Test Report

Report No.: RKEYS250811343 Date: Sep. 04, 2025 Page 1 of 25

Applicant: Mid Ocean Brands B.V.

Address: Unit 711-716, 7/F., Tower A, 83 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong

Manufacture: 117486

Address: /

The following merchandise was (were) submitted and identified by client as:

Sample Name: Reminder bottle

Sample Model: MO6856, MO6857, MO6858

Sample Received Date: Aug. 11, 2025

Testing Period: Aug. 11, 2025 to Aug. 14, 2025

Test Requested

As requested by the applicant, refer to attached page(s) for details.

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Approved by:

Tony Qian/Technical Manager

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Test Report

Summary of Test Results:

Test Requested		Conclusion
In accordance with European Commission Directive 1935/2004/EC, Regulation (EU)10/2011 and its amendments Regulation (EU) 2023/1442, Regulation (EU) 2024/3190 on plastic materials and articles intended to come into contact with food Resolution AP (2004)5 on silicones used for food contact applications		
1.For Material: PP, Tritan		
1.1	Sensory test-taste and odour to the integrate product	PASS
1.2	Overall migration	PASS
1.3	Migration of Heavy Metals	PASS
1.4	Migration of Primary Aromatic Amines test	PASS
1.5	Phthalate Test	PASS
1.6	Bisphenol A (BPA)content	PASS
1.7	Specific migration of Bisphenol A(BPA)	PASS
1.8	Polycyclic Aromatic Hydrocarbons(PAHs) content	PASS
1.9	Visible Color Migration	PASS
1.10	Special Migration of Melamine monomer	PASS
1.11	Specific migration of formaldehyde	PASS
2.For Material: Silicone		
2.1	Sensory test-taste and odour to the integrate product	PASS
2.2	Overall migration	PASS
2.3	Bisphenol A (BPA)content	PASS
2.4	Specific migration of Bisphenol A(BPA)	PASS
2.5	Volatile Organic Matter(VOM)	PASS
2.6	Peroxide value	PASS
2.7	Organotin Content	PASS
Selected test (s) in the selected parts as requested by client with the Regulation (EC) No 1935/2004 and EDQM CM/Res(2020)9 Metals and Alloys used in food contact materials and articles 2024 EDQM 2nd Edition		
3.For Material: Stainless		
3.1	Sensorial examination odour and taste test	PASS

Test Requested		Conclusion
3.2	Migration of Heavy Metals	PASS
In accordance with European Commission Directive 1935/2004/EC, Regulation 84/500/EEC and its amendments Regulation 2005/31/EC on Ceramic, glass and enamel products materials contact with food		
4.For Material: Glass		
4.1	Sensorial examination odour and taste test	PASS
4.2	Migration of lead and cadmium	PASS
4.3	Extractable Aluminum, Cobalt and Arsenic	PASS

Test Material Area And Simulant Liquid Volume

No.	Material Area	Simulant Volume
1	1dm^2	150ml
2	1dm^2	150ml
3	1dm^2	150ml
4	1dm^2	150ml
5	1dm^2	150ml

Test Result:

1.For Material: PP, Tritan

1.1 Sensory test-taste and odour to the integrate product

Test Method: reference to DIN10955:2024-01;

Test condition: Odour test:70℃,2 hours;

Taste test: sunflower oil ,70℃,2 hours.

Test Item (s)	Test Result		Limit
	1	2	
Sensorial examination odour (Point scale)	0	0	2.5
Sensorial examination taste (Point scale)	0	0	2.5

Note: Odour/Taste Grade

0= No perceptible difference

1= Just perceivable difference(still difficult to define)

2= Slight difference

3= Marked difference

4= Strong difference

1.2 Overall migration

Test Method: Regulation (EU)10/2011, With reference to EN 13130-1:2004, Regulation (EU) 2023/1442, EN 1186-1:2002, EN 1186-2:2022, EN 1186-3:2022

Stimulant used	Test condition	Test Result (mg/dm²)			MDL (mg/dm²)	Limit (mg/dm²)
		1				
		1st	2nd	3rd		
3 % acetic acid	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
20 % ethanol	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
95 % ethanol	2 hours at 60℃	N.D.	N.D.	N.D.	2.0	10
Isooctane	0.5 hours at 40℃	N.D.	N.D.	N.D.	2.0	10

Stimulant used	Test condition	Test Result (mg/dm²)			MDL (mg/dm²)	Limit (mg/dm²)
		2				
		1st	2nd	3rd		
3 % acetic acid	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
20 % ethanol	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
95 % ethanol	2 hours at 60℃	N.D.	N.D.	N.D.	2.0	10
Isooctane	0.5 hours at 40℃	N.D.	N.D.	N.D.	2.0	10

Note: 1. mg/dm²=milligram per square decimeter

2. N.D.= Not Detected(<MDL)

3. MDL = Method Detection Limit

1.3 Migration of Heavy Metals

Test Method: Regulation (EU)10/2011, With reference to EN 13130-1:2004, analysis was performed by ICP-MS

