

## TEST REPORT

Test Report # 20A-008331(A1) Date of Report Issue: December 1, 2020  
Date of Sample Received: November 24, 2020 Pages: Page 1 of 16

### CLIENT INFORMATION:

Company: Mid Ocean Brands B.V.  
Address: 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong



### SAMPLE INFORMATION:

Product Name: Glass drinking bottle with stainless steel lid  
Style No.: - Labeled Age Grade: -  
Order No.(PO No.): - Client Request Age Grade: -  
Country of Origin: - Recommended Age Grade: -  
Country of Distribution: Europe Tested Age Grade: -  
Model No.: MO6210  
Composition/Main Material: Glass, stainless steel, PP  
Buyer Name: Mid Ocean Brands B.V.  
Supplier Name: 100396  
Testing Period: 11/24/2020-12/01/2020

### OVERALL RESULT:

**PASS**

Please refer to the following pages for test result summary and appropriate notes.

QIMA (HANGZHOU) TESTING CO., LTD.

*Contrary Kong*

Contrary Kong  
Chemical Laboratory Manager



QIMA (HANGZHOU) TESTING CO., LTD. ♦ 4-5/F A2 BLDG NO. 1213 HUOJU SOUTH ROAD PUYAN STREET BINJIANG DISTRICT HANGZHOU CHINA

♦ Email: Labtesting@qima.com ♦ Tel: (86) 571 8999 7158.

Test(s) marked with 'φ' was subcontracted to external laboratory.

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and method /regulation section(s) tested as described herein.

If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA decision rule.

This test report may not be reproduced in whole or in part, without written approval of QIMA (Hangzhou) Testing Co., Ltd.

**TEST RESULTS SUMMARY:**

At the request of the client, the following tests were conducted:

CONCLUSION	TEST(S) CONDUCTED
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials
PASS	Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)
PASS	Client’s requirement, Bisphenol A content
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 -Sensorial examination odour and taste test
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Overall migration
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Specific migration of heavy metals
PASS	Regulation (EC) No 1935/2004, (EU) No 10/2011- Phthalates content
PASS	European Resolution ResAP(2004)5 on Silicones Used for Food Contact Applications - Overall Migration
PASS	BS 6748:1986+A1:2011, Release of Lead and Cadmium from Ceramic ware, glassware, glass ceramic ware and vitreous enamel ware
PASS	Commission Regulation (EU) No. 10/2011 with its amendments, Specific Migration - Primary Aromatic Amines <sup>φ</sup>



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 63 Lead in Substrate Materials**

Test Method: CPSC-CH-E1001-08.3 (Metal) and/or CPSC-CH-E1002-08.3 (Non-Metal)

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	2	4	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Lead (Pb)	ND	ND	ND	---	---	500
<b>Conclusion</b>	PASS	PASS	PASS	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15 mg/kg)



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII, Item 23 Cadmium in Substrate Materials**

Test Method: ASTM F963-17 Clause 8.3.1

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	1	4	---	---	---	Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Total Cadmium (Cd)	ND	ND	---	---	---	<b>100</b>
<b>Conclusion</b>	PASS	PASS	---	---	---	

*Note:*

mg/kg = Milligrams per kilogram

LT = Less than

ND = Not detected (Reporting Limit = 15mg/kg)



**DETAILED RESULTS:**

**Regulation (EC) No. 1907/2006 REACH Annex XVII as amended, Item 51 and 52 Phthalates – Mouthable (DBP, BBP, DEHP, DIBP, DnOP, DINP, DIDP)**

Test Method: CPSC-CH-C1001-09.4  
 Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No.		1	4	---	Limit (mg/kg)
Test Item	CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Dibutyl phthalate (DBP)	84-74-2	ND	ND	---	<b>1000</b>
Benzyl butyl phthalate (BBP)	85-68-7	ND	ND	---	<b>1000</b>
Di-(2-ethylhexyl) phthalate (DEHP)	117-81-7	ND	ND	---	<b>1000</b>
Diisobutyl phthalate (DIBP)	84-69-5	ND	ND	---	<b>1000</b>
Sum of DBP, BBP, DEHP, DIBP		ND	ND	---	<b>1000</b>
Di-n-octyl phthalate (DnOP)	117-84-0	ND	ND	---	
Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	ND	ND	---	
Diisodecyl phthalate (DIDP)	26761-40-0 68515-49-1	ND	ND	---	
Sum of DnOP, DINP, DIDP		ND	ND	---	<b>1000</b>
<b>Conclusion</b>		PASS	PASS	---	

