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# **TEST REPORT**

Customer	Client	Mid Ocean Brands B.V.						
information	Address	7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong						
	Name of sample	Bamboo wireless charger						
a 1	Test Model No.	MO9914						
Sample information	Trade mark	N/A						
mormation	Lot number	(si') (si') (si')						
	Manufacturer	114628						
	Sample received	July 12, 2024						
	Testing date	July 12, 2024 to July 22, 2024						
	Test sort	Commission Test						
	Requested/item	RoHS directive 2011/65/EU Annex II amending Annex(EU)2015/863.  (1) Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs and PBDEs Content.  (2) Di-(2-ethylhexyl) phthalate(DEHP), Benzylbutyl phthalate(BBP), Dibutyl phthalate(DBP), Disobutyl phthalate(DIBP) Content.						
Test information	Standard/ Foundation	(1)With reference to IEC 62321-3-1:2013, scanning by XRF Spectroscopy Chemical test method: With reference to IEC 62321-5:2013, determination of Cadmium, lead by ICP With reference to IEC 62321-4:2013+AMD1:2017, determination of Mercury by ICP With reference to IEC 62321-7-2:2017&IEC 62321-7-1:2015, determination of Hexavalent Chromium by Colorimetric method. With reference to IEC 62321-6:2015 determination of PBBs and PBDEs by GC-MS (2)With reference to IEC 62321-8:2017, and analysis was performed by GC-MS.						
	Conclusion	(1)The tested sample complied with RoHS directive (2011/65/EU). (2)The tested part of submitted sample complied with directive (EU)2015/863						
Remark								

Tested By:

Date:

Date:

2024/07/22

Date:

Approved By

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est res	ult: 1. Structural parts		D 14 C	D 14 C	C1 : 1	
No.	COMPONENTS	Item	Results of EDXRF	Results of Testing	Chemical testing limit	Conclusion (P/F)
	(9.)	(6,)	(P/F/D)	(mg/kg)	(mg/kg)	(P/F)
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
3	Bamboo shell	Hg	P	N.D.	<1000	P
51)	Daillood shell	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
2	Transparent solid glue	Hg	P	N.D.	<1000	P
2	Transparent sond give	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
(1)	(3)	PBDEs	P	N.D.	<1000	P
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
3	C-14	Hg	P	N.D.	<1000	P
3	Solder	Pb	P	N.D.	<1000	P
1	(6.)	PBBs	/	10	<1000	7
		PBDEs	/	/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
	IC (S)	Hg	P	N.D.	<1000	P
4	IC	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
	(ci^)	Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
_	IC f	Hg	P	N.D.	<1000	P
5	IC feet	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
5)		PBDEs	/	/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
	Duran 1	Hg	P	N.D.	<1000	P
6	Brown inductance	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P



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No.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of Testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
		Cd	P	N.D.	<100	Р
		Cr(VI)	P	N.D.	<1000	P
		Hg	Р	N.D.	<1000	P
7	Solder	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
		PBDEs	/	/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
8	Grey inductance	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	Р	N.D.	<1000	P
9	Black inductance	Pb	P	N.D.	<1000	P
	5)	PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
		Cd	Р	N.D.	<100	P
3		Cr(VI)	P	N.D.	<1000	P
	(sill)	Hg	PS	N.D.	<1000	P
10	Solder	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
		PBDEs	/	1	<1000	
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
11	USB metal port	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
5)		PBDEs		/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
12	Black plastic port	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P

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No.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of Testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
13	Silver metal feet	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
		PBDEs	/	/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
14	White chip	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
	6	Cd	Р	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	Р	N.D.	<1000	P
15	Black component	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
		Cd	P	N.D.	<100	P
3		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
16	Green PCB board	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	Р	N.D.	<1000	P
	(.4)	Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
17	Black board	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
5		PBDEs	Р	N.D.	<1000	P
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
18	White paper	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P

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No.	COMPONENTS	Item	Results of EDXRF (P/F/D)	Results of Testing (mg/kg)	Chemical testing limit (mg/kg)	Conclusion (P/F)
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
30		Hg	P	N.D.	<1000	P
19	Wire skin	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
20		Hg	P	N.D.	<1000	P
20	Copper wire	Pb	P	N.D.	<1000	P
		PBBs	/	/	<1000	/
		PBDEs		/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
	~ 11	Hg	P	N.D.	<1000	P
21	Solder	Pb	P	N.D.	<1000	P
		PBBs	/	19	<1000	9
		PBDEs	/	/	<1000	/
		Cd	P	N.D.	<100	P
		Cr(VI)	P	N.D.	<1000	P
		Hg	P	N.D.	<1000	P
22	Golden plastic tape	Pb	P	N.D.	<1000	P
		PBBs	P	N.D.	<1000	P
		PBDEs	P	N.D.	<1000	P



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#### Remark:

1 It is the result on total Br while test PBBs and PBDEs by EDXRF. It is the result on total Cr while test Hexavalent Chromium by EDXRF $_{\circ}$ 

2 Results are obtained by EDXRF for primary screening, and chemical testing by ICP (for Cd, Pb, Hg),UV-VIS (Cr(VI)) and GCMS (for PBBs, PBDEs) is recommended to be performed.