Test Condition: 70℃ for 2 hours in 3% Acetic acid

Test Item(s)	Unit	Result			MDL	Limit
		1				
		1st	2nd	3rd		
Soluble Aluminium (Al)	mg/kg	N.D.	N.D.	N.D.	0.01	1
Soluble Ammonium	mg/kg	N.D.	N.D.	N.D.	0.01	--

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Test Item(s)	Unit	Result			MDL	Limit
		1				
		1st	2nd	3rd		
Soluble Antimony(Sb)	mg/kg	N.D.	N.D.	N.D.	0.01	0.04
Soluble Arsenic(As)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Barium(Ba)	mg/kg	N.D.	N.D.	N.D.	0.01	1
Soluble Cadmium(Cd)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Calcium(Ca)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Chromium(Cr)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Cobalt(Co)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Copper(Cu)	mg/kg	N.D.	N.D.	N.D.	0.01	5
Soluble Europium(Eu)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Gadolinium(Gd)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Iron(Fe)	mg/kg	N.D.	N.D.	N.D.	0.01	48
Soluble Lanthanum(La)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Lead(Pb)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Lithium(Li)	mg/kg	N.D.	N.D.	N.D.	0.01	0.6
Soluble Magnesium(Mg)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Manganese(Mn)	mg/kg	N.D.	N.D.	N.D.	0.01	0.6
Soluble Mercury(Hg)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Nickel(Ni)	mg/kg	N.D.	N.D.	N.D.	0.01	0.02
Soluble Potassium(K)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Sodium(Na)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Terbium(Tb)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Zinc(Zn)	mg/kg	N.D.	N.D.	N.D.	0.01	5

Test Report

Test Item(s)	Unit	Result			MDL	Limit
		2				
		1st	2nd	3rd		
Soluble Aluminium (Al)	mg/kg	N.D.	N.D.	N.D.	0.01	1
Soluble Ammonium	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Antimony(Sb)	mg/kg	N.D.	N.D.	N.D.	0.01	0.04
Soluble Arsenic(As)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Barium(Ba)	mg/kg	N.D.	N.D.	N.D.	0.01	1
Soluble Cadmium(Cd)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Calcium(Ca)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Chromium(Cr)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Cobalt(Co)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Copper(Cu)	mg/kg	N.D.	N.D.	N.D.	0.01	5
Soluble Europium(Eu)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Gadolinium(Gd)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Iron(Fe)	mg/kg	N.D.	N.D.	N.D.	0.01	48
Soluble Lanthanum(La)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Lead(Pb)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Lithium(Li)	mg/kg	N.D.	N.D.	N.D.	0.01	0.6
Soluble Magnesium(Mg)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Manganese(Mn)	mg/kg	N.D.	N.D.	N.D.	0.01	0.6
Soluble Mercury(Hg)	mg/kg	N.D.	N.D.	N.D.	0.002	0.002
Soluble Nickel(Ni)	mg/kg	N.D.	N.D.	N.D.	0.01	0.02
Soluble Potassium(K)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Sodium(Na)	mg/kg	N.D.	N.D.	N.D.	0.01	--
Soluble Terbium(Tb)	mg/kg	N.D.	N.D.	N.D.	0.01	0.05
Soluble Zinc(Zn)	mg/kg	N.D.	N.D.	N.D.	0.01	5

Note: 1. mg/kg = ppm
2. N.D. = Not Detected (<MDL)
3. MDL = Method Detection Limit

1.4 Migration of Primary Aromatic Amines test

Test Method: Regulation (EU)10/2011, With reference to EN 13130-1:2004, analysis was performed by LC-MS/MS

Test Condition: 2hours at 70℃in 3% Acetic acid

No.	Name	CAS No.	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
			1				
			1st	2nd	3rd		
1	4-Aninobiphenyl	92-67-1	N.D.	N.D.	N.D.	0.002	0.002
2	4-Chloro-o-toluidine	95-69-2	N.D.	N.D.	N.D.	0.002	0.002
3	2-Naphthylamine	91-59-8	N.D.	N.D.	N.D.	0.002	0.002
4	o-Aminoazotoluene	97-56-3	N.D.	N.D.	N.D.	0.002	0.002
5	2-Amino-4-nitrotoluene	99-55-8	N.D.	N.D.	N.D.	0.002	0.002
6	p-Chloroaniline	106-47-8	N.D.	N.D.	N.D.	0.002	0.002
7	2,4-Diaminoanisole	615-05-4	N.D.	N.D.	N.D.	0.002	0.002
8	4,4’-Diaminobiphenylmethane	101-77-9	N.D.	N.D.	N.D.	0.002	0.002
9	3,3’-Dichlorobenzidine	91-94-1	N.D.	N.D.	N.D.	0.002	0.002
10	3,3’-Dmethoxybenzidine	119-90-4	N.D.	N.D.	N.D.	0.002	0.002
11	3,3’-Dimethylbenzidine	119-93-7	N.D.	N.D.	N.D.	0.002	0.002
12	3,3’-Dimethyl-4,4-diaminobiphenylmethane	838-88-0	N.D.	N.D.	N.D.	0.002	0.002
13	p-Cresidine	120-71-8	N.D.	N.D.	N.D.	0.002	0.002
14	4,4’-Methylene-bis-（2-chloroaniline）	101-214-4	N.D.	N.D.	N.D.	0.002	0.002
15	4,4’-Oxydianiline	101-80-4	N.D.	N.D.	N.D.	0.002	0.002
16	4,4’-Thiodianiline	139-65-1	N.D.	N.D.	N.D.	0.002	0.002
17	o-Toluidine	95-53-4	N.D.	N.D.	N.D.	0.002	0.002
18	2,4-Toluylendiamine	95-80-7	N.D.	N.D.	N.D.	0.002	0.002
19	2,4,5-Trimethylaniline	137-17-7	N.D.	N.D.	N.D.	0.002	0.002
20	o-Anisidine	90-04-0	N.D.	N.D.	N.D.	0.002	0.002
21	2,4-Xylidine	95-68-1	N.D.	N.D.	N.D.	0.002	0.002
22	2,6-Xylidine	87-62-7	N.D.	N.D.	N.D.	0.002	0.002

