Test Report

Applicant: Guangzhou Xingyi Electronic Technology Co., Ltd

Contact information: Room 805-808, Room 801, Building 4, No. 1, 3, and 5, Kesheng Road, Guangzhou Private Science and Technology Park, No. 1633 Beitai Road, Baiyun District, Guangzhou City

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

Sample Name	:	QuarkPi-CA2
Model No.	:	QuarkPi-CA2
Trade mark	:	ALIENTEK
Factory	:	Guangzhou P.E.T Precision Electronic Technology Co., Ltd
Address	:	3rd Floor, No. 11 Shunjing Road, Daxiang Village, Renhe Town, Baiyun District, Guangzhou City (Airport Baiyun)
Manufacturer	:	Guangzhou Xingyi Electronic Technology Co., Ltd
Address	:	Room 805-808, Room 801, Building 4, No. 1, 3, and 5, Kesheng Road, Guangzhou Private Science and Technology Park, No. 1633 Beitai Road, Baiyun District, Guangzhou City
Received Date	:	Mar. 4, 2025
Testing Period	:	From Mar. 5, 2025 to Mar. 7, 2025
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	Checked by	Approved by
Lili	Thea	Hedy
Lili Zeng	Thea Ye	Hedy Xu

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Summary of Test Results(Tested parts are required partially by client) :

TEST REQUEST	CONCLUSION
RoHS Directive 2011/65/EU and its subsequent amendments Directive (EU) 2015/863	
(1) To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), 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**

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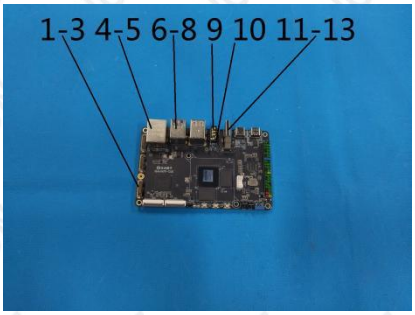
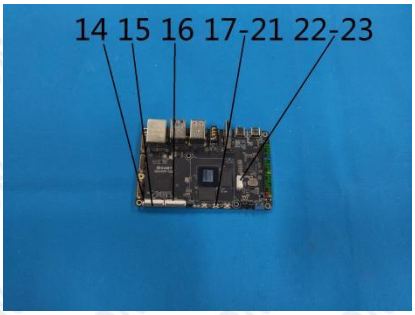
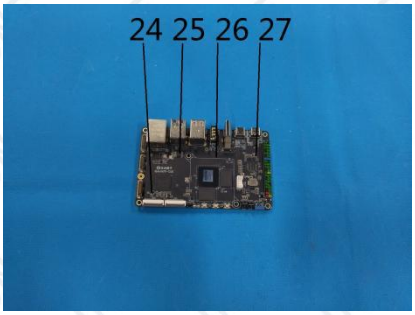
Test Material List

Material No.	Description (Location)	Photo(s) of tested materials
1	Beige-yellow plastic	
2	Brown plastic	
3	Silvery metal (pin)	
4	Silvery metal (shell)	
5	Black plastic	
6	Silvery metal (shell)	
7	Blue plastic (pin holder)	
8	Silvery metal (pin)	
9	Golden metal	
10	Black plastic	
11	Silvery metal (shell)	
12	Black plastic (pin holder)	
13	Silvery metal (pin)	
14	White plastic	
15	Gray-black plastic	
16	Silvery metal (pin)	
17	Beige plastic (button, switch)	
18	Silvery metal (shell, switch)	
19	Silvery metal (foil, switch)	
20	Silvery metal (connector, switch)	
21	White plastic (base, switch)	
22	White plastic (binding post)	
23	Silvery metal (pin)	
24	Black body (triode)	
25	Black body (IC)	
26	Black PCB	
27	Brown body (capacitor)	

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Test Result(s):

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

Test Method: 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.

