

Test Report

Report No.: AGC-03507-19-09-08-001S1

Date: Sep.25, 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. : MO9810
Supplier : 107978
Country of origin : CHINA
Country of destination : EUROPE
Sample Received Date : Sep.18, 2019
Testing Period : Sep.18, 2019 to Sep.24, 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 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
6. 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

Conclusion

Pass

Pass

Pass

Pass

Pass

Pass

Pass

Pass

Pass

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No.18 C

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Test Result(s):
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	1-5	
Lead (Pb)	IEC 62321-5:2013	10	16	19	N.D.	N.D.	N.D.	500
Conclusion	ICP-OES	/	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	1-10	1-11	
Lead (Pb)	IEC 62321-5:2013	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	500
Conclusion	ICP-OES	/	Pass	Pass	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:

Unit: mg/kg

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	10	N.D.	N.D.	N.D.	N.D.	N.D.	100
Conclusion	ICP-OES	/	Pass	Pass	Pass	Pass	Pass	/

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Unit: mg/kg

Test item(s)	Test Method/ Equipment	MDL	Result(s)						Limit
			1-6	1-7	1-8	1-9	1-10	1-11	
Cadmium (Cd)	IEC 62321-5:2013	10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	100
Conclusion	ICP-OES	/	Pass	Pass	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 of phthalates content

Unit: %, w/w

Test Item(s)	Test Method/ Equipment	MDL	Result(s)			Limit
			1-3	1-4	1-5	
Dibutyl phthalate (DBP)	EN 14372:2004 GC-MS	0.01	N.D.	N.D.	N.D.	0.1
Butylbenzyl phthalate (BBP)		0.01	N.D.	N.D.	N.D.	0.1
Di- (2-ethylhexyl) phthalate (DEHP)		0.01	N.D.	N.D.	N.D.	0.1
Diisobutyl phthalate (DIBP)		0.01	N.D.	N.D.	N.D.	0.1
Sum of DBP+BBP+DEHP+DIBP		—	N.D.	N.D.	N.D.	0.1
Di-n-octyl phthalate (DNOP)		0.01	N.D.	N.D.	N.D.	—
Di-isononyl phthalate (DINP)		0.01	N.D.	N.D.	N.D.	
Di-isodecyl phthalate (DIDP)		0.01	N.D.	N.D.	N.D.	
Sum of DNOP+DINP+DIDP		—	N.D.	N.D.	N.D.	0.1
Conclusion			/	Pass	Pass	Pass

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Unit: %, w/w

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

Unit: %, w/w

Test Item(s)	Test Method/ Equipment	MDL	Result(s)			Limit
			1-9	1-10	1-11	
Dibutyl phthalate (DBP)	EN 14372:2004 GC-MS	0.01	N.D.	N.D.	N.D.	0.1
Butylbenzyl phthalate (BBP)		0.01	N.D.	N.D.	N.D.	0.1
Di- (2-ethylhexyl) phthalate (DEHP)		0.01	N.D.	N.D.	N.D.	0.1
Diisobutyl phthalate (DIBP)		0.01	N.D.	N.D.	N.D.	0.1
Sum of DBP+BBP+DEHP+DIBP		—	N.D.	N.D.	N.D.	0.1
Di-n-octyl phthalate (DNOP)		0.01	N.D.	N.D.	N.D.	—
Di-isononyl phthalate (DINP)		0.01	N.D.	N.D.	N.D.	
Di-isodecyl phthalate (DIDP)		0.01	N.D.	N.D.	N.D.	
Sum of DNOP+DINP+DIDP		—	N.D.	N.D.	N.D.	0.1
Conclusion			/	Pass	Pass	Pass

- 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 st + 2 nd extractives	
			1-2	
Barium (Ba)	0.5% citric acid, 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	
Conclusion		/	Pass	/

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Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Test Result(s)	Limit
			3 rd extractives	
			1-2	
Barium (Ba)	0.5% citric acid, 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	
Conclusion		/	Pass	/

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

For silicone
5.1. Test result of Overall Migration

 Unit: mg/dm²

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

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	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
Conclusion	/	/	Pass	/

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

2. MDL=method detection limit

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For plastic
6.1. Test result of Overall Migration

 Unit: mg/dm²

Test Solution	Test condition	MDL	Test Result(s)	Limit
			1-4	
3%(w/v) Acetic acid	70°C, 2h	5	5.9	10
50% (v/v) Ethanol		5	N.D.	10
Conclusion	/	/	Pass	/

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

2. MDL=method detection limit

6.2. 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	
			1-4	
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
Conclusion		/	/	Pass

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

2. M= Migration

3. MDL= method detection limit

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6.3. Test result of Migration of BPA

Unit: mg/kg

Test Item(s)	Test condition/ Equipment	MDL	Result(s)	Limit
			3% (w/v) Acetic acid	
			1-4	
Migration of BPA	70°C, 2h / LC-MS-MS	0.02	N.D.	0.05
Conclusion	/	/	Pass	/

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

2. MDL=method detection limit

Sample Description

1-1	S/S 201
1-2	S/S 304
1-3	Silicone ring
1-4	Black PP cover
1-5	Black coating
1-6	White coating
1-7	Red coating
1-8	Yellow coating
1-9	Blue coating
1-10	Orange coating
1-11	Purple coating

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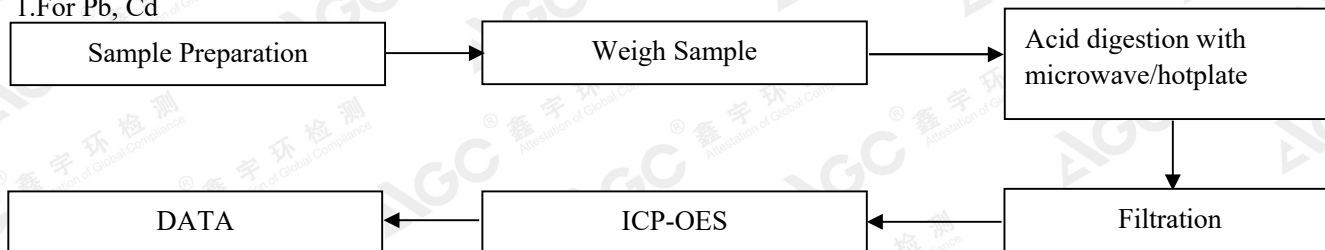
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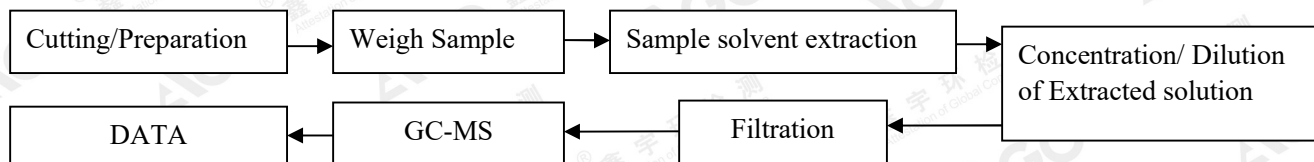
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Test Flow Chart

1. For Pb, Cd



2. For phthalates



This report is to supersede the report with No.: AGC-03507-19-09-08-001 dated on Sep.24, 2019.

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The photo of the sample



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AGC authenticate the photo on original report only

*** End of Report***

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