**Note:**  
 mg/kg (Milligrams per kilogram) = ppm (Parts per million) = 0.0001 % m/m (Percent by mass)  
 LT = Less than  
 ND = Not detected (Reporting Limit = 150 mg/kg)



**DETAILED RESULTS:**

**Client's requirement, Bisphenol A content**

Test Method: In-House Method  
 Analytical Method: Gas Chromatography-Mass Spectrometer  
 Liquid Chromatography-Mass Spectrometer (LC-MS)

Specimen No.	1	---	---	---	Client's limit (mg/kg)
Test Item CAS No.	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Bisphenol A (BPA) 80-05-7	ND	---	---	---	<b>Not Detected</b>
<b>Conclusion</b>	PASS	---	---	---	

*Note:*  
 mg/kg=milligram per kilogram  
 ND=Not Detected(Reporting limit = 1mg/kg)



**DETAILED RESULTS:**

**Regulation (EC) No 1935/2004, (EU) No 10/2011 -Sensorial examination odour and taste test**

Test Method: DIN 10955: 2004  
 Test condition: 70°C, 2 hours  
 Test media: Distilled water  
 No. of panelist: 6

Specimen No.	6	---	---	---	Max.Permissible Limit
Test Item	Result	Result	Result	Result	
Sensorial examination odour (Point scale)	0	---	---	---	2.5
Sensorial examination taste (Point scale)	0	---	---	---	2.5
<b>Conclusion</b>	PASS	---	---	---	

Scale evaluation:

- 0: No perceptible odour
- 1: Odour just perceptible (still difficult to define)
- 2: Moderate odour
- 3: Moderately strong odour
- 4: Strong odour



**DETAILED RESULTS:**

**Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Overall migration**

Test method: EN1186-1:2002: for selection of conditions and test methods  
 EN1186-9:2002: aqueous food simulants by article filling

Specimen No.		1	---	---	Maximum permissible Limit (mg/dm <sup>2</sup> )
Simulant used	Test condition	Result (mg/dm <sup>2</sup> )	Result (mg/dm <sup>2</sup> )	Result (mg/dm <sup>2</sup> )	
10% ethanol	2 hours at 70°C	ND	---	---	10
<b>Conclusion</b>		PASS	---	---	

*Note:*  
 mg/dm<sup>2</sup> = milligram per square decimeter  
 ND = Not Detected (Reporting limit = 3 mg/dm<sup>2</sup>)





**DETAILED RESULTS:**

**Regulation (EC) No 1935/2004, (EU) No 10/2011 and its amendment (EU) 2016/1416- Specific migration of heavy metals**

Test method: Sample preparation in 3% acetic acid at 70°C for 2hours ,ISO 17294-2:2016

Analytical Method: Inductively Coupled Plasma-Mass Spectrometry

Specimen No.		1	---	---	---	Maximum permissible Limit (mg/kg)
Test Item	Detection limit	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)	
Barium	0.1	ND	---	---	---	<b>1</b>
Cobalt	0.05	ND	---	---	---	<b>0.05</b>
Copper	0.5	ND	---	---	---	<b>5</b>
Iron	1.0	ND	---	---	---	<b>48</b>
Lithium	0.1	ND	---	---	---	<b>0.6</b>
Manganese	0.1	ND	---	---	---	<b>0.6</b>
Zinc	1.0	ND	---	---	---	<b>5</b>
Aluminum	0.1	ND	---	---	---	<b>1</b>
Nickel	0.01	ND	---	---	---	<b>0.02</b>
<b>Conclusion</b>		PASS	---	---	---	

*Note:*

mg/kg=milligram per kilogram

ND= Not Detected



**DETAILED RESULTS:**

**Regulation (EC) No 1935/2004, (EU) No 10/2011- Phthalates content**

Test Method: CPSC-CH-C1001-09.4

Analytical Method: Gas Chromatography with Mass Spectrometry

Specimen No	1	---	---	---	---	Max. Permissible Limit (% m/m)
Test Item CAS No.	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	Result (% m/m)	
DBP 84-74-2	ND	---	---	---	---	<b>0.05</b>
BBP 85-68-7	ND	---	---	---	---	<b>0.1</b>
DEHP 117-81-7	ND	---	---	---	---	<b>0.1</b>
DINP 68515-48-0	ND	---	---	---	---	<b>0.1</b>
DIDP 68515-49-1	ND	---	---	---	---	<b>0.1</b>
DEHA 103-23-1	ND	---	---	---	---	
DAP 131-17-9	ND	---	---	---	---	
<b>Conclusion</b>	PASS	---	---	---	---	

