中国认可
国际互认
检测
TESTING
CNAS L6478

TEST REPORT

Reference No.	:	WTF19F10069340C
Applicant	:	Mid Ocean Brands B.V.
Address	:	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer	:	115253
Sample Name	:	800ml Tritan bottle
Model No.	:	MO9850
Test Requested	:	In accordance with Regulation (EU) No 10/2011 with amendments, Council of Europe Resolution AP(2004)5, Council of Europe Resolution CM/Res(2013)9 and Regulation (EC) No 1935/2004.
Test Conclusion	:	**Pass** (Please refer to next pages for details)
Date of Receipt sample	:	2019-10-09
Date of Test	:	2019-10-09 to 2019-10-16
Date of Issue	:	2019-10-16
Test Result	:	Please refer to next page (s)
Remark	:	Selected test(s) as requested by applicant

Remarks:

The results shown in this test report refer only to the sample(s) tested; this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

If the report is not stamped with the accreditation recognized seal, it will only be used for scientific research, education, and internal quality control activities, and is not used for the purpose of issuing supporting data to the society.

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Test Results:

1. Overall Migration Test

Food Simulant	Test Condition	Result (mg/kg)	MDL(mg/kg)	Limit (mg/kg)
		No.1		
3% Acetic Acid	40°C for 6 hours	ND	20	60
10% Ethanol	40°C for 6 hours	ND	20	60
50% Ethanol	40°C for 6 hours	ND	20	60

Note:

1. Test method: With reference to BS EN 1186-1: 2002, BS EN 1186-3: 2002, BS EN 1186-9: 2002 and BS EN1186-14: 2002.
2. "mg/kg" = milligram per kilogram of foodstuff in contact with
3. "°C" = Celsius degree
4. MDL= Method Detection Limit
5. ND = Not Detected, less than MDL
6. The specification was quoted from Council of Europe Resolution AP (2004)5.

Food Simulant	Test Condition	Result (mg/dm^2)	MDL (mg/dm^2)	Limit (mg/dm^2)
		No.3		
3% Acetic Acid	40°C for 6 hours	ND	3	10
10% Ethanol	40°C for 6 hours	ND	3	10
50% Ethanol	40°C for 6 hours	ND	3	10

Note:

1. Test method: With reference to EN 1186-1: 2002, EN 1186-3: 2002, EN 1186-9: 2002 and EN1186-14: 2002.
2. "mg/dm^2" = milligram per square decimetre
3. "°C" = Celsius degree
4. MDL= Method Detection Limit
5. ND = Not Detected, less than MDL
6. The specification was quoted from (EU) No 10/2011 and its amendment (EU) 2016/1416, (EU)2017/752 and (EU)2019/37.
7. Mid Ocean: The ratio of volume to surface area was: 0.0016L/0.01dm^2

2. Bisphenol A Content*

Test Item	Result (mg/kg)		MDL (mg/kg)	Limit (mg/kg)
	No.1	No.3		
Bisphenol A	ND	ND	0.1	Not Detected (<0.1mg/kg)

Note:

1. Test Method: With reference to EPA3550C:2007, analysis was performed by LC-MS-MS.
2. “mg/kg” = milligram per kilogram
3. MDL= Method Detection Limit
4. ND = Not Detected, less than MDL
5. The specification was quoted from Law No 2012-1442.
6. The testing item marked with ‘*’ does not been accredited by CNAS.