No.	EDXRF Result (1)					Chemical Result (2) (mg/kg)	Remark(3)	Conclusion
	Pb	Cd	Hg	Cr	Br			
1	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
2	BL	BL	BL	BL	BL	—	—	PASS
3	BL	BL	BL	BL	NA	—	—	PASS
4	BL	BL	BL	BL	NA	—	—	PASS
5	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
6	BL	BL	BL	BL	NA	—	—	PASS
7	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
8	BL	BL	BL	BL	NA	—	—	PASS
9	BL	BL	BL	BL	NA	—	—	PASS
10	BL	BL	BL	BL	BL	—	—	PASS
11	BL	BL	BL	BL	NA	—	—	PASS
12	BL	BL	BL	BL	BL	—	—	PASS
13	BL	BL	BL	BL	NA	—	—	PASS
14	BL	BL	BL	BL	BL	—	—	PASS
15	BL	BL	BL	BL	BL	—	—	PASS
16	BL	BL	BL	BL	NA	—	—	PASS
17	BL	BL	BL	BL	BL	—	—	PASS
18	BL	BL	BL	BL	NA	—	—	PASS
19	BL	BL	BL	BL	NA	—	—	PASS
20	BL	BL	BL	BL	NA	—	—	PASS
21	BL	BL	BL	BL	BL	—	—	PASS
22	BL	BL	BL	BL	BL	—	—	PASS

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No.	EDXRF Result (1)					Chemical Result (2) (mg/kg)	Remark(3)	Conclusion
	Pb	Cd	Hg	Cr	Br			
23	BL	BL	BL	BL	NA	—	—	PASS
24	BL	BL	BL	BL	BL	—	—	PASS
25	BL	BL	BL	BL	BL	—	—	PASS
26	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
27	BL	BL	BL	BL	BL	—	—	PASS

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.

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
Pb	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(500-3σ)< X <(1500+3σ)≤ OL
Hg	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(700-3σ)< X <(1300+3σ)≤ OL	BL ≤(500-3σ)< X <(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

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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.
④ 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.

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

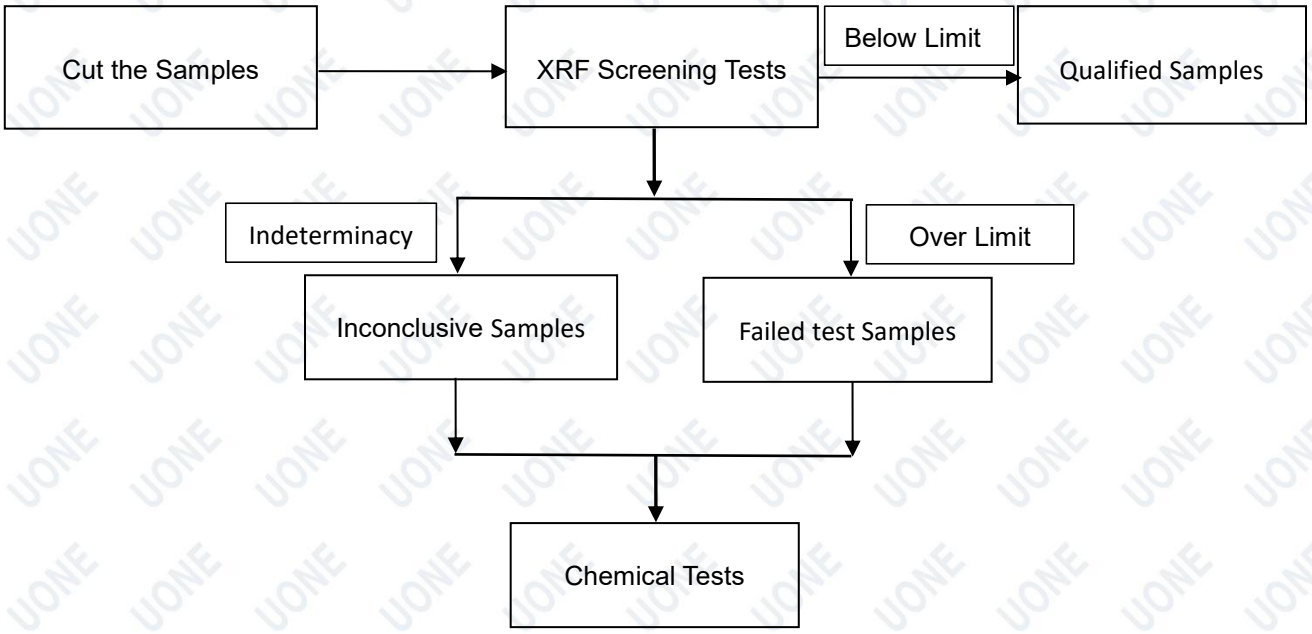
Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
MDL (mg/kg)	20	20	20	20	
Material No.	Result (mg/kg)				
1	N.D.	N.D.	N.D.	N.D.	PASS
2	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	PASS
7	N.D.	N.D.	N.D.	N.D.	PASS
10	N.D.	N.D.	N.D.	N.D.	PASS
12	N.D.	N.D.	N.D.	N.D.	PASS
14	N.D.	N.D.	N.D.	N.D.	PASS
15	N.D.	N.D.	N.D.	N.D.	PASS
17	N.D.	N.D.	N.D.	N.D.	PASS
21	N.D.	N.D.	N.D.	N.D.	PASS
22	N.D.	N.D.	N.D.	N.D.	PASS
24	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
27	N.D.	N.D.	N.D.	N.D.	PASS