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No.	Name	CAS No.	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
			1				
			1st	2nd	3rd		
23	SUM	--	N.D.	N.D.	N.D.	--	0.01

No.	Name	CAS No.	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
			2				
			1st	2nd	3rd		
1	4-Aninobiphenyl	92-67-1	N.D.	N.D.	N.D.	0.002	0.002
2	4-Chloro-o-toluidine	95-69-2	N.D.	N.D.	N.D.	0.002	0.002
3	2-Naphthylamine	91-59-8	N.D.	N.D.	N.D.	0.002	0.002
4	o-Aminoazotoluene	97-56-3	N.D.	N.D.	N.D.	0.002	0.002
5	2-Amino-4-nitrotoluene	99-55-8	N.D.	N.D.	N.D.	0.002	0.002
6	p-Chloroaniline	106-47-8	N.D.	N.D.	N.D.	0.002	0.002
7	2,4-Diaminoanisole	615-05-4	N.D.	N.D.	N.D.	0.002	0.002
8	4,4’-Diaminobiphenylmethane	101-77-9	N.D.	N.D.	N.D.	0.002	0.002
9	3,3’-Dichlorobenzidine	91-94-1	N.D.	N.D.	N.D.	0.002	0.002
10	3,3’-Dmethoxybenzidine	119-90-4	N.D.	N.D.	N.D.	0.002	0.002
11	3,3’-Dimethylbenzidine	119-93-7	N.D.	N.D.	N.D.	0.002	0.002
12	3,3’-Dimethyl-4,4-diaminobiphenylmethane	838-88-0	N.D.	N.D.	N.D.	0.002	0.002
13	p-Cresidine	120-71-8	N.D.	N.D.	N.D.	0.002	0.002
14	4,4’-Methylene-bis-（2-chloroaniline）	101-214-4	N.D.	N.D.	N.D.	0.002	0.002
15	4,4’-Oxydianiline	101-80-4	N.D.	N.D.	N.D.	0.002	0.002
16	4,4’-Thiodianiline	139-65-1	N.D.	N.D.	N.D.	0.002	0.002
17	o-Toluidine	95-53-4	N.D.	N.D.	N.D.	0.002	0.002
18	2,4-Toluylendiamine	95-80-7	N.D.	N.D.	N.D.	0.002	0.002
19	2,4,5-Trimethylaniline	137-17-7	N.D.	N.D.	N.D.	0.002	0.002
20	o-Anisidine	90-04-0	N.D.	N.D.	N.D.	0.002	0.002
21	2,4-Xylidine	95-68-1	N.D.	N.D.	N.D.	0.002	0.002

No.	Name	CAS No.	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
			2				
			1st	2nd	3rd		
22	2,6-Xylidine	87-62-7	N.D.	N.D.	N.D.	0.002	0.002
23	SUM	--	N.D.	N.D.	N.D.	--	0.01

Note:

1. mg/kg=ppm
2. N.D. = Not Detected (<MDL)
3. MDL = Method Detection Limit
4. Primary aromatic amines ("PAAs") listed in entry 43 to Appendix 8 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council (*) and for which no migration limit is specified in Table 1 of Annex I shall not migrate or shall not otherwise be released from plastic materials and articles into food or food simulant. They shall not be detectable using analytical equipment with a limit of detection of 0.002 mg/kg food or food simulant applied to each individual primary aromatic amine ("PAA"), in accordance with Article 11(4). For PAAs not listed in entry 43 to Appendix 8 of Annex XVII to Regulation (EC) No 1907/2006, but for which no specific migration limit is specified in Annex I, compliance with Article 3 of Regulation (EC) No 1935/2004 shall be verified in accordance with Article 19. The sum of those PAAs shall however not exceed 0.01 mg/kg in food or food simulant.