3. Specific Migration of Bisphenol A

Test Item	Result (mg/kg)		MDL (mg/kg)	Limit (mg/kg)
	No.1	No.3		
Migration of Bisphenol A	ND	ND	0.01	0.05

Note:

1. Test Method: With reference to CEN/TS 13130-13-2005, sample preparation in 3% acetic acid at 40°C for 6 hours, analysis was performed by HPLC.
2. “mg/kg” = milligram per kilogram of foodstuff in contact with
3. MDL= Method Detection Limit
4. ND = Not Detected, less than MDL
5. The specification was quoted from regulation (EU) No 10/2011 and its amendments (EU) 2018/213.
6. The ratio of volume to surface area was: 0.0016L/0.01dm^2

4. Council of Europe Resolution CM/Res(2013)9-Specific Migration of Heavy Metal

Test Items	1st+2nd Migration (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	No.2		
Aluminium (Al)	ND	0.2	35
Antimony (Sb)	ND	0.02	0.28
Chromium (Cr)	ND	0.04	1.75
Cobalt (Co)	ND	0.02	0.14
Copper (Cu)	ND	0.2	28
Iron (Fe)	1.8	0.4	280
Manganese (Mn)	ND	0.2	12.6
Molybdenum (Mo)	ND	0.02	0.84
Nickel (Ni)	0.03	0.02	0.98
Silver (Ag)	ND	0.02	0.56
Tin (Sn)	ND	0.2	700
Vanadium (V)	ND	0.01	0.07
Zinc (Zn)	ND	0.2	35
Arsenic (As)	ND	0.002	0.014
Barium (Ba)	ND	0.2	8.4
Beryllium (Be)	ND	0.01	0.07
Cadmium (Cd)	ND	0.002	0.035
Lead (Pb)	ND	0.01	0.07
Lithium (Li)	ND	0.01	0.336
Mercury (Hg)	ND	0.002	0.021
Thallium (Tl)	ND	0.0002	0.0007
Magnesium (Mg)	ND	0.2	--
Titanium (Ti)	ND	0.02	--

Test Items	3rd Migration (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	No.2		
Aluminium (Al)	ND	0.1	5
Antimony (Sb)	ND	0.01	0.04
Chromium (Cr)	ND	0.02	0.25
Cobalt (Co)	ND	0.01	0.02
Copper (Cu)	ND	0.1	4
Iron (Fe)	ND	0.2	40
Manganese (Mn)	ND	0.1	1.8
Molybdenum (Mo)	ND	0.01	0.12
Nickel (Ni)	ND	0.01	0.14
Silver (Ag)	ND	0.01	0.08
Tin (Sn)	ND	0.1	100
Vanadium (V)	ND	0.005	0.01
Zinc (Zn)	ND	0.1	5
Arsenic (As)	ND	0.001	0.002
Barium (Ba)	ND	0.1	1.2
Beryllium (Be)	ND	0.005	0.01
Cadmium (Cd)	ND	0.001	0.005
Lead (Pb)	ND	0.005	0.01
Lithium (Li)	ND	0.005	0.048
Mercury (Hg)	ND	0.001	0.003
Thallium (Tl)	ND	0.0001	0.0001
Magnesium (Mg)	ND	0.1	--
Titanium (Ti)	ND	0.01	--

Note:

1. Test Method: With reference to BS EN 13130-1: 2004, analysis was performed by ICP-OES and ICP-MS.
2. Test Condition and simulant: Sample(s) were migrated with 5g/L citric acid at 40°C for 6 hours.
3. “mg/kg” = milligram per kilogram of foodstuff in contact with
4. MDL = Method Detection Limit
5. ND = Not Detected, less than MDL
6. “--” = Not regulated
7. The specification was quoted from Technical Guide on Metals and alloys used in food contact materials of Council of Europe Resolution CM/Res(2013)9.

