

# Test Report

Report No.: AGC-03507-19-09-02-001

Date: Sep.10, 2019

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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: 1,6/F.,Building 2,No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Baoan District, Shenzhen, Guangdong, China

## Report on the submitted samples said to be:

Sample Name : Double wall vacuum insulated bottle  
Model No. : MO9812  
Supplier : 107978  
Country of origin : CHINA  
Country of destination : EUROPE  
Sample Received Date : Sep.04, 2019  
Testing Period : Sep.04, 2019 to Sep.10, 2019

**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:   
Liulinwen, Lewis  
Technical Director



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## Test Requested:

1. As specified by client, to determine the Lead and Lead compounds content in the submitted sample(s) with reference to entry 63, Annex XVII of the REACH Regulation (EC) No 1907/2006.
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.
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.
4. As specified by client, to test sample with reference to food for compliance with Regulation 1935/2004/EC and Technical Guide on Metals and alloys used in food contact materials of Council of Europe Resolution CM/Res(2013)9. for metal:
  - Extractable heavy metal
5. As specified by client, to test sample with reference to Regulation 1935/2004/EC, Regulation (EU) No.10/2011&(EU)2016/1416&(EU) 2017/752 and (EU) 2018/213 for plastic:
  - Overall Migration(3%(w/v) Acetic acid, 50% (v/v) Ethanol)
  - Specific Migration of Heavy metals
  - Migration of BPA
6. As specified by client, to test sample with reference to Regulation 1935/2004/EC and Council of Europe Resolution AP (2004) 5 and (EU) 2018/213 for silicone:
  - Overall Migration(3%(w/v) Acetic acid, 50% (v/v) Ethanol)
  - Migration of BPA

## Conclusion

Pass

Pass

Pass

Pass

Pass

Pass

Pass

Pass

Pass

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**1. Test Result(s) of Lead and Lead compounds content**

Unit: mg/kg

Test item(s)	Test Method/ Equipment	MDL	Result(s)				Limit
			1-1	1-2	1-3	1-4	
<b>Lead (Pb)</b>	IEC 62321-5:2013	10	14	13	33	N.D.	500
<b>Conclusion</b>	ICP-OES	/	<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

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

Unit: mg/kg

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

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### 3. Test result of phthalates content

Unit: %, w/w

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

- Note :**
- 0.1%,w/w =1000mg/kg
  - MDL=method detection limit
  - N.D.=not detected (less than method detection limit)
  - “—” =Not regulated
  - As specified by client, only test the designated sample

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**For metal**
**4.1. Test result of Extractable heavy metal**

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)	Limit
			1 <sup>st</sup> + 2 <sup>nd</sup> extractives	
			1-2	
Barium (Ba)	Artificial tap water 70°C, 2h ICP-OES	0.1	N.D.	8.4
Copper (Cu)		0.1	N.D.	28
Iron (Fe)		0.1	N.D.	280
Tin (Sn)		0.1	N.D.	700
Chromium (Cr)		0.01	N.D.	1.75
Manganese (Mn)		0.1	N.D.	12.6
Zinc (Zn)		0.1	N.D.	35
Aluminum (Al)		0.1	N.D.	35
Lithium (Li)		0.01	N.D.	0.336
Beryllium (Be)		0.005	N.D.	0.07
Vanadium (V)		0.005	N.D.	0.07
Nickel (Ni)		0.01	N.D.	0.98
Cobalt (Co)		0.01	N.D.	0.14
Arsenic (As)		0.002	N.D.	0.014
Molybdenum (Mo)		0.01	N.D.	0.84
Silver (Ag)		0.01	N.D.	0.56
Cadmium (Cd)		0.002	N.D.	0.035
Antimony (Sb)		0.01	N.D.	0.28
Mercury (Hg)		0.002	N.D.	0.021
Thallium (Tl)		0.0001	N.D.	0.0007
Lead (Pb)	0.01	N.D.	0.07	
<b>Conclusion</b>		/	<b>Pass</b>	/

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Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)	Limit
			3 <sup>rd</sup> extractives	
			1-2	
Barium (Ba)	Artificial tap water 70°C, 2h ICP-OES	0.1	N.D.	1.2
Copper (Cu)		0.1	N.D.	4
Iron (Fe)		0.1	N.D.	40
Tin (Sn)		0.1	N.D.	100
Chromium (Cr)		0.01	N.D.	0.25
Manganese (Mn)		0.1	N.D.	1.8
Zinc (Zn)		0.1	N.D.	5
Aluminum (Al)		0.1	N.D.	5
Lithium (Li)		0.01	N.D.	0.048
Beryllium (Be)		0.005	N.D.	0.01
Vanadium (V)		0.005	N.D.	0.01
Nickel (Ni)		0.01	N.D.	0.14
Cobalt (Co)		0.01	N.D.	0.02
Arsenic (As)		0.002	N.D.	0.002
Molybdenum (Mo)		0.01	N.D.	0.12
Silver (Ag)		0.01	N.D.	0.08
Cadmium (Cd)		0.002	N.D.	0.005
Antimony (Sb)		0.01	N.D.	0.04
Mercury (Hg)		0.002	N.D.	0.003
Thallium (Tl)		0.0001	N.D.	0.0001
Lead (Pb)	0.01	N.D.	0.01	
<b>Conclusion</b>		/	<b>Pass</b>	/

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**Note:**

1. N.D.=Not Detected(less than method detection limit)
2. MDL= method detection limit
3. As specified by client, only test the designated sample.

**Remark:**

Results from all three extractives are to be considered for compliance:

- (1). Result of 3<sup>rd</sup> extractive shall not exceed the SRL;
- (2). Sum of result of 1<sup>st</sup> and 2<sup>nd</sup> extractives shall not exceed 7 times of SRL.