$\sim$	
- 4	
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Element	Polymer	Metal	Composite Materials
Cd	$P \le 70-3\sigma \le D \le 130+3\sigma \le F$	$P \le 70-3\sigma \le D \le 130+3\sigma \le F$	$P \le 50-3\sigma \le D \le 150+3\sigma \le F$
Pb	$P \le 700-3\sigma \le D \le 1300+3\sigma \le F$	P≤700-3σ <d<1300+3σ≤f< td=""><td><math>P \le 500-3\sigma \le D \le 1500+3\sigma \le F</math></td></d<1300+3σ≤f<>	$P \le 500-3\sigma \le D \le 1500+3\sigma \le F$
Hg	$P \le 700-3\sigma \le D \le 1300+3\sigma \le F$	P≤700-3σ <d<1300+3σ≤f< td=""><td><math>P \le 500-3\sigma &lt; D &lt; 1500+3\sigma \le F</math></td></d<1300+3σ≤f<>	$P \le 500-3\sigma < D < 1500+3\sigma \le F$
Br	P≤300-3σ <d< td=""><td><u> </u></td><td>P≤250-3σ<d< td=""></d<></td></d<>	<u> </u>	P≤250-3σ <d< td=""></d<>
Cr	P≤700-3σ <d< td=""><td>P≤700-3σ<d< td=""><td>P≤500-3σ<d< td=""></d<></td></d<></td></d<>	P≤700-3σ <d< td=""><td>P≤500-3σ<d< td=""></d<></td></d<>	P≤500-3σ <d< td=""></d<>

P = PASS; F = FAIL; D = DETECTED;

- 4. mg/kg = ppm; N.D. = NOT DETECTED (<MDL) Pb, Cd, Hg,Cr(VI): 2mg/kg; PBBs, PBDEs: 5mg/kg
- 5. With reference to IEC 62321:-7-1:2015, result on Cr (VI) for metal sample is shown as Positive/Negative. Positive = Presence of Cr(VI) coating, Negative = Absence of Cr(VI) coating
- 6 \*According to Annex III of European Council Directive 2011/65/EU, Lead in copper alloy containing up to 4% lead by weight.
- 7 \*\*According to Annex III of European Council Directive 2011/65/EU, Lead in steel alloy containing up to 0.35% lead by weight.
- 8 \*According to Annex III of European Council Directive 2011/65/EU, Cadmium and its compounds in electrical contacts is exempted.



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# (3) DEHP, BBP, DBP, DIBP

SAMPLE No.		SAMPLE	MDL	REQUIRED LIMIT			
ITEM	1	2	4	6	8	(mg/kg)	(mg/kg)
Di-2-ethylhexyl phthalate (DEHP)	ND	ND	ND	ND	ND	30	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate (BBP)	ND	ND	ND	ND	ND	30	1000
Diisobutyl phthalate (DIBP)	ND	ND	ND	ND	ND	30	1000

SAMPLE No.		SAMPLE	MDL	REQUIRED LIMIT			
ITEM	9	12	14	15	16	(mg/kg)	(mg/kg)
Di-2-ethylhexyl phthalate (DEHP)	ND	ND	ND	ND	ND	30	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate (BBP)	ND	ND	ND	ND	ND	30	1000
Diisobutyl phthalate (DIBP)	ND	ND	ND	ND	ND	30	1000

SAMPLE No.	S.	AMPLE CON (mg	MDL	REQUIRED LIMIT		
ITEM	17	18	19	22	(mg/kg)	(mg/kg)
Di-2-ethylhexyl phthalate (DEHP)	ND	ND	ND	ND	30	1000
Dibutyl phthalate (DBP)	ND	ND	ND	ND	30	1000
Benzylbutyl phthalate (BBP)	ND	ND	ND	ND	30	1000
Diisobutyl phthalate (DIBP)	ND	ND	ND	ND	30	1000

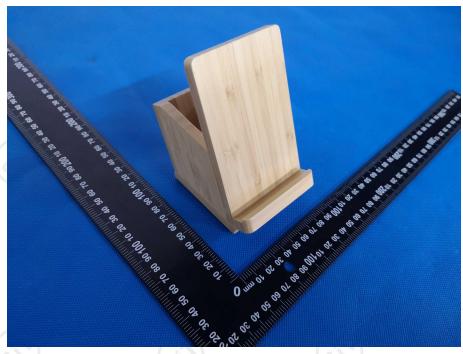
Note: MDL = Method Detection Limit, ND=not detected (<Method Detection Limit).