*Note:*

DBP= Dibutyl phthalate, BBP= Butyl benzyl phthalate, DEHP=Di-2-ethylhexyl phthalate, DINP= Di-iso-nonyl phthalate, DIDP= Di-iso-decyl phthalate, DEHA= Bis-(2-ethylhexyl) adipate, DAP= Phthalic acid, diallyl ester  
 % m/m = Percent by mass

LT = Less than

ND = Not detected (Reporting Limit = 0.015 % m/m)



**DETAILED RESULTS:**

**European Resolution ResAP(2004)5 on Silicones Used for Food Contact Applications - Overall Migration**

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, EN 1186-3:2002 (Total Immersion Method)

Specimen No.			4	---	---	Limit (mg/dm <sup>2</sup> )
Test Simulant	Test Condition		Result (mg/dm <sup>2</sup> )	Result (mg/dm <sup>2</sup> )	Result (mg/dm <sup>2</sup> )	
	Temp.	Duration				
10% Ethanol	70 °C	2hours	ND	---	---	<b>10</b>
<b>Conclusion</b>			PASS	---	---	

*Note:*

Temp. = Temperature

°C = Degree Celsius

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

LT = Less than

ND = Not detected (Reporting Limit = 3 mg/dm<sup>2</sup>)

Unless specified, 1<sup>st</sup> migration is reported.



**DETAILED RESULTS:**

**BS 6748:1986+A1:2011, Release of Lead and Cadmium from Ceramic ware, glassware, glass ceramic ware and vitreous enamel ware**

Test Method: BS 6748:1986+A1:2011

Analytical Method: Inductively Coupled Plasma-Optical Emission Spectrometry

Specimen No.	5-A	5-B	5-C	5-D	Average (mg/L)	Limit (mg/L)
Test Item	Result (mg/L)	Result (mg/L)	Result (mg/L)	Result (mg/L)		
Volume of Acid Used, mL	520	520	520	520		
Leachable Lead (Pb)	ND	ND	ND	ND	ND	<b>4.0</b>
Leachable Cadmium (Cd)	ND	ND	ND	ND	ND	<b>0.3</b>
<b>Conclusion</b>	PASS	PASS	PASS	PASS	PASS	

*Note:*

mL = Millilitres

mg/L = Milligrams per litre

NA = Not applicable

LT = Less than

ND = Not detected (Reporting Limit: Pb = 0.2 mg/L; Cd = 0.02 mg/L)

	Category	Leachable Pb	Leachable Cd
	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 25mm	0.8 mg/dm <sup>2</sup>	0.07 mg/dm <sup>2</sup>
X	2: All other articles which can be filled	4.0 mg/L	0.3 mg/L
	3: Cooking ware; packaging and storage vessels having a capacity of more than three litres	1.5 mg/L	0.1 mg/L



**DETAILED RESULTS:**

**Commission Regulation (EU) No. 10/2011 with its amendments, Specific Migration - Primary Aromatic Amines<sup>φ</sup>**

Test Method: Regulation (EU) No. 10/2011 with its amendments ANNEX II and ANNEX V, EN 13130-1:2004 (Total Immersion Method)

Analytical Method: Liquid Chromatography with Tandem Mass Spectrometry (LC-MSMS)

Test Condition:

