

# Test Report

Report No.: AGC03507200510-001

Date: Jun.11, 2020

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Applicant: MID OCEAN BRANDS B.V  
Address: 7/F, Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong  
Test site: 6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

## Report on the submitted samples said to be:

Sample Name : RPET bottle with SS lid  
Model : MO9960  
Material : See Sample Description  
Country of origin : CHINA  
Country of destination : EUROPE  
Vendor Code : 107978  
Sample Receiving Date : May 26, 2020  
Testing Period : May 26, 2020 to Jun.11, 2020

Test Requested : Please refer to next page(s).

Test Method : Please refer to next page(s).

Test Result : Please refer to next page(s).

Approved by

Liangdan, Jessie Liang

Technical Director



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## Test Requested:

## Conclusion

1. As specified by client, to determine the Lead compounds content in the submitted sample(s) with reference to entry 63, Annex XVII of the REACH Regulation (EC) No 1907/2006.

Pass

2. As specified by client, to determine the Cadmium(Cd)content in the Submitted sample(s) with reference to entry 23, Annex XVII of the REACH Regulation (EC) No 1907/2006.

Pass

3. As specified by client, to determine the phthalates content in the submitted sample(s) with reference to entry 51 and its amendment (EU)2018/2005& entry 52, Annex XVII of the REACH Regulation (EC) No 1907/2006 and Amendment Regulation (EC) No 552/2009.

Pass

### Part 1: RPET material

4. As specified by client, to test sample with reference to Regulation 1935/2004/EC, Council of Europe Resolution EU (No) 10/2011& (EU)2016/1416&(EU)2017/752 and (EU) 2018/213 for:

- Overall Migration(3%(w/v) Acetic acid, 10%(v/v) Ethanol)

Pass

-Migration of BPA

Pass

-Migration of Heavy metals

Pass

### Part 2: Silicone material

5. As specified by client, to test sample with reference to Regulation 1935/2004/EC , Council of Europe Resolution AP (2004) 5 and (EU) 2018/213 for:

-Overall Migration(3%(w/v) Acetic acid, 10%(v/v) Ethanol)

Pass

-Migration of BPA

Pass

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**Test Results:**

**1. Test Result(s) of Pb:**

Unit: mg/kg

Test Item(s)	Test Method/ Equipment	MDL	Result(s)					Limit
			1-1	1-2	1-3	1-4	1-5	
Lead (Pb)	IEC 62321-5:2013 ICP-OES	10	N.D	N.D	N.D	N.D	N.D	500
Conclusion		/	Pass	Pass	Pass	Pass	Pass	/

Unit: mg/kg

Test Item(s)	Test Method/ Equipment	MDL	Result(s)				Limit
			1-6	1-7	1-8	1-9	
Lead (Pb)	IEC 62321-5:2013 ICP-OES	10	N.D	N.D	N.D	10	500
Conclusion		/	Pass	Pass	Pass	Pass	/

- Note:**
1. MDL=Method Detection Limit
  2. N.D.=Not Detected(less than method detection limit)
  - 3.As specified by client, only test the designated sample

**2. Test Result(s) of Cd:**

Test Item(s)	Test Method/ Equipment	MDL	Result(s)					Limit
			1-1	1-2	1-3	1-4	1-5	
Cadmium (Cd)	IEC 62321-5:2013 ICP-OES	10	N.D	N.D	N.D	N.D	N.D	100
Conclusion		/	Pass	Pass	Pass	Pass	Pass	/

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Test Item(s)	Test Method/ Equipment	MDL	Result(s)				Limit
			1-6	1-7	1-8	1-9	
Cadmium (Cd)	IEC 62321-5:2013 ICP-OES	10	N.D	N.D	N.D	N.D	100
Conclusion		/	Pass	Pass	Pass	Pass	/

- Note:**
1. MDL = Method Detection Limit
  2. N.D. = Not Detected (less than method detection limit)
  3. As specified by client, only test the designated sample

### 3. Test Result(s) of phthalates content:

Unit: %,w/w

Test Item(s)	Test Method/ Equipment	MDL	Result(s)				Limit
			1-1	1-2	1-3	1-4	
Dibutyl phthalate (DBP)	EN 14372:2004 GC-MS	0.01	N.D.	N.D.	N.D.	N.D.	0.1
Butylbenzyl phthalate (BBP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
Di- (2-ethylhexyl) phthalate (DEHP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
Diisobutyl phthalate (DIBP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
<b>Sum of DBP+BBP+DEHP+DIBP</b>		—	N.D.	N.D.	N.D.	N.D.	0.1
Di-n-octyl phthalate (DNOP)		0.01	N.D.	N.D.	N.D.	N.D.	—
Di-isononyl phthalate (DINP)		0.01	N.D.	N.D.	N.D.	N.D.	
Di-isodecyl phthalate (DIDP)		0.01	N.D.	N.D.	N.D.	N.D.	
<b>Sum of DNOP+DINP+DIDP</b>		—	N.D.	N.D.	N.D.	N.D.	0.1
Conclusion		/	Pass	Pass	Pass	Pass	/

