mg/kg	ND	0.01	ND	ND	ND
Europium (Eu)	mg/kg	-	0.01	ND	ND	ND
Gadolinium (Gd)	mg/kg	-	0.01	ND	ND	ND
Lanthanum (La)	mg/kg	-	0.01	ND	ND	ND
Terbium (Tb)	mg/kg	-	0.01	ND	ND	ND
Sum of lanthanide substances	mg/kg	0.05	-	ND	ND	ND
Lead (Pb)	mg/kg	ND	0.01	ND	ND	ND
Mercury (Hg)	mg/kg	ND	0.01	ND	ND	ND

**Remark:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

Test condition & simulant were specified by client

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Peroxide Value

Test Request: Peroxide values as specified in German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31 with amendments and BfR Recommendations XV for silicon rubber. Test with reference to European pharmacopoeia 9.0-2.5.5.

Sample	Limit	Result
2	Absent	Absent
3	Absent	Absent

### Volatile Organic Matter

Test Request: Volatile organic matter as specified in German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31, BfR Recommendations XV for silicon rubber

Test Method: With reference to Bestimmung von flüchtigen Verbindungen in Bedarfsgegenständen aus Silikon (Version 02 stand: 09/2023)

Test Item(s)	Unit	Limit	MDL	Result	
				2	3
Volatile Organic Matter	%	0.5	0.1	0.13	0.29

### **Remark:**

% = percentage of weight by weight

MDL = method detection limit

ND = Not detected, less than MDL

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Migration of Organotin (as tin)

Test Request: To determine the specific migration of organotin (as tin) for compliance with French Decree No. 2007-766 and its amendments, and French Arrêté du 25 Novembre 1992 for silicon materials.

Test Method: With reference to EN 13130-1:2004 for test preparation method, analysis was performed by ICP-MS.

Simulant Used: Acetic Acid 3%

Test Condition: 2h at 70° C

Test Item(s)	Unit	Limit	MDL	Result					
				2			3		
				1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Tin (Sn)	mg/kg	0.1	0.01	ND	ND	ND	ND	ND	ND

Simulant Used: Acetic Acid 3%

Test Condition: 10d at 40° C

Test Item(s)	Unit	Limit	MDL	Result					
				2			3		
				1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
Tin (Sn)	mg/kg	0.1	0.01	ND	ND	ND	ND	ND	ND

**Remark:**

mg/kg = milligram per kilogram

MDL = method detection limit

ND = Not detected, less than MDL

Test condition & simulant were specified by client.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

**EN 15284:2007 Materials and articles in contact with food stuffs- Test method for the: resistance to microwave heating of ceramic, glass, glass-ceramic or plastics cookware**

<b>Number Of Tested Samples:</b>	1 piece of sample A
<b>Sample Material:</b>	Plastic
<b>Microwave power output:</b>	600W
<b>Short period time (for 72000 J):</b>	120s
<b>Long period (for 468000 J):</b>	780s
<b>Test Procedure:</b>	<ol style="list-style-type: none"> <li>1. Apply a stain to the surface of the test specimen and wash clear.</li> <li>2. Visually check that the surface is not damaged. Note any small faults prior to testing.</li> <li>3. Except for articles made from glass or glass-ceramic, immerse the test specimen in water at a temperature of <math>(20 \pm 3) ^\circ\text{C}</math> for one hour and then wipe the surface dry with a cloth.</li> <li>4. Pour <math>(125 \pm 2, 5)</math> ml of water into each water container and place at the back of the oven so as not to interfere with the turntable.</li> <li>5. Place the test specimen at the center of the turntable for the short heating period test. If electrical arcing begins IMMEDIATELY SWITCH OFF THE OVEN. Terminate the test and state in the test report that at the onset of electrical arcing the test was terminated.</li> <li>6. After the cycle is completed, open the oven door and, if applicable, using the surface temperature measuring apparatus, find and record the highest temperature of the handle. When additional data is required, follow this procedure to find the highest surface temperature. Ensure that this process takes no longer than 45 s.</li> <li>7. Immediately following 6 set the oven for the long period and restart.</li> <li>8. After completion, when additional data is required, record the highest surface temperature (in no more than 45 s). Remove the test specimen from the oven and allow it to cool on an insulated surface to prevent thermal shock.</li> <li>9. Apply stain to the test specimen and wash clear.</li> <li>10. Visually inspect the test specimen for damage according to the criteria in Table 1.</li> <li>11. Repeat the test using the different article shapes in the set.</li> </ol>
<b>Test Requirement:</b>	<ol style="list-style-type: none"> <li>1. Record the highest temperature for each item tested in a set.</li> <li>2. Record any damage that has occurred to individual items.</li> <li>3. Record any arcing, temperature limits and damage. <ul style="list-style-type: none"> <li>● If arcing occurs (5), the article fails the test and is unsuitable for use in a microwave oven.</li> <li>● The maximum surface temperature of handles after the short period heating (6) shall not exceed the following limit values: ceramic, glass-ceramic or glass: <math>56 ^\circ\text{C}</math>; plastics: <math>60 ^\circ\text{C}</math>.</li> </ul> </li> </ol>

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

	4. If any damage occurs (according to the criteria in 10), the article fails the test and is unsuitable for use in a microwave oven.
<b>Test Result:</b>	No any damage present after test No any arcing presented after test Visually Inspection Result: No Cracking Colour change Melting Deformation Charring were observed  Suitability for re-use in a microwave oven
<b>Test Conclusion</b>	<b>Pass</b>

**Remark:**

1. Pass= No cracking listed in Table 1 were found.
2. The test was subcontracted to Eurofins Product Testing Service (Shanghai) Co., Ltd. Hangzhou Branch.