Simulant: 3% Acetic acid      Temperature: 70°C      Duration: 2h

Specimen No.	3	---	---	RL (mg/kg)	Migratable Limit (mg/kg)
Test Item	Result (mg/kg)	Result (mg/kg)	Result (mg/kg)		
2,4,5-Trimethylaniline(2,4,5-TMA)	ND	---	---	0.002	
2,4-Dimethylaniline(2,4-DMA)	ND	---	---	0.002	
2,4-Toluenediamine(2,4-TDA)	ND	---	---	0.002	
2,6-Dimethylaniline(2,6-DMA)	ND	---	---	0.002	
2,6-Toluenediamine(2,6-TDA)	ND	---	---	0.002	
2-Methoxy-5-Methylaniline(2-M-5-MA)	ND	---	---	0.002	
3,3-Dimethylbenzidine(3,3-DMB)	ND	---	---	0.002	
4,4-Diaminodiphenylether(4,4-DPE)	ND	---	---	0.002	
4,4'-Methylenedianiline(4,4-MDA)	ND	---	---	0.002	
4,4-Methylenedi-o-toluidine(4,4-MDoT)	ND	---	---	0.002	
4-Aminobiphenyl(4-ABP)	ND	---	---	0.002	
4-Chloro-Aniline(4-CA)	ND	---	---	0.002	
4-Chloro-o-Toluidine(4-CoT)	ND	---	---	0.002	
Aniline(ANL)	ND	---	---	0.002	
4-Methoxy-mphenylenediamine(4-M-mPDA)	ND	---	---	0.002	
Benzidine(BNZ)	ND	---	---	0.002	
M-Phenylenediamine(m-PDA)	ND	---	---	0.002	
O-Anisidine(o-ASD)	ND	---	---	0.002	
O-Toluidine(O-T)	ND	---	---	0.002	
P-Phenylenediamine(p-PDA)	ND	---	---	0.002	
1,5-Diaminenaphthalene(1,5-DAN)	ND	---	---	0.002	



QIMA (HANGZHOU) TESTING CO., LTD. ♦ 4-5/F A2 BLDG NO. 1213 HUOJU SOUTH ROAD PUYAN STREET BINJIANG DISTRICT HANGZHOU CHINA

♦ Email: Labtesting@qima.com ♦ Tel: (86) 571 8999 7158.

Test(s) marked with 'φ' was subcontracted to external laboratory.

The test result(s) and conclusion(s) in this report relate only to the sample(s) as received and method /regulation section(s) tested as described herein.

If it is not further specified in the report, the decision rule for stating conformity is based on the QIMA decision rule.

This test report may not be reproduced in whole or in part, without written approval of QIMA (Hangzhou) Testing Co., Ltd.

Specific migration of primary aromatic amines (total)	ND	---	---	--	<b>0.01</b>
<b>Conclusion</b>	PASS	---	---		

*Note:*

°C = Degree Celsius

mg/kg = Milligrams per kilogram foodstuff

LT = Less than

ND = Not detected. Result value is less than reporting limit (RL).

1<sup>st</sup> migration is reported.

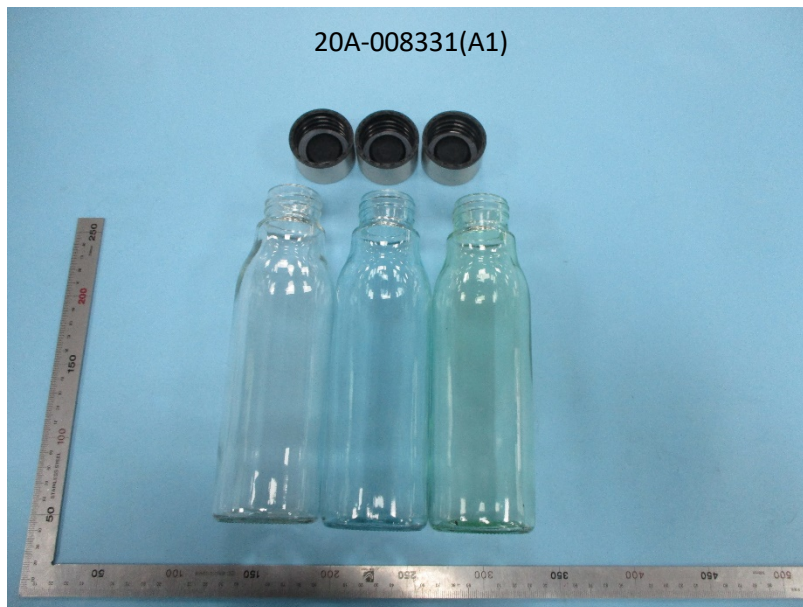


**SPECIMEN DESCRIPTION:**

Specimen No.	Specimen Description	Location
1	Black plastic	Lid(transparent style)
2	Silvery metal	Lid(transparent style)
3	Black plastic	Lid(blue style)
4	Translucent soft plastic	Seal ring(transparent style)
5	Transparent glass	Main body(transparent style)
6	Glass drinking bottle with stainless steel lid	Finished product(transparent style)



**SAMPLE PHOTO:**



-End Report-