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Unit: %,w/w

Test Item(s)	Test Method/ Equipment	MDL	Result(s)				Limit
			1-5	1-6	1-7	1-8	
Dibutyl phthalate (DBP)	EN 14372:2004 GC-MS	0.01	N.D.	N.D.	N.D.	N.D.	0.1
Butylbenzyl phthalate (BBP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
Di- (2-ethylhexyl) phthalate (DEHP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
Diisobutyl phthalate (DIBP)		0.01	N.D.	N.D.	N.D.	N.D.	0.1
<b>Sum of DBP+BBP+DEHP+DIBP</b>		—	N.D.	N.D.	N.D.	N.D.	0.1
Di-n-octyl phthalate (DNOP)		0.01	N.D.	N.D.	N.D.	N.D.	—
Di-isononyl phthalate (DINP)		0.01	N.D.	N.D.	N.D.	N.D.	
Di-isodecyl phthalate (DIDP)		0.01	N.D.	N.D.	N.D.	N.D.	
<b>Sum of DNOP+DINP+DIDP</b>		—	N.D.	N.D.	N.D.	N.D.	0.1
<b>Conclusion</b>			/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

- Note:**
1. MDL=Method Detection Limit
  2. N.D.=Not Detected(less than method detection limit)
  - 3.As specified by client, only test the designated sample

## Part 1: RPET

### Test Result(s):

#### 4.1 Test Result(s) of Overall Migration

Unit: mg/dm<sup>2</sup>

Test Solution	Test condition	MDL	Test Result(s)				Limit
			1-1	1-2	1-3	1-4	
3%(w/v) Acetic acid	40°C, 10d	5	N.D.	N.D.	N.D.	N.D.	10
10%(v/v) Ethanol	40°C, 10d	5	N.D.	N.D.	N.D.	N.D.	10
<b>Conclusion</b>	/	/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	/

Unit: mg/dm<sup>2</sup>

Test Solution	Test condition	MDL	Test Result(s)			Limit
			1-5	1-6	1-7	
3%(w/v) Acetic acid	40°C, 10d	5	N.D.	N.D.	N.D.	10
10%(v/v) Ethanol	40°C, 10d	5	N.D.	N.D.	N.D.	10
<b>Conclusion</b>	/	/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	/

- Note:**
1. N.D.=not detected (less than method detection limit)
  2. MDL=method detection limit

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## 4.2.Migration of Heavy metals

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)				Limit
			3% (w/v) Acetic acid				
			1-1	1-2	1-3	1-4	
Aluminum(Al) (M)	40°C, 10d / ICP-OES	0.5	N.D.	N.D.	N.D.	N.D.	1
Barium ( Ba ) (M)		0.25	N.D.	N.D.	N.D.	N.D.	1
Cobalt (Co) (M)		0.01	N.D.	N.D.	N.D.	N.D.	0.05
Copper (Cu) (M)		0.25	N.D.	N.D.	N.D.	N.D.	5
Iron (Fe) (M)		0.25	N.D.	N.D.	N.D.	N.D.	48
Lithium (Li) (M)		0.5	N.D.	N.D.	N.D.	N.D.	0.6
Manganese (Mn) (M)		0.25	N.D.	N.D.	N.D.	N.D.	0.6
Zinc (Zn) (M)		0.5	N.D.	N.D.	N.D.	N.D.	5
Nickel (Ni) (M)		0.01	N.D.	N.D.	N.D.	N.D.	0.02
<b>Conclusion</b>			/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

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Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)			Limit
			3% (w/v) Acetic acid			
			1-5	1-6	1-7	
Aluminum(Al) (M)	40°C, 10d / ICP-OES	0.5	N.D.	N.D.	N.D.	1
Barium ( Ba ) (M)		0.25	N.D.	N.D.	N.D.	1
Cobalt (Co) (M)		0.01	N.D.	N.D.	N.D.	0.05
Copper (Cu) (M)		0.25	N.D.	N.D.	N.D.	5
Iron (Fe) (M)		0.25	N.D.	N.D.	N.D.	48
Lithium (Li) (M)		0.5	N.D.	N.D.	N.D.	0.6
Manganese (Mn) (M)		0.25	N.D.	N.D.	N.D.	0.6
Zinc (Zn) (M)		0.5	N.D.	N.D.	N.D.	5
Nickel (Ni) (M)		0.01	N.D.	N.D.	N.D.	0.02
<b>Conclusion</b>			/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>

Note: 1. N.D.=not detected (less than method detection limit)

2. M= Migration

3. MDL= method detection limit

### 4.3 Test result of Migration of BPA

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)				Limit
			3% (w/v) Acetic acid				
			1-1	1-2	1-3	1-4	
Migration of BPA	40°C, 10d/ LC-MS-MS	0.02	N.D.	N.D.	N.D.	N.D.	0.05
<b>Conclusion</b>	/	/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	/