**For plastic**
**5.1. Test result of Overall Migration**

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

Test Solution	Test condition	MDL	Test Result(s)	Limit
			1-3	
3%(w/v) Acetic acid	70°C, 2h	5	7.1*	10
50% (v/v) Ethanol		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

3. \*=The result was got from the third extraction duration.

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**5.2. Test result of Special Migration of Heavy metals**

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)	Limit
			3% (w/v) Acetic acid	
			1-3	
Aluminum (Al) (M)	70°C, 2h / ICP-OES	0.5	N.D.	1
Barium (Ba) (M)		0.25	N.D.	1
Cobalt (Co) (M)		0.01	N.D.	0.05
Copper (Cu) (M)		0.25	N.D.	5
Iron (Fe) (M)		0.25	N.D.	48
Lithium (Li) (M)		0.5	N.D.	0.6
Manganese (Mn) (M)		0.25	N.D.	0.6
Zinc (Zn) (M)		0.5	N.D.	5
Nickel (Ni) (M)		0.01	N.D.	0.02
<b>Conclusion</b>		/	/	<b>Pass</b>

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

**5.3. Test result of Migration of BPA**

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Result(s)	Limit
			3% (w/v) Acetic acid	
			1-3	
Migration of BPA	70°C, 2h / 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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**For silicone**
**6.1. Test result of Overall Migration**

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

Test Solution	Test condition	MDL	Test Result(s)	Limit
			1-4	
3%(w/v) Acetic acid	70°C, 2h	5	N.D.	10
50% (v/v) Ethanol		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

**6.2. Test result of Migration of BPA**

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Result(s)	Limit
			3% (w/v) Acetic acid	
			1-4	
Migration of BPA	70°C, 2h / 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

**Sample Description**

1-1	Stainless steel 201
1-2	Stainless steel 304
1-3	Black PP cover
1-4	Silicone ring

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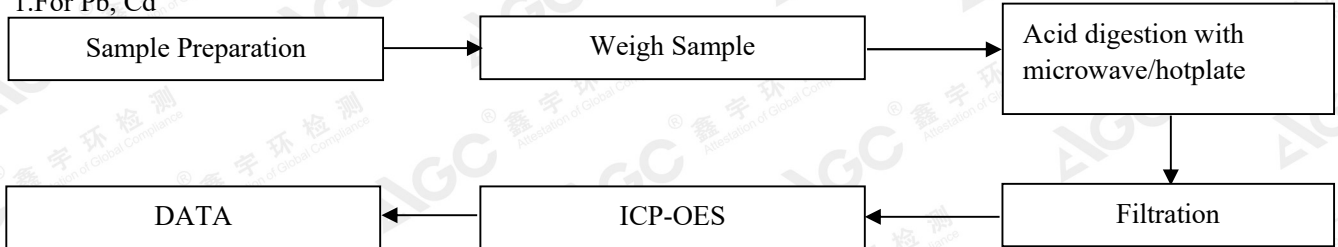
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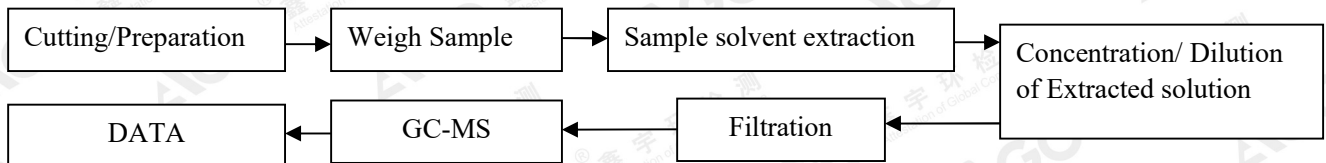
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## Test Flow Chart

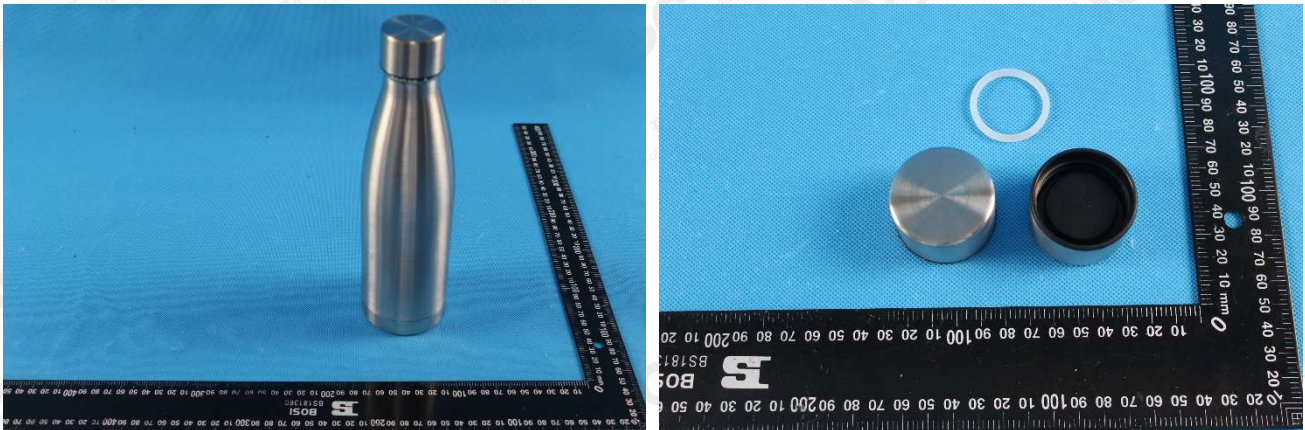
1. For Pb, Cd



2. For phthalates



## The photo of the sample



**AGC-03507-19-09-02-001**

AGC authenticate the photo on original report only

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

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