TEST REPORT

APPLICANT	:	Mid Ocean Hong Kong Ltd.
ADDRESS	:	7/F, Kings Tower,111 King Lam Street,Cheung Sha Wan,Kowloon,Hong Kong.
SAMPLE DESCRIPTION	:	MO6240 Lunch box in PP with natural bamboo lid MO6205 Lunch box in PP, MO6254 Lunch box with knife and fork, MO6244 Double wall tumbler, MO6255 PP mug with spoon, MO8078 Single wall tumbler in shiny white PP with silicone lid and middle ring MO6275 PP Lunch box with Cutlery MO6274 PP storage container
MODEL NO.	:	MO6240,MO6205,MO6254,MO6244, MO6255,MO8078,MO6275,MO6274;
SAMPLE RECEIVED DATE	:	12-Mar-2021
SAMPLE RESUBMISSION DATE	:	23-Apr-2021
FURTHER INFORMATION DATE	:	06-May-2021
TURN AROUND TIME	:	12-Mar-2021 to 11-May-2021

The following test item(s) was/were performed on submitted sample(s) and/or component(s) confirmed by applicant

TEST REQUESTED	RESULT
Total Lead Content	Pass
Total Cadmium Content	Pass
Phthalates Content	Pass
Pentachlorophenol (PCP) Content	Pass
Specific Migration of Bisphenol-A(BPA)	Pass
Overall Migration	Pass
Specific Migration of Heavy Metal	Pass
Extractable Formaldehyde	Pass

********** FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S) **********

Signed for and on behalf of
Eurofins Product Testing Service (Shanghai) Co., Ltd

Joyce Liu
Lab Manager

SAMPLE PHOTO(S)

TO BE CONTINUED

EFSH21030385-CG-02

TO BE CONTINUED

REFERENCE SAMPLE PHOTO(S)

The reference sample(s) has not been tested in current report, but according to customer´s request, the picture has also been included. For sample tested in current report, please refer to “Test sample photo”.

EFSH21030385-CG-02

TO BE CONTINUED

TO BE CONTINUED

COMPONENT LIST

Component No.	Component
1	Natural color bamboo lid
2	Semi-transparent silicone seal ring
3	Grey silicone plug
4	Red silicone lid
5	Beige PP box
6	White PP box
7	Brown elastic band
8	Transparent PS
9	Semi-transparent PP

TO BE CONTINUED

TEST RESULT

Total Lead Content

Test Request: Total lead content as specified in entry 63 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Regulation (EU) No 2015/628.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996
Acid digestion/ microwave digestion method was used and total lead content was determined by ICP-OES.

Test Item(s)	Unit	Limit	MDL	Result			
				1	2+3+4	5+6	7
Total Lead	mg/kg	500	10	ND	ND	ND	ND

Test Item(s)	Unit	Limit	MDL	Result	
				8	9
Total Lead	mg/kg	500	10	ND	ND

Remark:
According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.
mg/kg = milligram per kilogram
MDL = method detection limit
ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Total Cadmium Content

Test Request: Total cadmium content as specified in Commission Regulation (EU) 2016/217 amending entry 23 of Annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: EPA 3050B:1996, EPA 3051A:2007, EPA 3052:1996
Acid digestion/ microwave digestion method was used and total cadmium content was determined by ICP-OES.

Test Item(s)	Unit	Limit	MDL	Result			
				1	2+3+4	5+6	7
Total Cadmium	mg/kg	100	5	ND	ND	ND	ND

Test Item(s)	Unit	Limit	MDL	Result	
				8	9
Total Cadmium	mg/kg	100	5	ND	ND

Remark:
According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.
mg/kg = milligram per kilogram
MDL = method detection limit
ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Phthalates Content

Test Request: Phthalates content as specified in entry 51&52 of annex XVII of REACH Regulation (EC) No 1907/2006 and its amendment Commission Regulation (EU) 2018/2005.