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

Test Process Flow

1. XRF scan



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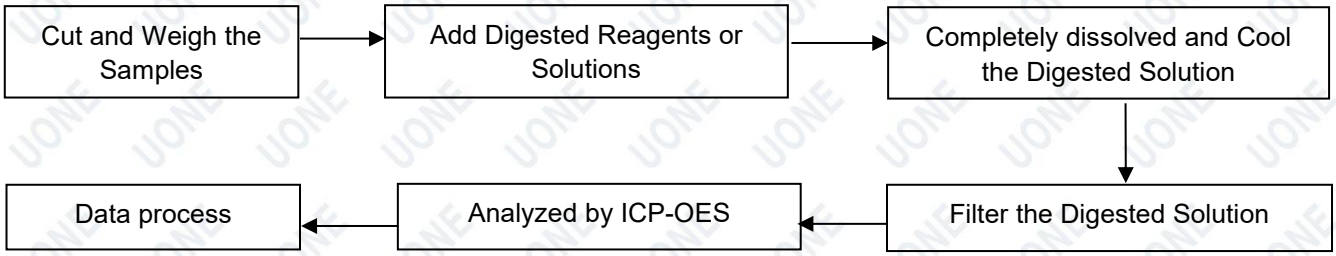
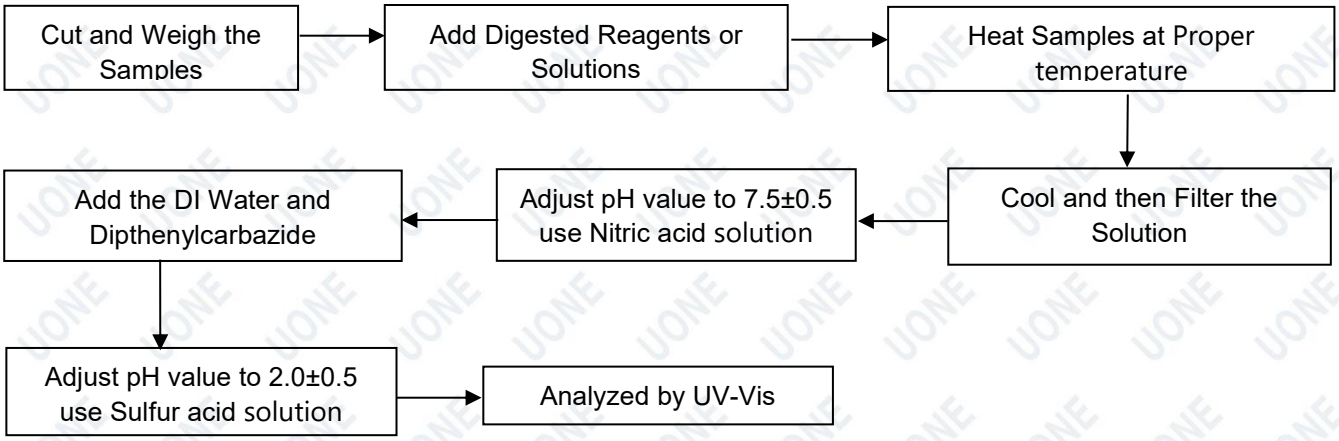
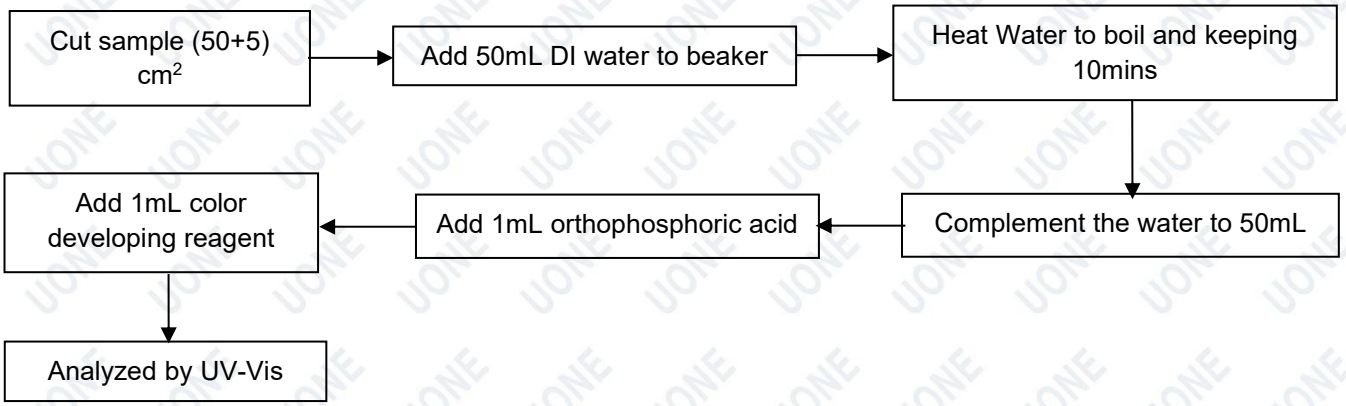
2. Lead, Cadmium, Mercury