1.5 Phthalate test

Test Method: Regulation (EU)10/2011 and its amendments Regulation (EU) 2023/1442, With reference to EN 13130-1:2004, EN 1186-1:2002, EN 1186-2:2022, EN1186-3:2022

Test Instrument: Gas Chromatography-Mass Spectrometer(GC-MS)

Total Phthalate

Test Item(s)	Unit	MDL	Limit	Test Result	
				1	2
Dibutyl Phthalate(DBP)	mg/kg	30	500	N.D.	N.D.
Benzylbutyl Phthalate (BBP)	mg/kg	30	1000	N.D.	N.D.
Di-(2-ethylhexyl) Phthalate(DEHP)	mg/kg	30	1000	N.D.	N.D.
Diisononyl Phthalate(DINP)	mg/kg	100	1000	N.D.	N.D.
Di-n-octyl Phthalate(DNOP)	mg/kg	30	1000	N.D.	N.D.
Diisodecyl Phthalate (DIDP)	mg/kg	100	1000	N.D.	N.D.

Phthalate Migration

Test Condition: 3% Acetic acid: 70℃, 2h

Test Item(s)	Unit	Test Result			MDL	Limit
		1				
		1st	2nd	3rd		
Dibutyl Phthalate(DBP)	mg/kg	N.D.	N.D.	N.D.	0.05	0.12
Benzylbutyl Phthalate (BBP)	mg/kg	N.D.	N.D.	N.D.	0.2	6
Di-(2-ethylhexyl) Phthalate(DEHP)	mg/kg	N.D.	N.D.	N.D.	0.2	0.6
Diisononyl Phthalate(DINP)	mg/kg	N.D.	N.D.	N.D.	0.2	1.8
Di-n-octyl Phthalate(DNOP)	mg/kg	N.D.	N.D.	N.D.	0.2	5
Diisodecyl Phthalate (DIDP)	mg/kg	N.D.	N.D.	N.D.	0.2	9

Test Item(s)	Unit	Test Result			MDL	Limit
		2				
		1st	2nd	3rd		
Dibutyl Phthalate(DBP)	mg/kg	N.D.	N.D.	N.D.	0.05	0.12
Benzylbutyl Phthalate (BBP)	mg/kg	N.D.	N.D.	N.D.	0.2	6
Di-(2-ethylhexyl) Phthalate(DEHP)	mg/kg	N.D.	N.D.	N.D.	0.2	0.6
Diisononyl Phthalate(DINP)	mg/kg	N.D.	N.D.	N.D.	0.2	1.8
Di-n-octyl Phthalate(DNOP)	mg/kg	N.D.	N.D.	N.D.	0.2	5
Diisodecyl Phthalate (DIDP)	mg/kg	N.D.	N.D.	N.D.	0.2	9

Note:

1. mg/kg=ppm
2. N.D. = Not Detected (<MDL)
3. MDL = Method Detection Limit

1.6 Bisphenol A (BPA)content

Test Method: Regulation (EU)10/2011 and its amendments Regulation(EU) 2024/3190,
With reference to CEN/TS 13130-13:2005, analysis was perfommed by LC-MS/MS

Test Item	Unit	MDL	Limit	Test Result	
				1	2
Bisphenol A (BPA)	ug/kg	1	1	N.D.	N.D.

Note: 1. ug/kg=Micrograms per kilogram
2. MDL=Method Detection Limit
3. N.D.=Not Detection(<MDL)

1.7 Specific migration of Bisphenol A(BPA)

Test Method: Regulation (EU)10/2011 and its amendments Regulation (EU) 2024/3190,
With reference to EN 13130-1:2004,EN 1186-1:2002,EN 1186-3:2022, EN1186-14:2002
Test Condition: 3% Acetic acid, 2 hours at 70°C

Test Item(s)	Unit	MDL	Limit	Test Result					
				1			2		
				1st	2nd	3rd	1st	2nd	3rd
Bisphenol A(BPA)	ug/kg	1	1	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Note:
1.ug/kg=Micrograms per kilogram
2.N.D.= Not Detected (<MDL)
3.MDL=Method Detection Limit
4.The requirement in accordance with the Commission Regulation (EU)2024/3190.

1.8 Polycyclic Aromatic Hydrocarbons(PAHs) content

Test Method: With reference to AfPS GS 2019:01 PAK

Test Instrument: Gas Chromatography-Mass Spectrometer (GC-MS)

Tested Item(s)	Test Result Unit (mg/kg)		Limit
	1	2	
Naphthalene	N.D.	N.D.	<1
Phenanthrene	N.D.	N.D.	<1 Sums
Pyrene	N.D.	N.D.	
Anthracene	N.D.	N.D.	
Fluoranthene	N.D.	N.D.	
Benzo[a]anthracene	N.D.	N.D.	<0.2
Chrysene	N.D.	N.D.	<0.2
Benzo[b]fluoranthene	N.D.	N.D.	<0.2
Benzo[k]fluoranthene	N.D.	N.D.	<0.2
Benzo[j]fluoranthene	N.D.	N.D.	<0.2
Benzo[a]pyrene	N.D.	N.D.	<0.2
Benzo[e]pyrene	N.D.	N.D.	<0.2
Indenol[1,2,3-cd]pyrene	N.D.	N.D.	<0.2
Dibenz[a,h]anthracene	N.D.	N.D.	<0.2
Benzo[g,h,i]perylene	N.D.	N.D.	<0.2
15 PAHs SUMs	N.D.	N.D.	<1
Conclusion	**PASS**	**PASS**	**---**

