

Applicant: Haven Technologies, Inc.

Contact information: 873 W Carmel Drive, Carmel, IN, 46032 USA

The following sample(s) was (were) submitted and identified by client as:

Sample Description : Wireless earbuds

Model No. : ISOtunes FREE Aware IT-15, ISOtunes FREE Aware IT-16,

ISOtunes Sport CALIBER IT-17, ISOtunes Sport CALIBER IT-18,

ISOtunes Sport CALIBER IT-24

Sample Received Date : Nov. 17, 2021

Testing Period : From Nov. 17, 2021 to Nov. 24, 2021

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

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

Shen Zhen UONE Test Co., LTD.

Prepared by

Max Wu

Checked by

TIL

Approved by

_event Liang



Report No.: U01308211117614-2E	Page 2 of 14
Summary of test results:	200
TEST REQUEST	CONCLUSION
RoHS Directive 2011/65/EU and its subsequent amendments Directive (EU) 2015/863 To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), (1) Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs) content by screening test and chemical test	PASS
(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test	PASS



Test Material List

est Material List	0. 0. 0. 0. 0. 1	0 0 0
Material No.	Description (Location)	Photo(s) of tested materials
1012 1 11012	Black plastic with green print (shell)	1 2 3 4 5
2	Silvery magnet block (shell)	
3 10	Silvery metal (hinge)	8 4
4	Silvery metal (rod)	
5	Silvery metal (screw)	
6	Golden metal base (charging connector,PCB)	OHE TOME TOME TOM
7	Silvery metal spring (charging connector,PCB)	
8	Golden metal pin (charging connector,PCB)	OHE HOME HOME HOM
9	Black body (resistance,PCB)	4. 4. 4. 3
10	Brown body (capacitance,PCB)	Our HOME HOME HOM
11	Black body (inductance,PCB)	de de de d
12	Black body (IC,PCB)	6-8 9 10 11 12 13 14
13	Yellow body (LED,PCB)	
14	Black body (inductance,PCB)	
15	Silvery metal shell (type-c,PCB)	
16	Black plastic pin holder (type-c,PCB)	15 ¹ 17 18 ¹ 22
17	Silvery metal pin (type-c,PCB)	THE CHE CHE
18	Black plastic button (button switch,PCB)	2 12 12 12
19	Silvery metal sheet (button switch,PCB)	ONE THO THO THE
20	White plastic shell (button switch,PCB)	
21	Silvery metal sheet (button switch,PCB)	OHE TOHE TOHE TOM
22	Silvery metal pin (button switch,PCB)	

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Material No.	Description (Location)	Photo(s) of tested materials
23	Green PCB	23 24 25-27
24	Silvery solder (PCB)	2
25	White plastic base (socket,PCB)	on son so-vy
26	Black plastic buckle (socket,PCB)	
27	Silvery metal pin (socket,PCB)	
OHE JOHE		28
28	Brown FPC	-
29	Black foam with adhesive (battery)	10, 10, 10, 10
30	White foam with adhesive (battery)	6 6 6
31	Yellow translucent plastic tape (battery)	29 30 31 32 33 34 35 36 37
32	Silvery metal wire (battery)	
33	Black soft plastic wire jacket (battery)	
34	Red soft plastic wire jacket (battery)	
35	Silvery solder (battery)	
36	Black PCB (battery)	2
37	Beige paper with adhesive (battery)	all all all
38	Black cloth rope (lanyards)	38 39 40
39	Black cloth rope (lanyards)	
40	Black plastic buckle (lanyards)	3

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Material No.	Description (Location)	Photo(s) of tested materials
41	Yellow green plastic shell (earphone)	41 42 43 44 45 46
42	Transparent plastic block (earphone)	
43	Yellow green translucent dry glue (earphone)	
44	Black foam (earplug)	
45	White soft plastic (earplug)	
46	Silvery metal (tube)	
OHE JOHE	JOHE JOHE JOHE JOHE JOHE J	47
47	Golden metal (charging connector)	GND 90
ONE JOHE	JOHE JOHE JOHE JOHE JOHE J	
ONE JOHE		48
48	Black FPC	\$1.5 may 10.5 may 10.
49	White translucent soft plastic shell (EC,PCB)	0. 10. 10. 10
50	Black body (EC,PCB)	49-50 51 52 53 54
51	Blue PCB	
52	Silvery solder (PCB)	
53	Transparent body (LED,PCB)	
54	Silvery body (crystal oscillator,PCB)	2 110 110 110

