



# Test Report

Report No. A2240413041127

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**Company Name** DONGGUAN AILLEN ELECTRONIC TECHNOLOGY CO., LTD.  
**shown on Report**  
**Address** NO.28, JINGGANG ZHONG ROAD, SHATIAN TOWN, DONGGUAN CITY,  
GUANGDONG PROVINCE, P. R. CHINA

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

**Sample Name** Lead-free resistor  
**Sample Received Date** Jul. 15, 2024  
**Testing Period** Jul. 15, 2024 to Jul. 24, 2024

**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/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

Date

Jul. 24, 2024

Hill Zheng  
Technical Manager

No. R677501838

Centre Testing International Group Co., Ltd.

CIT Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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Test Method

Tested 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
	1		
Lead (Pb)	N.D.	10 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	10 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	10 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	20 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL	Limit
	1		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	100 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	100 mg/kg	
Tribromobiphenyl	N.D.	100 mg/kg	
Tetrabromobiphenyl	N.D.	100 mg/kg	
Pentabromobiphenyl	N.D.	100 mg/kg	
Hexabromobiphenyl	N.D.	100 mg/kg	
Heptabromobiphenyl	N.D.	100 mg/kg	
Octabromobiphenyl	N.D.	100 mg/kg	
Nonabromobiphenyl	N.D.	100 mg/kg	
Decabromobiphenyl	N.D.	100 mg/kg	

Tested Item(s)	Result	MDL	Limit
	1		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	100 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	100 mg/kg	
Tribromodiphenyl ether	N.D.	100 mg/kg	
Tetrabromodiphenyl ether	N.D.	100 mg/kg	
Pentabromodiphenyl ether	N.D.	100 mg/kg	
Hexabromodiphenyl ether	N.D.	100 mg/kg	
Heptabromodiphenyl ether	N.D.	100 mg/kg	
Octabromodiphenyl ether	N.D.	100 mg/kg	
Nonabromodiphenyl ether	N.D.	100 mg/kg	
Decabromodiphenyl ether	N.D.	100 mg/kg	

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Tested Item(s)	Result	MDL	Limit
	1		
Phthalates (DBP, BBP, DEHP, DIBP)			
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
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

## Sample/Part Description

No.	CTI Sample ID	Description
1	1	Blue resistance(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%

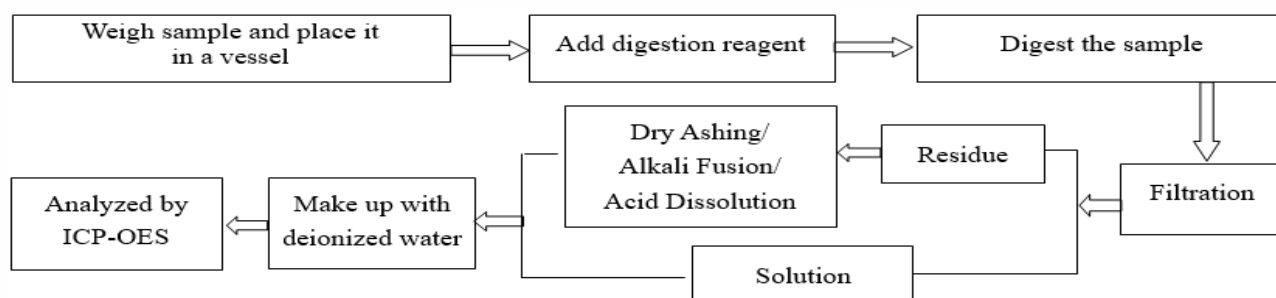
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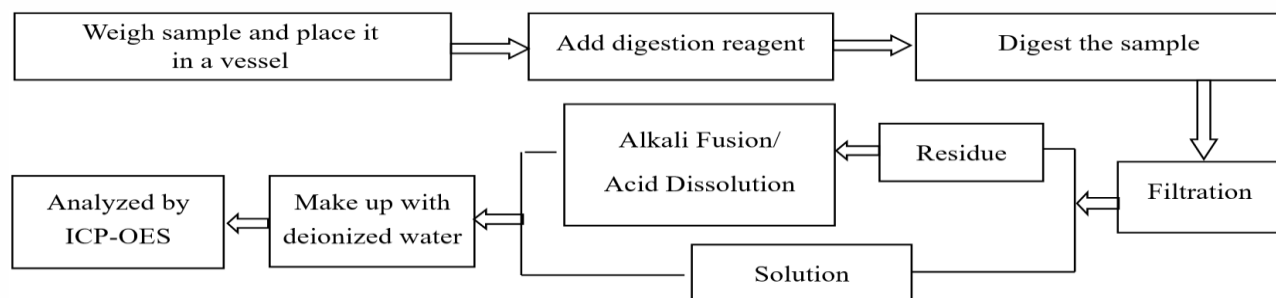
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## Test Process