Note: - mg/kg = Milligram per kilogram
-N.D. = not detected

1. 9 Visible Color Migration

The simulated solution used	Test condition	Maximum Limit	Test Result
			1
3 % acetic acid	2 hours at 70℃	No color migration	No color migration was observed
20 % ethanol	2 hours at 70℃	No color migration	No color migration was observed
95 % ethanol	2 hours at 60℃	No color migration	No color migration was observed
Isooctane	0.5 hours at 40℃	No color migration	No color migration was observed
Conclusion	--	--	**PASS**

The simulated solution used	Test condition	Maximum Limit	Test Result
			2
3 % acetic acid	2 hours at 70℃	No color migration	No color migration was observed
20 % ethanol	2 hours at 70℃	No color migration	No color migration was observed
95 % ethanol	2 hours at 60℃	No color migration	No color migration was observed
Isooctane	0.5 hours at 40℃	No color migration	No color migration was observed
Conclusion	--	--	**PASS**

Note: -N.D. =Not Detected
- mg/kg = Milligram per kilogram
- % = Percentage by weight
- ℃ = Centigrade
- h = hour
- <=less than

1.10 Special Migration of Melamine monomer

Test Method: Regulation (EU)10/2011 and its amendments Regulation (EU) No.1282/2011, With reference to EN13130 -1:2004

Test Item	Test condition	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		2				
		1st	2nd	3rd		
Special Migration of Melamine monomer	3 % acetic acid, 2 h at 70℃	N.D.	N.D.	N.D.	1	2.5

Note: 1. mg/kg=ppm

2. MDL=Method Detection Limit

3. N.D.=Not Detection(<MDL)

1.11 Specific migration of formaldehyde

Test Method: Regulation (EU)10/2011 and its amendments Regulation (EU) No.1282/2011, With reference to EN13130 -23:2004

Test Item	Test condition	Test Result(mg/kg)			MDL (mg/kg)	Limit (mg/kg)
		2				
		1st	2nd	3rd		
Specific migration of formaldehyde	3 % acetic acid, 2 h at 70℃	17.9	12.6	4.21	1	15

Note: 1. mg/kg=ppm

2. MDL=Method Detection Limit

3. N.D.=Not Detection(<MDL)

2. For Material: Silicone

2.1 Sensory test-taste and odour to the integrate product

Test Method: reference to DIN10955:2024-01;

Test condition: Odour test:70℃,2 hours;

Taste test: sunflower oil ,70℃,2 hours.

Test Item(s)	Test Result	Maximum Permissible Limit
	3	
Sensorial examination odour(Point scale)	0	2.5
Sensorial examination taste(Point scale)	0	2.5

Note: Odour/Taste Grade

0= No perceptible difference

1= Just perceivable difference(still difficult to define)

2= Slight difference

3= Marked difference

4= Strong difference

2.2 Overall Migration

Test Method: Regulation AP (2004)5, With reference to EN 13130-1:2004, EN 1186-1:2002, EN 1186-2:2022, EN1186-3:2022

Stimulant used	Test condition	Test Result (mg/dm^2)			MDL (mg/dm^2)	Limit (mg/dm^2)
		3				
		1st	2nd	3rd		
3 % acetic acid	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
20 % ethanol	2 hours at 70℃	N.D.	N.D.	N.D.	2.0	10
95 % ethanol	2 hours at 60℃	N.D.	N.D.	N.D.	2.0	10
Isooctane	0.5 hours at 40℃	N.D.	N.D.	N.D.	2.0	10

2.3 Bisphenol A (BPA)content

Test Method: Regulation AP (2004)5 and its amendments Regulation(EU) 2024/3190,
With reference to CEN/TS 13130-13:2005, analysis was perfommed byLC-MS/MS

Test Item	Unit	MDL	Limit	Test Result
				3
Bisphenol A (BPA) content	ug/kg	1	1	N.D.

Note: 1. ug/kg=Micrograms per kilogram
2. MDL=Method Detection Limit
3. N.D.=Not Detection(<MDL)

2.4 Specific migration of Bisphenol A(BPA)

Test Method: Regulation AP (2004)5 and its amendments Regulation (EU) 2024/3190,
With reference to EN 13130-1:2004,EN 1186-1:2002,EN 1186-3:2022, EN1186-14:2002
Test Condition: 3% Acetic acid, 2 hours at 70°C

Test Item(s)	Unit	MDL	Limit	Test Result		
				3		
				1st	2nd	3rd
Bisphenol A(BPA)	ug/kg	1	1	N.D.	N.D.	N.D.

Note:
1.ug/kg=Micrograms per kilogram
2.N.D.= Not Detected (<MDL)
3.MDL=Method Detection Limit
4.The requirement in accordance with the Commission Regulation (EU)2024/3190.