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Material No.	Description (Location)	Photo(s) of tested materials
55	Black body (IC,PCB)	55 56 57
56	Silvery metal sheet (PCB)	
57	Yellow translucent plastic tape (PCB)	
58	Silvery metal shell (speaker)	<i>1</i>
59	Silvery metal gasket (speaker)	OHE OHE OHE OHE
60	Silvery magnet block (speaker)	0 0 0 0
61	Golden metal ring (speaker)	58 59 60 61 62 63 64 65 66 67 68
62	Coppery metal coil (speaker)	2 / / / / / / / / / / / / / / / / / / /
63	Transparent plastic film (speaker)	
64	Red soft plastic wire jacket (speaker)	3
65	Black soft plastic wire jacket (speaker)	
66	Silvery metal wire (speaker)	0, 10, 10, 10,
67	Silvery solder (speaker)	
68	Green PCB (speaker)	WE WE WE WE



Test Result(s):

(1) Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)

<u>Test Method:</u> IEC62321-3-1: 2013, IEC62321-4: 2013+A1:2017, IEC62321-5: 2013, IEC62321-6: 2015,IEC 62321-7-1:2015, IEC 62321-7-2: 2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

Na	0	EDX	(RF Resu	ılt ⁽¹⁾		Chemical Result (2)		0_ 0_
No.		Pb Cd Hg Cr Br		(mg/kg)	Remark ⁽³⁾	Conclusion		
120.	BL	BL	BL	BL	BL	10, 10, 1	20, 70,	PASS
2	BL	BL	BL	BL	BL	& - &	- A	PASS
3	BL	BL	BL	BL	NA	10, 10,	01, 201	PASS
4	BL	BL	BL	BL	NA	4 - 4	.66	PASS
5	BL	BL	BL	BL	NA	10HF -10HF	OFF TOPE	PASS
6	OL	BL	BL	BL	NA	Pb: 29800#	Copper alloy	PASS
7	BL	BL	BL	BL	NA	OHE -OHE	OHE OHE	PASS
8	OL	BL	BL	BL	NA	Pb: 28900#	Copper alloy	PASS
9	BL	BL	BL	BL	BL	all - all	NE -NE	PASS
10	BL	BL	BL	BL	BL	10, 10, 1	0. 70.	PASS
11	BL	BL	BL	BL	BL	40 - 30	de - de	PASS
12	BL	BL	BL	BL	BL	1101 -101 1	Op. 20p.	PASS
13	BL	BL	BL	BL	BL		· - ·	PASS
14	BL	BL	BL	BL	BL	10HF -10HF	OH . 10HF	PASS
15	BL	BL	BL	BL	NA	0 _0 (PASS
16	BL	BL	BL	BL	BL	ME - ME	ME - ME	PASS
17	BL	BL	BL	BL	NA	120 -120 1	20 720	PASS
18	BL	BL	BL	BL	BL	- JE - JE	16 - 16	PASS
19	BL	BL	BL	BL	NA	110, -10, 1	0, 70,	PASS
20	BL	BL	BL	BL	BL	4. 4.	4 4.	PASS
21	BL	BL	BL	BL	NA	1014 1014	Op. 100p.	PASS
22	BL	BL	BL	BL	NA	_		PASS

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No.	120	EDX	(RF Resu	ult ⁽¹⁾	110	Chemical Result (2)	- 1(3)	20 120
	Cd	Hg	Cr	Br	(mg/kg)	Remark ⁽³⁾	Conclusion	
23	BL	BL	BL	BL	Х	PBBs: N.D. PBDEs: N.D.	20, 70,	PASS
24	BL	BL	BL	BL	NA	<u> </u>	<u> </u>	PASS
25	BL	BL	BL	BL	BL	101, -101, 1	1012 4012 V	PASS
26	BL	BL	BL	BL	BL	.00.	.cc.	PASS
27	BL	BL	BL	BL	NA	10/11/10/11	OBL 1081	PASS
28	BL	BL	BL	BL	BL			PASS
29	BL	BL	BL	BL	BL	OHE -OHE	OHE OHE	PASS
30	BL	BL	BL	BL	BL	200 000 1	200	PASS
31	BL	BL	BL	BL	BL	all - all	all -all	PASS
32	BL	BL	BL	BL	NA	10, 10, 1	20. 20.	PASS
33	BL	BL	BL	BL	BL	& - &	16 - 16	PASS
34	BL	BL	BL	BL	BL	11012 -11012 V	OF 201	PASS
35	BL	BL	BL	BL	NA	2, - 2,	· - ·	PASS
36	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	$O_{H_{I}}$ $\frac{1}{2}O_{H_{I}}$	PASS
37	BL	BL	BL	BL	BL	/ /.	, - ,.	PASS
38	BL	BL	BL	BL	BL	10 Mg - 10 Mg.	0HE -10HE	PASS
39	BL	BL	BL	BL	BL	2 2	2	PASS
40	BL	BL	BL	BL	BL	ME - ME	ME - ME	PASS
41	BL	BL	BL	BL	BL	10 -10 1	20 720	PASS
42	BL	BL	BL	BL	BL	de - de	JE - JE	PASS
43	BL	BL	BL	BL	BL	10, 10, 1	0, 40,	PASS
44	BL	BL	BL	BL	BL	4. 4.	J J.	PASS
45	BL	BL	BL	BL	BL	10/10/10/10/10	OH . 10h	PASS
46	OL	х	BL	BL	NA	Pb: 26800 [#] Cd: 36	Copper alloy	PASS
47	BL	BL	BL	BL	NA	1011-1011	0H2 10H2	PASS
48	BL	BL	BL	BL	BL	0 0		PASS



