

# Test Report



Report No. A2230619017101003

Company Name ANHUI ZHAN BANG ELECTRONIC TECHNOLOGY CO., LTD  
shown on Report

Address NO.31, PENGJU ROAD, GUANGDE ECONOMIC DEVELOPMENT ZONE, XUANCHENG CITY, ANHUI PROVINCE

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name LEAD FREE HASL PRINTED CIRCUIT BOARD

Sample Received Date Nov. 24, 2023

Testing Period Nov. 24, 2023 to Nov. 28, 2023

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

Test Method Please refer to the following page(s).

Test Result(s) Please refer to the following page(s).

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### Conclusion

Tested Sample	According to standard/directive	Result
Submitted Sample	RoHS Directive 2011/65/EU with amendment (EU) 2015/863	PASS

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PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.



Approved by

Yin Chi

Date

Nov. 28, 2023

Yin Chi

Lab Authorized Signatory

No. R465022511

Centre Testing International (Ningbo) Co.,Ltd.

1-2F, Eastern Factory, No.76, Jinghua Road, High-Tech Zone, Ningbo, Zhejiang, China

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**Test Method**

Test Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS

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**Test Result(s)**

Tested Item(s)	Result	MDL	Limit
	003		
Lead (Pb)	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg	1000 mg/kg
Tested Item(s)	Result	MDL	Limit
	003		
<b>Polybrominated Biphenyls (PBBs)</b>			
Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	5 mg/kg	
Tested Item(s)	Result	MDL	Limit
	003		
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	5 mg/kg	

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**Test Result(s)**

Tested Item(s)	Result	MDL	Limit
	003		
<b>Phthalates (DBP, BBP, DEHP, DIBP)</b>			
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg

**Sample/Part Description**

No.	CTI Sample ID	Description
1	003	PCB(Tested as a whole)

**Remark:**     **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**  
**-The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.**  
 -MDL = Method Detection Limit  
 -N.D. = Not Detected (<MDL )  
 -mg/kg = ppm = parts per million  
 -1000 mg/kg = 0.1%

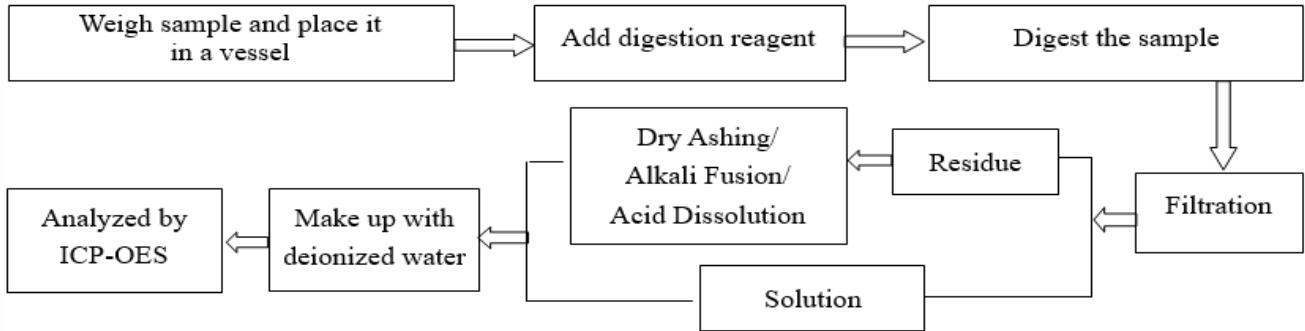
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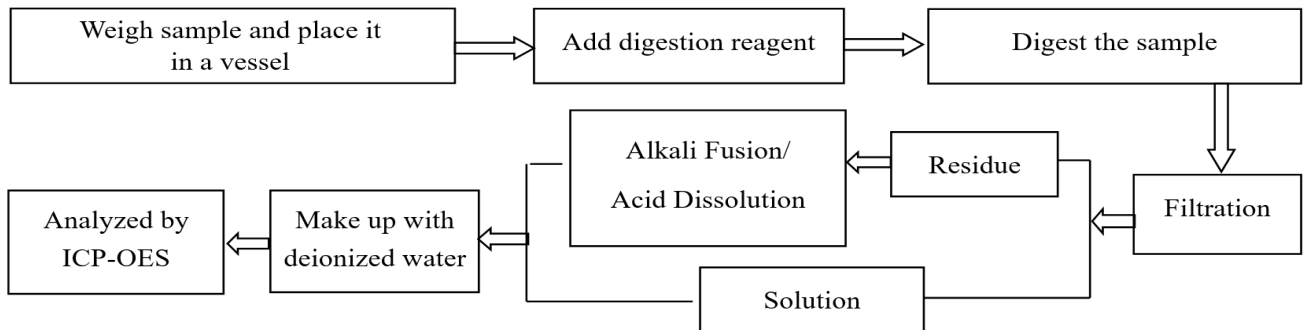
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**Test Process**