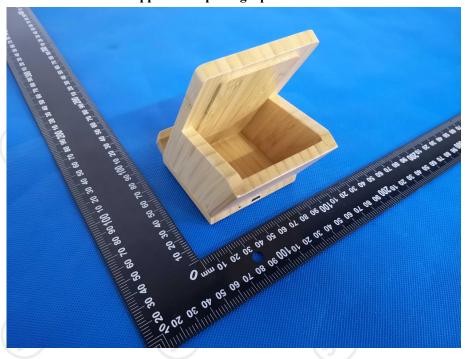


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# Sample photo

#### Appearance photograph of EUT





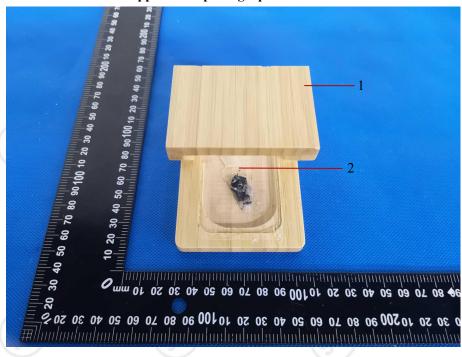




# Sample photo

#### Appearance photograph of EUT



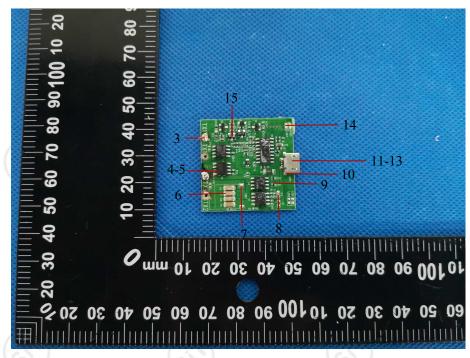


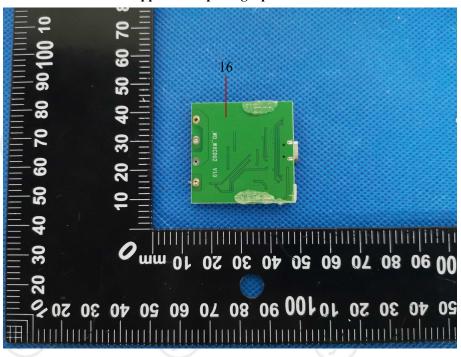


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# Sample photo

#### Appearance photograph of EUT



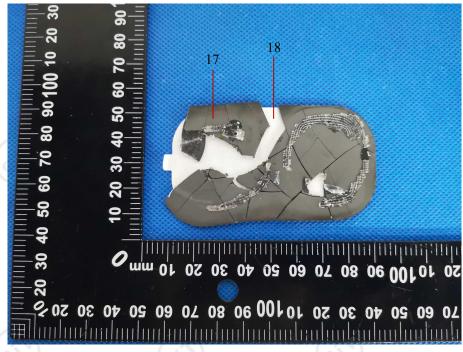


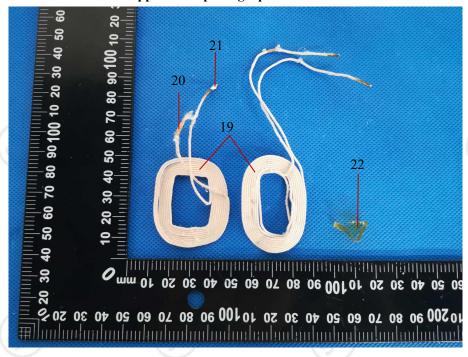


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# Sample photo

#### Appearance photograph of EUT







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List of apparatus

No.	Name	Model	Calibration Valid Date	USE(√)
1	ICP-OES	VISTA-MPX	2024/12/28	1
2	GC-MS	5975i	2024/12/16	√
3	UV-Vis	Lambda 25	2024/12/16	√
5 4	XRF	EDX3000B	2024/12/22	√

\*\*\*\*\* END OF REPORT \*\*\*\*\*