2.5 Volatile organic matter (VOM)

Test Method: With reference to 60. Mitteilung ber dieUntersuchung von Kunststoffen, Bundesgesundheitsbl 45 (2002) 462 and LFGB § 64 BVL B 80.30.1(EG)

Test Item(s)	Unit	MDL	Limit	Test Result
				3
Volatile organic matter (VOM), 200℃, 4h	% (w/w)	0.1	0.5	N.D.

Notes: %(w/w) =percentage of weight by weight

2.6 Peroxide value

Test Method: With reference to European pharmacopoeia, 2005 Appendix X F. Peroxide Value method A.

Test Item(s)	Limit	Test Result
		3
Peroxide Value	Absent	Absent

2.7 Organotin Content

Test Method: With reference to EN ISO 1679:2012

Test Instrument: Gas Chromatography-Mass Spectrometer (GC-MS)

Test Item(s)	CAS No.	Unit	MDL	Maximum Permissible Limit	Test Result(s)		
					3		
					1st	2nd	3rd
Methyl tin (MeT)	993-16-8	mg/kg	0.02	Absent	N.D.	N.D.	N.D.
Dibutyl tin (DBT)	683-18-1	mg/kg	0.02	Absent	N.D.	N.D.	N.D.
Dioctyl tin (DOT)	3542-36-7	mg/kg	0.02	Absent	N.D.	N.D.	N.D.
Triphenyl tin (TPhT)	639-58-7	mg/kg	0.02	Absent	N.D.	N.D.	N.D.

3.For Material: Stainless

3.1 Sensorial examination odour and taste test

Test Method: Sensorial examination odour and taste test with reference to DIN10955:2024-01;

Test condition: Odour test:70℃,2 hours;

Taste test: sunflower oil ,70℃,2 hours.

Test Item (s)	Test Result	Limit
	4	
Sensorial examination odour (Point scale)	0	2.5
Sensorial examination taste (Point scale)	0	2.5

Note: Odour/Taste Grade

0= No perceptible difference

1= Just perceivable difference(still difficult to define)

2= Slight difference

3= Marked difference

4= Strong difference

5. This part of the test is holistic test

3.2 Migration of Heavy Metals

Test Method: With reference to CM/Res(2020)9 &ISO 11885:2007&ISO 17294-2:2023

Test condition: 0.5% (w/v)citric acid in aqueous solution,100℃, 0.5 hours

Test Instrument: Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES), Inductively Coupled Plasma Mass Spectrometer (ICP-MS)

Test Item(s)	Unit	MDL	Result		Requirement	
			4			
			1st+2nd	3rd	7*SRL	SRL
Aluminium (Al)	mg/kg	0.1	N.D.	N.D.	35	5
Antimony (Sb)	mg/kg	0.001	N.D.	N.D.	0.28	0.04
Chromium (Cr)	mg/kg	0.1	N.D.	N.D.	7	1
Cobalt (Co)	mg/kg	0.001	N.D.	N.D.	0.14	0.02
Copper (Cu)	mg/kg	0.1	N.D.	N.D.	28	4
Iron (Fe)	mg/kg	1	N.D.	N.D.	280	40

Test Report

Test Item(s)	Unit	MDL	Result		Requirement	
			4			
			1st+2nd	3rd	7*SRL	SRL
Manganese (Mn)	mg/kg	0.1	N.D.	N.D.	3.85	0.55
Molybdenum (Mo)	mg/kg	0.01	N.D.	N.D.	0.84	0.12
Nickel (Ni)	mg/kg	0.01	N.D.	N.D.	0.98	0.14
Silver (Ag)	mg/kg	0.001	N.D.	N.D.	0.56	0.08
Tin (Sn)	mg/kg	1	N.D.	N.D.	700	100
Vanadium (V)	mg/kg	0.001	N.D.	N.D.	0.07	0.01
Zinc (Zn)	mg/kg	0.1	N.D.	N.D.	35	5
Arsenic (As)	mg/kg	0.001	N.D.	N.D.	0.014	0.002
Barium (Ba)	mg/kg	0.1	N.D.	N.D.	8.4	1.2
Beryllium (Be)	mg/kg	0.001	N.D.	N.D.	0.07	0.01
Cadmium (Cd)	mg/kg	0.001	N.D.	N.D.	0.035	0.005
Lead (Pb)	mg/kg	0.001	N.D.	N.D.	0.07	0.01
Lithium (Li)	mg/kg	0.001	N.D.	N.D.	0.336	0.048
Mercury (Hg)	mg/kg	0.001	N.D.	N.D.	0.021	0.003
Thallium (Tl)	mg/kg	0.0001	N.D.	N.D.	0.007	0.001
Zirconium(Zr)	mg/kg	0.1	N.D.	N.D.	14	2
Magnesium (Mg)	mg/kg	0.001	N.D.	N.D.	–	–
Titanium (Ti)	mg/kg	0.001	N.D.	N.D.	–	–

Note: 1. mg/kg=milligram per kilogram

2. N.D.= Not Detected(<MDL)

3. MDL = Method Detection Limit

4.SRL = Specific Release Limit

4.For Material: Glass

4.1 Sensory test-taste and odour to the integrate product

Test Method: Sensorial examination odour and taste test with reference to DIN 10955-2024-01;

Test condition: odour test: 70℃, 2 hours;

Taste test: sunflower oil, 70℃, 2 hours.