3. Hexavalent Chromium (Non-metal)



Hexavalent Chromium (Metal)



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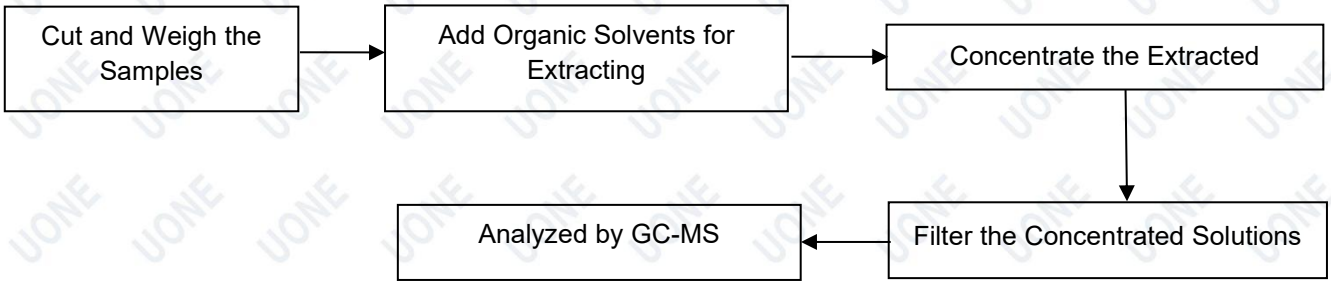
4. PBBs & PBDEs, Phthalates



Photo(s) of Sample:

End of Report

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Statement

1. The information listed on the first page of this test report, except the date of receipt, test date, test result and test conclusion, is provided by the client. The client shall be responsible for the representativeness of sample and authenticity of materials, for which UONE shall bear no responsibilities.

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