Test Method: EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Test Item(s)	CAS No.	Unit	Limit	MDL	Result				
					2+3+4	5+6	7	8	9
Dibutyl phthalate (DBP)	84-74-2	%	-	0.005	ND	ND	ND	ND	ND
Benzylbutyl phthalate (BBP)	85-68-7	%	-	0.005	ND	ND	ND	ND	ND
Diethylhexyl phthalate (DEHP)	117-81-7	%	-	0.005	ND	ND	ND	ND	ND
Diisobutyl phthalate (DIBP)	84-69-5	%	-	0.005	ND	ND	ND	ND	ND
Sum of (DEHP+DBP+BBP+DIBP)	-	%	0.1	-	ND	ND	ND	ND	ND
Di-n-octyl phthalate (DNOP)	117-84-0	%	-	0.005	ND	ND	ND	ND	ND
Diisononyl phthalate (DINP)	28553-12-0	%	-	0.005	ND	ND	ND	ND	ND
Diisodecyl phthalate (DIDP)	26761-40-0	%	-	0.005	ND	ND	ND	ND	ND
Sum of (DNOP + DINP + DIDP)	-	%	0.1	-	ND	ND	ND	ND	ND

Remarks:
According to client's request, tests are combination tests. The experimental results are the total result of mixed samples.
Remark:
MDL = method detection limit
ND = Not detected, less than MDL
"-" = Not Regulated

TO BE CONTINUED

TEST RESULT

Pentachlorophenol (PCP) Content

Test Request: Pentachlorophenol (PCP) content as specified in entry 22 of annex XVII of REACH Regulation (EC) No 1907/2006.

Test Method: With reference to ISO 17070:2015, analysis was performed by GC-MS.
With reference to § 64 LFGB B 82.02.8-2001, analysis was performed by GC-MS.
With reference to EPA 3550C:2007, EPA 8270E:2018, solvent extraction and quantification by GC-MS.

Tested Item(s)	CAS No.	Unit	Limit	MDL	Result
					1
Pentachlorophenol (PCP)	87-86-5	mg/kg	1000	0.5	ND

Remark:
mg/kg = milligram per kilogram
MDL = method detection limit
ND = Not detected, less than MDL

TO BE CONTINUED

TEST RESULT

Specific Migration of Bisphenol-A (BPA)

Test Requested : In accordance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31, and BfR recommendation, Commission Regulation (EU) No. 10/2011 and its amendments, Commission Regulation (EU) No 2018/213, for materials and articles intended to come into contact with food and foodstuffs.

Test Method : With reference to EU 10/2011 for selection of test condition, with reference to BS EN 13130-1:2004 for sample preparation, analysis was performed by HPLC-MS.

Simulant Used : 3% Acetic Acid (W/V) Aqueous Solution
Test Condition : 70°C 2hrs

Test item(s)	Max. Permissible Limit	Unit	MDL	Result				
				2	3	4	5	6
Specific migration of 2,2-bis(4-hydroxyphenyl) propane (Bisphenol A)	0.05	mg/kg	0.01	ND	ND	ND	ND	ND

Test item(s)	Max. Permissible Limit	Unit	MDL	Result	
				8	9
Specific migration of 2,2-bis(4-hydroxyphenyl) propane (Bisphenol A)	0.05	mg/kg	0.01	ND	ND

Remark:
(1) mg/kg = milligram per kilogram
(2) MDL = method detection limit
(3) ND = Not detected, less than MDL
(4) Test condition & simulant were specified by client.

TO BE CONTINUED

TEST RESULT

Overall Migration

Test Requested : In accordance with German Food, Articles of Daily Use and Feed Code of September 1, 2005 (LFGB), Section 30 and 31, Commission Regulation (EU) No. 10/2011 and its amendments, and BfR recommendation.

Test Method : By reference to EU 10/2011 for selection of test condition;
With reference to EN1186-1:2002 for test methods;
or EN1186-3:2002 aqueous food simulants by total immersion method;
or EN1186-9:2002 aqueous food simulants by article filling method;
or EN1186-2:2002 olive oil by total immersion method;
or EN1186-8:2002 olive oil by article filling method;
or EN1186-14:2002 substitute test

Simulant used	Time	Temperature	Max. Permissible Limit (mg/dm^2)	Result (mg/dm^2)				
				2	3	4	5	6
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70℃	10	<3.0#	<3.0#	<3.0#	<3.0#	<3.0#
10% Ethanol (V/V) Aqueous Solution	2hrs	70℃	10	<3.0#	<3.0#	<3.0#	<3.0#	<3.0#
95% Ethanol I (V/V) Aqueous Solution (Rectified Olive Oil Substitute)	2hrs	60℃	10	<3.0#	<3.0#	9.9#	<3.0#	<3.0#
Isooctane (Rectified Vegetable Oil Substitute)	0.5hrs	40°C	10	<3.0#	<3.0#	8.5#	<3.0#	<3.0#