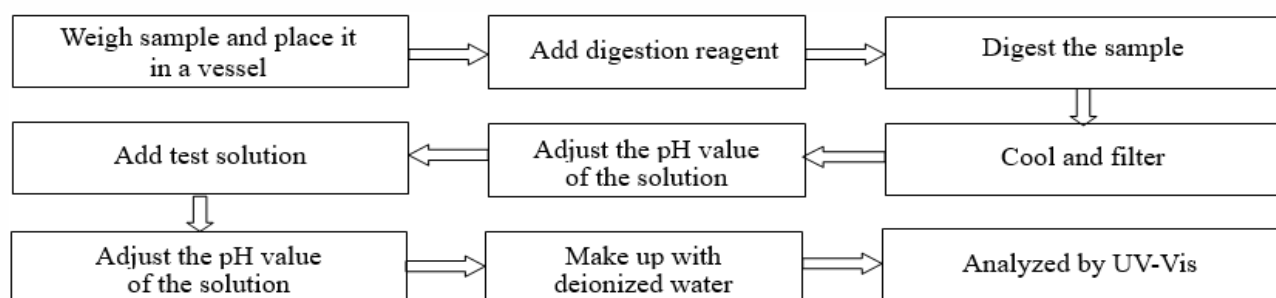
### 1. Lead (Pb), Cadmium (Cd), Chromium(Cr)



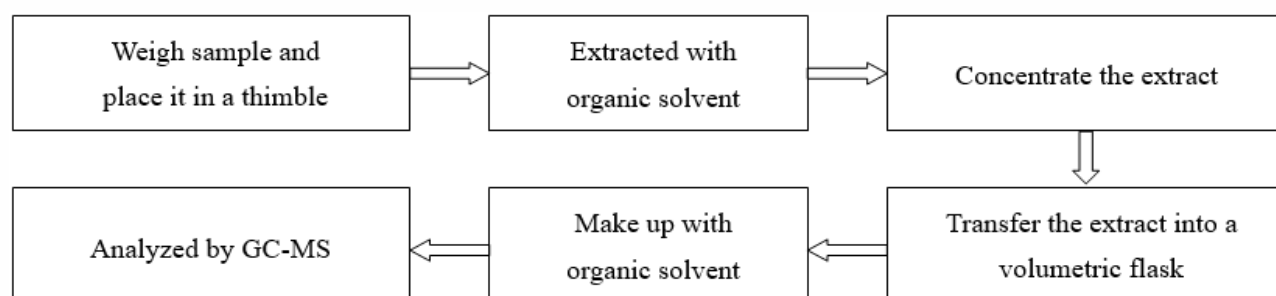
### 2. Mercury (Hg)



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



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

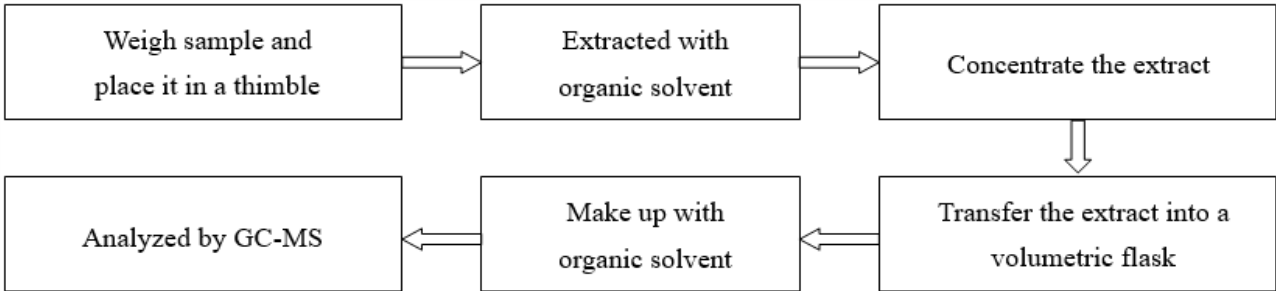


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5. Phthalates (DBP, BBP, DEHP, DIBP)



华测检测有限公司

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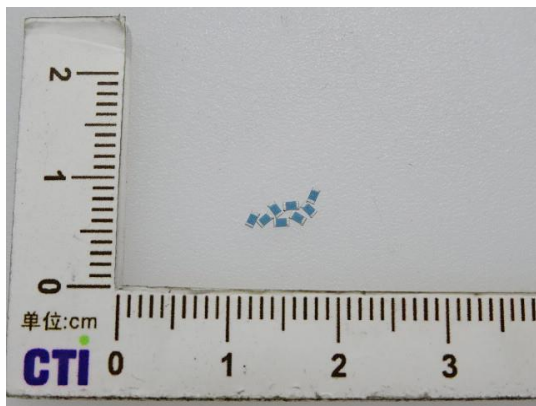
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## Photo(s) of the sample(s)

Final Product

1



### 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. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ( $w=0$ ) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. 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 \*\*\*