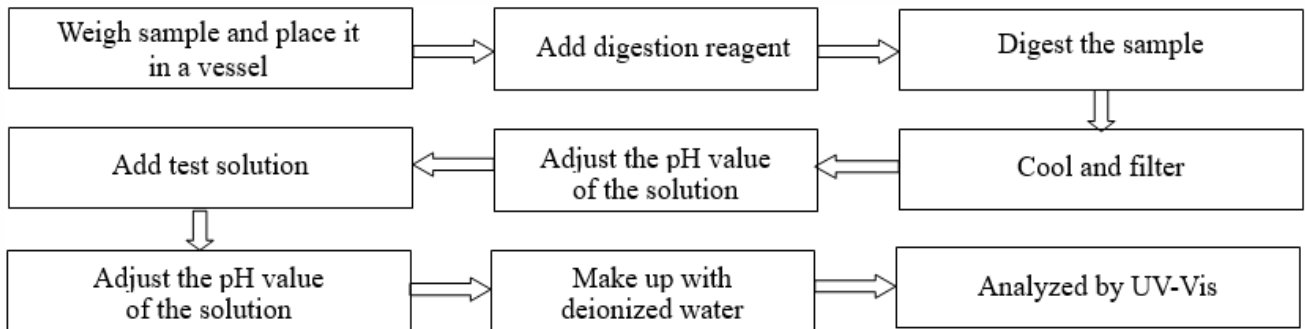
**1. Lead (Pb), Cadmium (Cd), Chromium (Cr)**



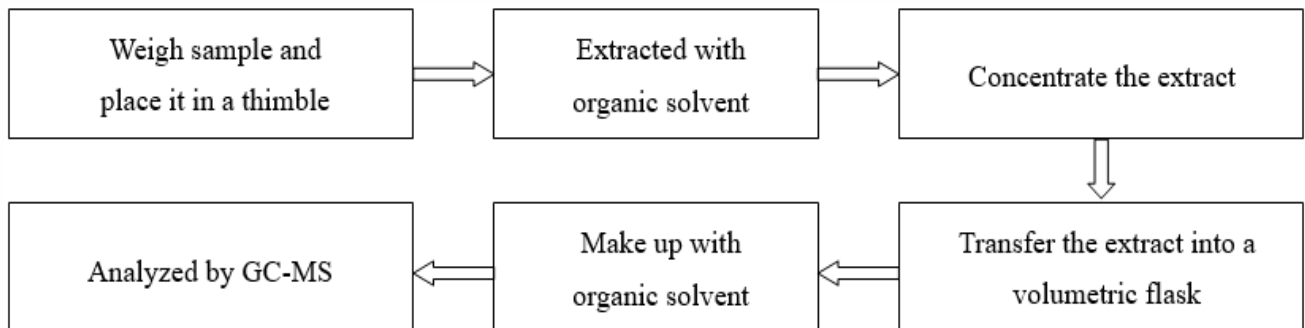
**2. Mercury (Hg)**



**3. Hexavalent Chromium (Cr(VI))**



**4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)**

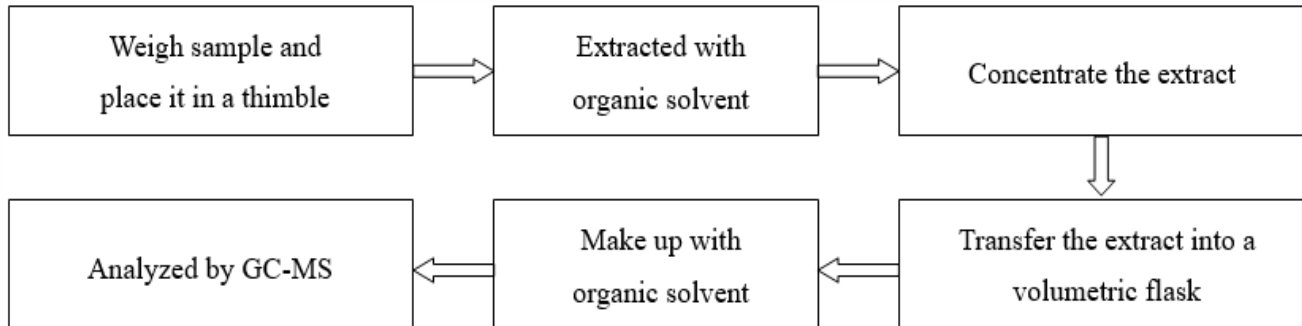


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## 5. Phthalates (DBP, BBP, DEHP, DIBP)



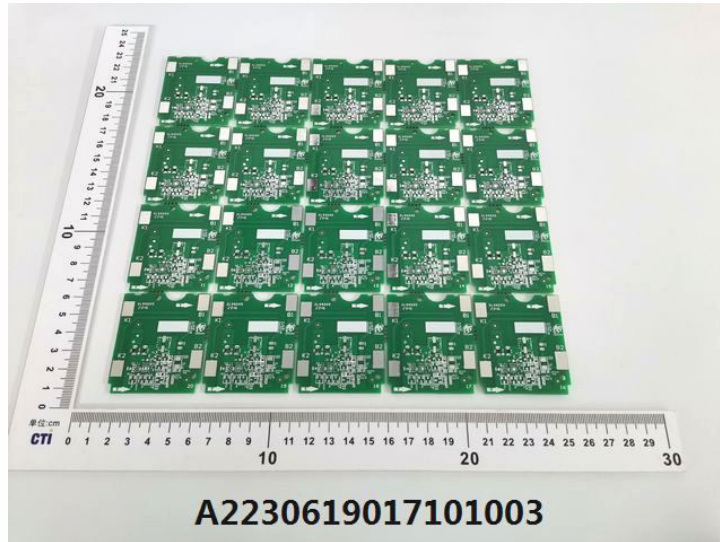
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## Photo(s) of the sample(s)



### Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Without written approval of CTI, this report can't be reproduced except in full;
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* End of report \*\*\*