12 12		EDXRF Result (1)				Chemical Result (2)	(2)	20 00
No.	No. Pb Cd		Hg Cr		Br	(mg/kg)	Remark ⁽³⁾	Conclusion
49	BL	BL	BL	BL	BL	10, -10, 12	2, 40,	PASS
50	BL	BL	BL	BL	BL	4 4.	4 4.	PASS
51	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	Oly Oly	PASS
52	BL	BL	BL	BL	NA	4 4.	6 - 6	PASS
53	BL	BL	BL	BL	BL	10Hr -10Hr 1	740 TOER	PASS
54	BL	BL	BL	BL	BL			PASS
55	BL	BL	BL	BL	BL	WE - WE	Mr Mr.	PASS
56	BL	BL	BL	BL	NA	20 0	700	PASS
57	BL	BL	BL	BL	BL	- HE	JE - JE	PASS
58	BL	BL	BL	BL	NA	10, -10, 13	2. 70.	PASS
59	BL	BL	BL	BL	NA	36 - 36	& - &	PASS
60	BL	BL	BL	BL	BL	110 10 10 11	OL 2019	PASS
61	BL	BL	BL	BL	NA	2 2.	6 - 6	PASS
62	BL	BL	BL	BL	NA	10HP -10HP	7HC - 0HC	PASS
63	BL	BL	BL	BL	BL	2 2	2	PASS
64	BL	BL	BL	BL	BL	ME - ME	ME -ME	PASS
65	BL	BL	BL	BL	BL	12 72 12	200	PASS
66	BL	BL	BL	BL	NA	Je - Je	de - de	PASS
67	BL	BL	BL	BL	NA	10, 10, 1	2, 90,	PASS
68	BL	BL	BL	BL	BL	6 - 6	4 - 4	PASS



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Remark:

- (1) ①Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd, Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).
 - 2OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.
 - ③The EDXRF screening test for RoHS elements The reading may be different to the actual content in the sample be of non-uniformity composition.

<u>'</u>	, , ,		
Element	Polymer	Metal	Composite Materials
Cd	BL ≤(70-3σ)< X <(130+3σ)≤ OL	BL ≤(70-3σ)< X <(130+3σ)≤ OL	LOD < X <(150+3σ)≤ OL
DL	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X
Pb	SOL SOL	OL	<(1500+3σ)≤ OL
1012	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(700-3σ)< X <(1300+3σ)≤	BL ≤(500-3σ)< X
Hg	OL	OL	<(1500+3σ)≤ OL
Br	BL ≤ (300-3σ)< X	NA	BL ≤ (250-3σ)< X
Cr	BL ≤ (700-3σ)< X	BL ≤ (700-3σ)< X	BL ≤ (500-3σ)< X

Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

- (2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than MDL).
 - ②Unit and MDL (Method detection limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	8	5	5

3According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

- According to IEC 62321-3-1:2013, this column represents the results of wet chem test.
- (3) This column represents the exempted decoration of material or other related testing sample's information. According to the declaration from the client, Lead in specimen(s) is exempted by RoHS Directive (2011/65 / EU) annex III and its amendment base on:
 - Copper alloy containing up to 4 % lead by weight.



(2) Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Substances	DBP	BBP	DEHP	DIBP	0
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	all all
Limit (mg/kg)	1000	1000	1000	1000	Conclusion
MDL (mg/kg)	20	20	20	20	A 3
Material No.	ADIL ADIL	Result	(mg/kg)	John Holes	POLE POL
, 1	N.D.	N.D.	N.D.	N.D.	PASS
01112 01111	N.D.	N.D.	N.D.	N.D.	PASS
9	N.D.	N.D.	N.D.	N.D.	PASS
10	N.D.	N.D.	N.D.	N.D.	PASS
11	N.D.	N.D.	N.D.	N.D.	PASS
12	N.D.	N.D.	N.D.	N.D.	PASS
13	N.D.	N.D.	N.D.	N.D.	PASS
14	N.D.	N.D.	N.D.	N.D.	PASS
16	N.D.	N.D.	N.D.	N.D.	PASS
18	N.D.	N.D.	N.D.	N.D.	PASS
20	N.D.	N.D.	N.D.	N.D.	PASS
23	N.D.	N.D.	N.D.	N.D.	PASS
25	N.D.	N.D.	N.D.	N.D.	PASS
26	N.D.	N.D.	N.D.	N.D.	PASS
28	N.D.	N.D.	N.D.	N.D.	PASS
29	N.D.	N.D.	N.D.	N.D.	PASS
30	N.D.	N.D.	N.D.	N.D.	PASS
31	N.D.	N.D.	N.D.	N.D.	PASS
33	N.D.	N.D.	111	N.D.	PASS
34	N.D.	N.D.	81	N.D.	PASS
36	N.D.	N.D.	N.D.	N.D.	PASS