5. Specific Migration of heavy metal (Nickel, Aluminium, Barium, Cobalt, Copper, Iron, Lithium, Manganese, Zinc)

Test Items	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	No.3		
Specific migration of Nickel	ND	0.01	0.02
Specific migration of Aluminium	ND	0.1	1
Specific migration of Barium	ND	0.1	1
Specific migration of Cobalt	ND	0.01	0.05
Specific migration of Copper	ND	0.1	5
Specific migration of Iron	ND	0.1	48
Specific migration of Lithium	ND	0.01	0.6
Specific migration of Manganese	ND	0.01	0.6
Specific migration of Zinc	ND	0.1	5

Note:

1. Test Method: With reference to BS EN 13130-1: 2004, sample preparation in 3% acetic acid at 40°C for 6 hours, analysis was performed by ICP-OES.
2. “mg/kg” = milligram per kilogram of foodstuff in contact with
3. MDL= Method Detection Limit
4. ND = Not Detected, less than MDL
5. The specification was quoted from (EU) No 10/2011 and its amendment (EU) 2016/1416 and (EU)2017/752.
6. The ratio of volume to surface area was: 0.0016L/0.01dm^2

6. Specific Migration of Primary Aromatic Amines

Test Item	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	No.3		
Migration of Primary aromatic amines	ND	0.01	Not Detected (<0.01mg/kg)

Note:

1. Test Method: With reference to § 64 LFGB L No. 00.00-6, analysis was performed by UV-visible Spectrometer.
2. Test Condition and simulant: 3% acetic acid at 40°C for 6 hours.
3. “mg/kg” = milligram per kilogram of foodstuff in contact with
4. MDL= Method Detection Limit
5. ND = Not Detected, less than MDL
6. The specification was quoted from (EU) No 10/2011 and its amendment (EU) 2016/1416 and (EU)2017/752.
7. The ratio of volume to surface area was: 0.0016L/0.01dm^2

7. Specific Migration of Antimony*

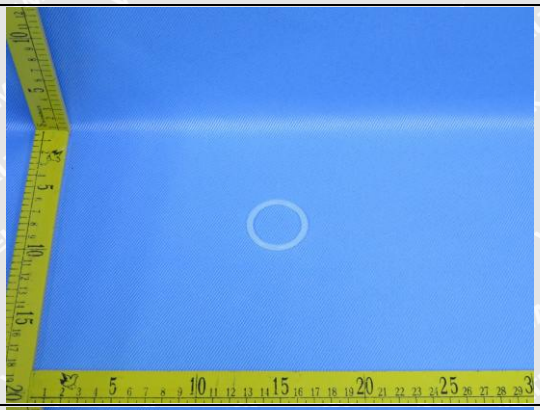
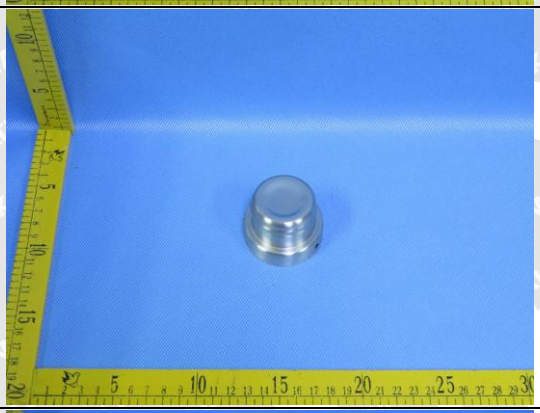
Test Items	Result (mg/kg)	MDL (mg/kg)	Limit (mg/kg)
	No.3		
Specific migration of Antimony	ND	0.01	0.04

Note:

1. Test Method: With reference to EN 13130-1: 2004, sample preparation in 3% acetic acid at 40°C for 6 hours, analysis was performed by ICP-OES.
2. “mg/kg” = milligram per kilogram of foodstuff in contact with
3. MDL= Method Detection Limit
4. ND = Not Detected, less than MDL
5. The specification was quoted from (EU) No 10/2011.
6. The ratio of volume to surface area was: 0.0016L/0.01dm^2
7. The testing item marked with ‘*’ does not been accredited by CNAS.

Sample Photo：

Photograph of parts tested:

No.	Photo of testing part	Parts Description	Client Claimed Material
1		Translucent silicone rubber	Silicone rubber
2		Silvery metal	Stainless steel
3		Red plastic	Tritan

====== End of Report ======