Test Item(s)	Test Result	Maximum Permissible Limit
	5	
Sensorial examination odour(Point scale)	0	2.5
Sensorial examination taste(Point scale)	0	2.5

Note: Odour/Taste Grade

0= No perceptible difference

1= Just perceivable difference(still difficult to define)

2= Slight difference

3= Marked difference

4= Strong difference

5. This part of the test is holistic test

4.2 Migration of lead and cadmium-with European Commission Regulation (EC) No 1935/2004 and 84/500/EEC & 2005/31/EC.

Test Method: With reference to EN 1388-1: 1996 and EN 1388-2: 1996.

Test Condition: 4% (v/v)acetic acid in aqueous solution , 22℃, 24hours

Test Instrument: Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

Tested Sample 5 :

Category : 2

Internal Depth (mm) : 198

Surface Area (dm^2) : 3.2

Unit	Leaching Volume (mL)	Test Result (mg/L)	
		Extractable Lead (Pb)	Extractable Cadmium (Cd)
1	750	<0.05	<0.01
2	750	<0.05	<0.01

3	750	<0.05	<0.01
4	750	<0.05	<0.01
Average	-	<0.05	<0.01
Conclusion	-	PASS	PASS

Note:

1.mg/L = milligram per liter = ppm

2.mg/dm^2 = milligram per square centimeter

3.N.D.= Not detected

4.MDL = Method detection limit

5.The limit was quoted from DIN 51032:2017-07.

Limit as Below

Category	Pb	Cd
Category 1: Articles which cannot be filled and articles which can be filled, the internal depth of which, measured from the lowest point to the horizontal plane passing through the upper rim, does not exceed 25 mm	0.8 mg/dm^2	0.07 mg/dm^2
Category 2: All other articles which can be filled	4.0 mg/L	0.3 mg/L
Category 3: Cooking ware; packaging and storage vessels having a capacity of more than three litres.	1.5 mg/L	0.1 mg/L

4.3 Extractable Aluminum, Cobalt and Arsenic in Ceramic, Glass, Enamel Wares and Slate Materials in Contact with Foodstuffs

Test Method: With reference to EN 1388-1: 1996 and EN 1388-2: 1996.

Test Condition: 4% (v/v)acetic acid in aqueous solution , 22℃, 24hours

Test Instrument: Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)

-	Unit	Req.	Test Result (3rd Migrate)				
			5				
Test Sample(s) / Trial(s)	-	-	Trial 1	Trial 2	Trial 3	Trial 4	Average
Parameter	-	-	-	-	-	-	-
Internal Volume	mL	-	750	750	750	750	-
Volume of Test Solution	mL	-	730	730	730	730	-
Aluminum (Al)	mg/kg	1.0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Cobalt (Co)	mg/kg	0.02	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Arsenic (As)	mg/kg	ND	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Conclusion	-	-	PASS				

Note:

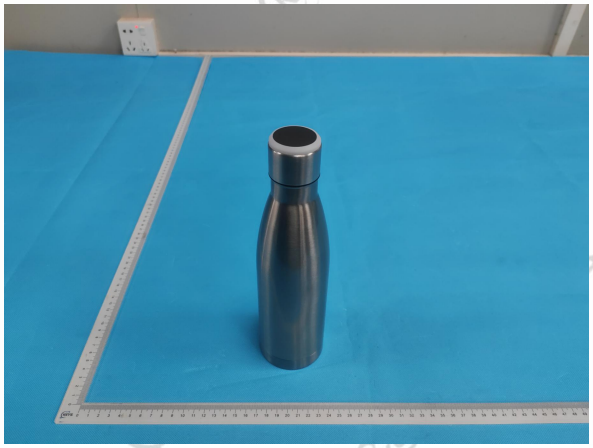
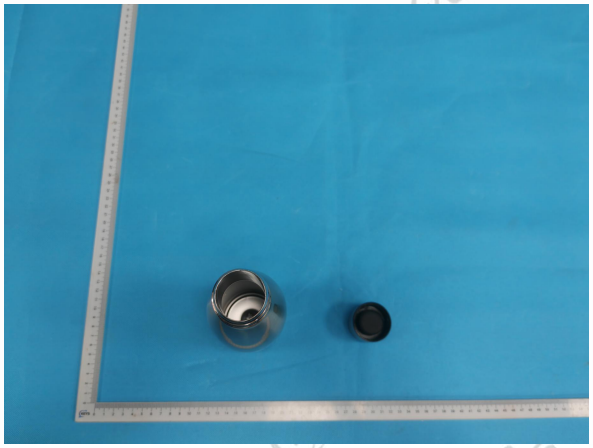
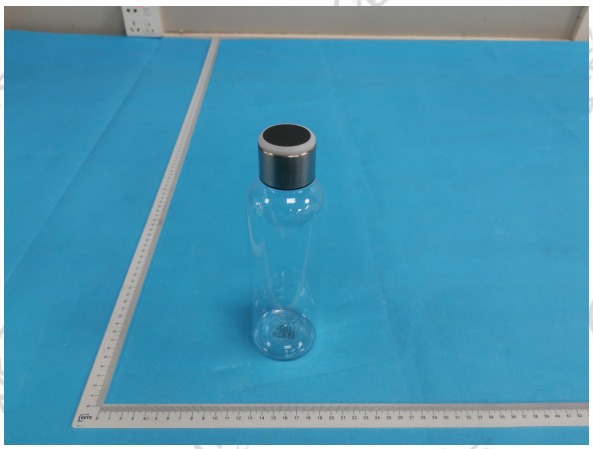
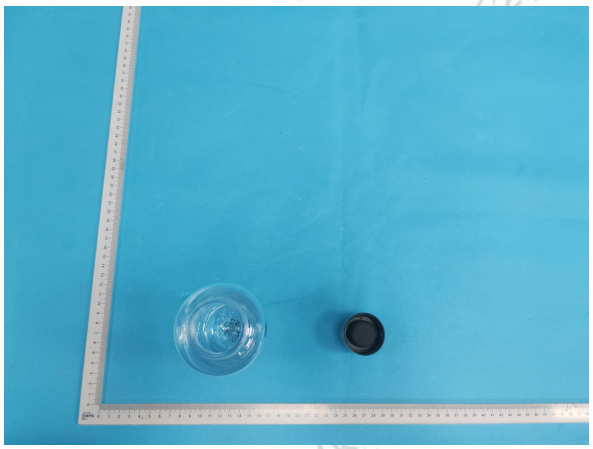
- mg/kg = milligram(s) per kilogram
- N.D. =Not Detected (<MDL)
- MDL=Method Detection Limit

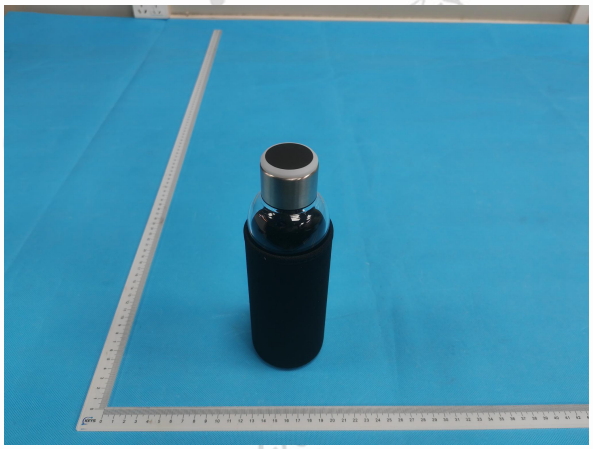
Test Report

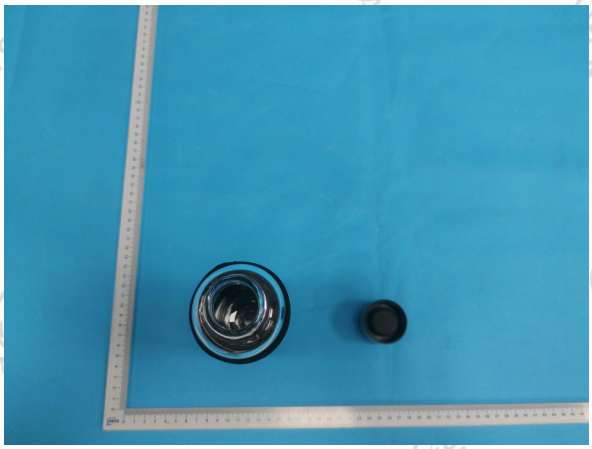
Sample Description:

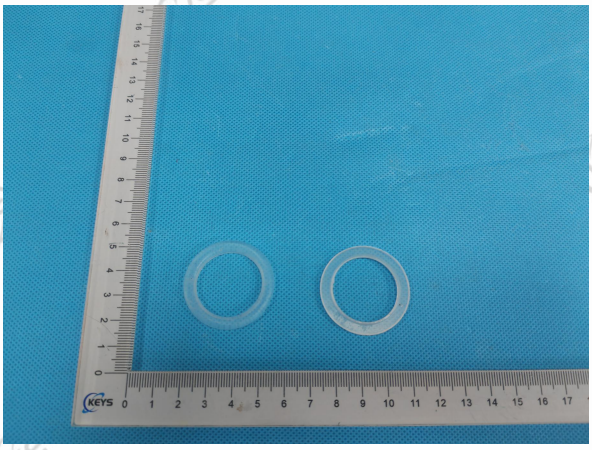
No.	Description	Material
1	Black plastic	PP
2	Transparent plastic	Tritan
3	Transparent silicone gel	Silicone
4	Silver metal	Stainless
5	Transparent glass	Glass

Sample Photo:







*** End of Report ***