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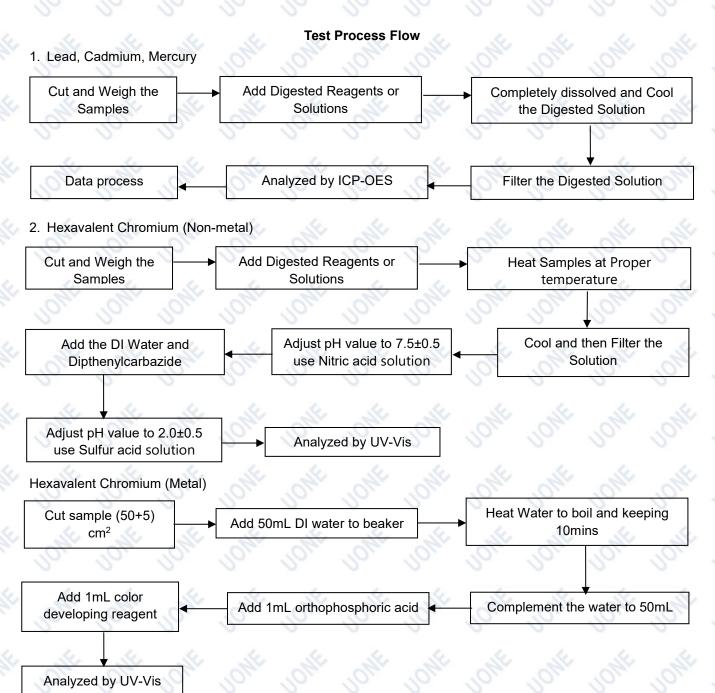


Substances CAS No. Limit (mg/kg) MDL (mg/kg)	DBP 84-74-2 1000 20	85-68-7 1000 20	DEHP 117-81-7 1000 20	DIBP 84-69-5 1000 20	Conclusion						
						Material No.	Result (mg/kg)				10/11/10/1
						37	N.D.	N.D.	N.D.	N.D.	PASS
						38	N.D.	N.D.	N.D.	N.D.	PASS
39	N.D.	N.D.	N.D.	N.D.	PASS						
40	N.D.	N.D.	N.D.	N.D.	PASS						
41	N.D.	N.D.	N.D.	N.D.	PASS						
42	N.D.	N.D.	N.D.	N.D.	PASS						
43	N.D.	N.D.	N.D.	N.D.	PASS						
44	N.D.	N.D.	N.D.	N.D.	PASS						
45	N.D.	N.D.	N.D.	N.D.	PASS						
48	N.D.	N.D.	N.D.	N.D.	PASS						
49	N.D.	N.D.	N.D.	N.D.	PASS						
50	N.D.	N.D.	N.D.	N.D.	PASS						
51	N.D.	N.D.	N.D.	N.D.	PASS						
53	N.D.	N.D.	N.D.	N.D.	PASS						
54	N.D.	N.D.	N.D.	N.D.	PASS						
55	N.D.	N.D.	N.D.	N.D.	PASS						
57	N.D.	N.D.	N.D.	N.D.	PASS						
60	N.D.	N.D.	N.D.	N.D.	PASS						
63	N.D.	N.D.	N.D.	N.D.	PASS						
64	N.D.	N.D.	N.D.	N.D.	PASS						
65	N.D.	N.D.	N.D.	N.D.	PASS						
68	N.D.	N.D.	N.D.	N.D.	PASS						



Note: 1. mg/kg

- mg/kg = milligram per kilogram (ppm).
- 2. MDL= method detection limit.
- 3. N.D.=not detected(less than MDL).



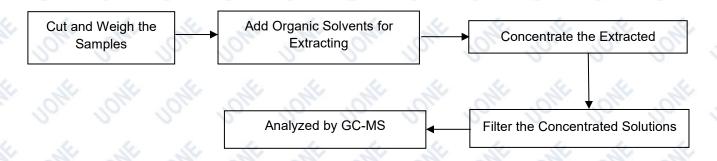
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Test Process Flow (Continued):

3. PBBs & PBDEs, Phthalates



Photo(s) of Sample:



End of Report

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