Table 1 — Inspection criteria

Material	Cracking	Crazing	Scaling	Colour	Melting	Deformation	Suitability for re-use	Charring
Ceramic	+	+ <sup>a</sup>	+ <sup>b</sup>	+ <sup>c</sup>				
Glass, glass-ceramic	+		+ <sup>b</sup>	+ <sup>c</sup>				
Plastics	+			+ <sup>c</sup>	+ <sup>d</sup>	+	+ <sup>e</sup>	+

(+) = to be inspected  
<sup>a</sup> refers to the glaze  
<sup>b</sup> refers to on-glaze decoration  
<sup>c</sup> if several colours are present on one article to be inspected, the colour with the greatest change shall be chosen  
<sup>d</sup> article shall not be too soft to handle  
<sup>e</sup> article shall be washable and stain resistant

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

**BS EN 12875-1: 2005 Mechanical dishwashing resistance of utensils-Part 1: Reference test method for domestic articles**

1) Number of tested sample: 1 Piece of sample A

2) Number of controlled sample: 1 Piece

3) Test Procedure

Clause	Test item	Test methods
8.1	Preparation of test dish washer	When testing metal articles, after each regeneration of the ion exchanger with sodium chloride, run one test cycle(see 8.3) with no test specimens
8.2	Loading the test dishwasher	The test dishwasher shall be fully loaded, using dummy articles to fill excess capacity if necessary. Each specimen shall be placed in the appropriate basket making sure that the specimens will not come into contact with each other during testing. All surfaces shall be equally exposed to the water spray, and the specimens shall be positioned in a way that avoids the formation of water pools. It is permissible to simultaneously wash several different types of domestic articles of ceramic, glass, metal or plastics. Note The risk of interaction between different materials should be considered. Where there is such a risk, such specimens should not be tested together. If it is necessary to withdraw a test specimen during the test, it shall be replaced by a similar article.
8.3	Test cycle	The test cycle shall comprise the stages specified in BS EN 12875-1:2005
8.4	Parameter control	The parameters of the test cycle listed below shall be verified before starting the first test cycle and after every 10 <sup>th</sup> test cycles, as per client's request
8.5	Number of test cycles	Subject specimens to <b>10 test cycles</b> , as per client's request

4) Test result:

**BS EN 12875-2:2002**

**Mechanical dishwashing resistance of utensils-Part 2: Inspection of non-metallic articles**

After 10 cycle(s)

Product No	Color	Gloss	Clouding	Resistant deposites and iridescent layers	Other aspects
A	0	0	/	0	0

**Remark:**

The test was subcontracted to Eurofins Product Testing Service (Shanghai) Co., Ltd. Hangzhou Branch.

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

Table 1 – Inspection criteria

Articles with or without decoration	Colour <sup>(1)</sup>	gloss	Clouding	Resistant deposits and iridescent layers <sup>(2)</sup>	Other aspects
Ceramic tableware	+	+		+	+(3) (4) (5)
Glass, glass ceramic ware	+	+	+(6)	+	+ (4) (5)
Vitreous enameled tableware	+	+		+	+(3) (4) (5)
Plastic articles	+	+	+(6)	+	+(3)(7)

(+) = to be inspected

(1) If several colours are present on one article to be inspected, the colour with the greatest change shall be chosen.

(2) For the elimination of easily removable deposits.

(3) e.g. crazing.

(4) The adherence of decorations shall be tested by repeated wiping with a moist cloth under slight pressure.

(5) Abrasion which is caused by friction during the dishwasher treatment shall be disregarded.

(6) Transparent articles only

(7) Swelling, deformation, cracking, or delamination

Table 2 – Evaluation of inspection criteria

Classification	Rating
0	No visible change
1	First discernible change
2	Clearly visible change

\*\*\*TO BE CONTINUED\*\*\*

## TEST RESULT

### Specific Migration of Heavy Metals(Ca, Mg, K, Na)

Test method : The concentration of the following elements is examined by ICP-MS/IC

Test condition :

Food simulant	Test duration/temperature
3% Acetic Acid	2 hours / 70°C

Testing Material No.		1			Detection limit
Parameter	Unit	Test result			
		Trial I	Trial II	Trial III	
Calcium(Ca)	mg/kg	N.D.	N.D.	N.D.	1
Magnesium(Mg)	mg/kg	N.D.	N.D.	N.D.	0.1
Potassium(K)	mg/kg	N.D.	N.D.	N.D.	0.1
Sodium(Na)	mg/kg	N.D.	N.D.	N.D.	1

Food simulant	Test duration/temperature
3% Acetic Acid	10 days / 40°C

Testing Material No.		1			Detection limit
Parameter	Unit	Test result			
		Trial I	Trial II	Trial III	
Calcium(Ca)	mg/kg	N.D.	N.D.	N.D.	1
Magnesium(Mg)	mg/kg	N.D.	N.D.	N.D.	0.1
Potassium(K)	mg/kg	N.D.	N.D.	N.D.	0.1
Sodium(Na)	mg/kg	N.D.	N.D.	N.D.	1

Note: - 1 mg/kg = 1 ppm = 0.0001%

- °C = degree Celsius

- N.D. = Not Detected

The test item(s) was/were subcontracted to Eurofins internal lab.

### Other Information / Remark:

(1) Food contact area to food simulant (S/V in dm<sup>2</sup>/ L): Material No. 1 (5.1:1).

(2) The test condition was specified by applicant.

\*\*\*END OF THE REPORT\*\*\*