Simulant used	Time	Temperature	Max. Permissible Limit (mg/dm^2)	Result (mg/dm^2)	
				8	9
3% Acetic Acid (W/V) Aqueous Solution	2hrs	70℃	10	<3.0#	<3.0#
10% Ethanol (V/V) Aqueous Solution	2hrs	70℃	10	<3.0#	<3.0#
95% Ethanol I (V/V) Aqueous Solution (Rectified Olive Oil Substitute)	2hrs	60℃	10	<3.0#	<3.0#
Isooctane (Rectified Vegetable Oil Substitute)	0.5hrs	40°C	10	<3.0#	<3.0#

Remark:

(1) mg/kg =milligram per kilogram
(2) mg/dm^2 =milligram per square decimeter
(3) Analytical tolerance of aqueous simulants is 6mg/kg or 1mg/dm^2
(4) Analytical tolerance of fatty food simulants is 20mg/kg or 3mg/dm^2
(5) Test condition & simulant were specified by client.

TO BE CONTINUED

TEST RESULT

Specific Migration of Heavy Metal

Test Requested : To determine the Specific Migration of Heavy Metal for compliance with Commission Regulation (EU) No. 10/2011 and its amendments relating to plastic materials and articles intended to come into contact with foodstuffs.

Test Method : With reference to Regulation (EU) 10/2011 for selection of test condition and EN 13130-1:2004 for test preparation method; analysis was performed by ICP-MS.

Simulant used : 3% Acetic Acid (W/V) Aqueous Solution
Test condition : 70℃ 2hours

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				2		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				3		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				4		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				5		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				6		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				8		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

TO BE CONTINUED

TEST RESULT

Test Item(s)	Max. Permissible limit	Unit	MDL	Test Result		
				9		
				1st test	2nd test	3rd test
Barium(Ba)	1	mg/kg	0.25	ND	ND	ND
Cobalt(Co)	0.05	mg/kg	0.05	ND	ND	ND
Copper(Cu)	5	mg/kg	0.25	ND	ND	ND
Iron(Fe)	48	mg/kg	0.25	ND	ND	ND
Lithium(Li)	0.6	mg/kg	0.5	ND	ND	ND
Manganese(Mn)	0.6	mg/kg	0.05	ND	ND	ND
Zinc(Zn)	5	mg/kg	0.5	ND	ND	ND
Aluminum(Al)	1	mg/kg	0.1	ND	ND	ND
Nickel(Ni)	0.02	mg/kg	0.01	ND	ND	ND
Antimony(Sb)	0.04	mg/kg	0.01	ND	ND	ND
Arsenic(As)	ND	mg/kg	0.01	ND	ND	ND
Cadmium(Cd)	ND	mg/kg	0.002	ND	ND	ND
Chromium(Cr)	ND	mg/kg	0.01	ND	ND	ND
Lead(Pb)	ND	mg/kg	0.01	ND	ND	ND
Mercury(Hg)	ND	mg/kg	0.01	ND	ND	ND
Europium(Eu)	-	mg/kg	0.01	ND	ND	ND
Gadolinium((Ga)	-	mg/kg	0.01	ND	ND	ND
Lanthanum(La)	-	mg/kg	0.01	ND	ND	ND
Terbium(Tb)	-	mg/kg	0.01	ND	ND	ND
Sum of all lanthanide substances	0.05	mg/kg	-	ND	ND	ND

Note:

(1) mg/kg = milligram per kilogram
(2) MDL = Method Detection Limit
(3) ND = Not Detected(<MDL)
(4) Test condition & simulant were specified by client.

TO BE CONTINUED

TEST RESULT

Extractable formaldehyde

Test Requested :	In accordance with Regulation (EC) No 1935/2004, and Commission Regulation (EU) No 10/2011 and its amendments For material: Wood/Bamboo Polymer Compound –Extractable formaldehyde
Test Method :	Sample preparation with reference to EN 13130-1: 2004 with selection of simulant and condition, followed by analysis by UV-vis.
Simulant used :	3% Acetic Acid (W/V) Aqueous
Test condition :	70℃ 2hours

Test Items	Max. Permissible Limit	Unit	MDL	Result
				1
Extractable formaldehyde	15	mg/kg	1	6.8

Note:

ND = not detected, less than MDL
MDL = method detection limit
Test condition & simulant were specified by client.

END OF THE REPORT