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Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)			Limit
			3% (w/v) Acetic acid			
			1-5	1-6	1-7	
Migration of BPA	40°C, 10d/ LC-MS-MS	0.02	N.D.	N.D.	N.D.	0.05
<b>Conclusion</b>	/	/	<b>Pass</b>	<b>Pass</b>	<b>Pass</b>	/

Note: 1. N.D.=not detected (less than method detection limit)

2. MDL=method detection limit

## Part 2: Silicone

### 5.1 Test Result(s) of Overall Migration

Unit: mg/dm<sup>2</sup>

Test Solution	Test condition	MDL	Test Result(s)	Limit
			1-8	
3%(w/v) Acetic acid	40°C, 10d	5	N.D.	10
10%(v/v) Ethanol	40°C, 10d	5	N.D.	10
<b>Conclusion</b>	/	/	<b>Pass</b>	/

Note: 1. N.D.=not detected (less than method detection limit)

2. MDL=method detection limit

### 5.2 Test result of Migration of BPA

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)	Limit
			3% (w/v) Acetic acid	
			1-8	
Migration of BPA	40°C, 10d/ LC-MS-MS	0.02	N.D.	0.05
<b>Conclusion</b>	/	/	<b>Pass</b>	/

Note: 1. N.D.=not detected (less than method detection limit)

2. MDL=method detection limit

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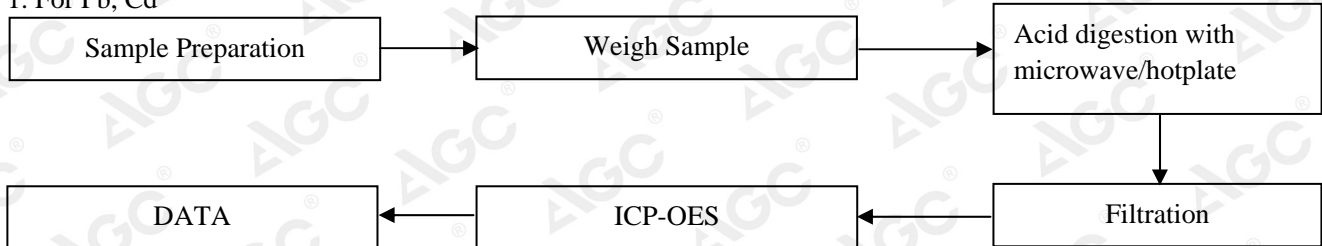
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## Sample Description

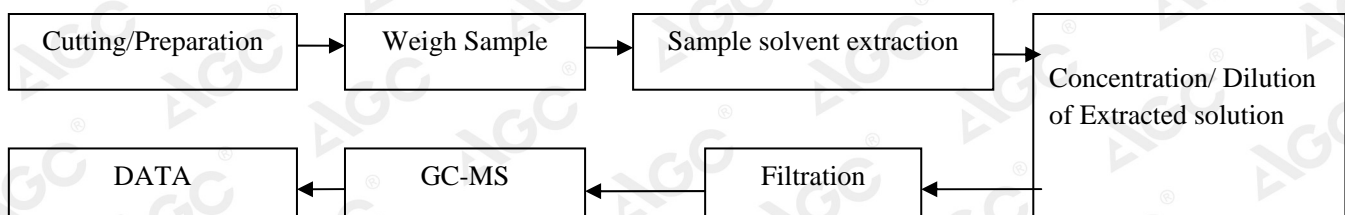
No.	Material	Description
1-1	RPET	Black bottle body
1-2	RPET	White bottle body
1-3	RPET	Blue bottle body
1-4	RPET	Orange bottle body
1-5	RPET	Green bottle body
1-6	RPET	Red bottle body
1-7	RPET	Black lid
1-8	/	Silicone ring
1-9	/	201 stainless steel

## Test Flow Chart

1. For Pb, Cd



2. For phthalates



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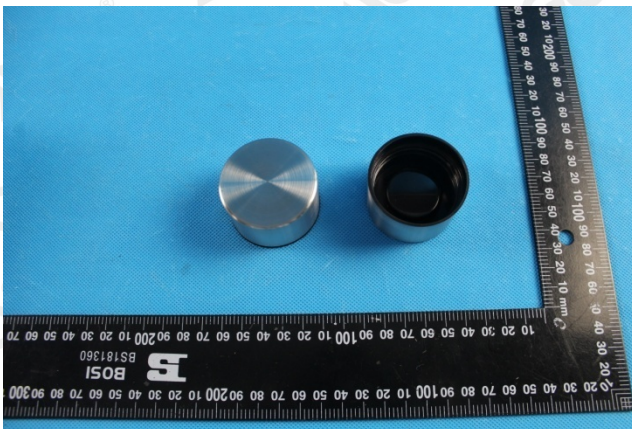
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## The photo of the sample



**AGC03507200510-001**

AGC authenticate the photo on original report only

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

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