

Test Report



Report No. A2230402541101001R1

Company Name shown on Report DONG GUAN KOHOKU ELECTRONICS CO.,LTD

Address NO. 1, XIALINGBEI SECTION, LIAOCHENG MIDDLE ROAD, LIAOBU TOWN, DONGGUAN CITY

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

Sample Name LEAD WIRE
Part No. TPCH
Color Silver White
Item No. KG5L1437D084/H321

Sample Received Date Aug. 10, 2023
Testing Period Aug. 10, 2023 to Aug. 15, 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), Beryllium(Be), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I), Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA), Red phosphorus in the submitted sample(s).

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

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

Conclusion

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

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 Hill Zheng
Hill Zheng
Technical Manager

Date Aug. 17, 2023

No. R411771626

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. 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 62321-7-1:2015	UV-Vis
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
Beryllium(Be)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
Fluorine (F)	Refer to EN 14582:2016	IC
Chlorine (Cl)	Refer to EN 14582:2016	IC
Bromine (Br)	Refer to EN 14582:2016	IC
Iodine (I)	Refer to EN 14582:2016	IC
Perfluorooctane Sulfonates(PFOS)*	Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
Perfluorooctanoic Acid(PFOA)*	Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
Red phosphorus*	Refer to GB/T 6040-2002, GB/T 9722-2006, GB/T 17359-2012, EPA 6010D:2014	ICP-OES, PY-GC-MS, FTIR, EM

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Test Result(s)

Tested Item(s)	Result	MDL	Limit
	001		
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. ▼	0.10 µg/cm ² (LOQ)	1000 mg/kg
Tested Item(s)	Result	MDL	Limit
	001		
Polybrominated Biphenyls (PBBs)*			
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
	001		
Polybrominated Diphenyl Ethers (PBDEs)*			
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
	001		
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
Tested Item(s)	Result	MDL	
	001		
Beryllium (Be)	N.D.	2 mg/kg	
Tested Item(s)	Result	MDL	
	001		
Fluorine (F)	N.D.	10 mg/kg	
Chlorine (Cl)	N.D.	10 mg/kg	
Bromine (Br)	N.D.	10 mg/kg	
Iodine (I)	N.D.	10 mg/kg	
Tested Item(s)	Result	MDL	
	001		
Perfluorooctane Sulfonates (PFOS)*	N.D.	0.010 mg/kg	
Tested Item(s)	Result	MDL	
	001		
Perfluorooctanoic Acid (PFOA)*	N.D.	0.010 mg/kg	
Tested Item(s)	Result	MDL	
	001		
Red phosphorus*	N.D.	500 mg/kg	

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Sample/Part Description

No.	CTI Sample ID	Description
1	001	Metal with silvery plating

Remark: The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Beryllium.

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 $\mu\text{g}/\text{cm}^2$

-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10 $\mu\text{g}/\text{cm}^2$. The coating is considered a non-Cr(VI) based coating.

Note: -*Indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.

-This testing report revised “Color” and deleted “Material” based on the original report of No. A2230402541101001. This testing report displaces the original one which was invalid since the date of this testing report released.

-The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.

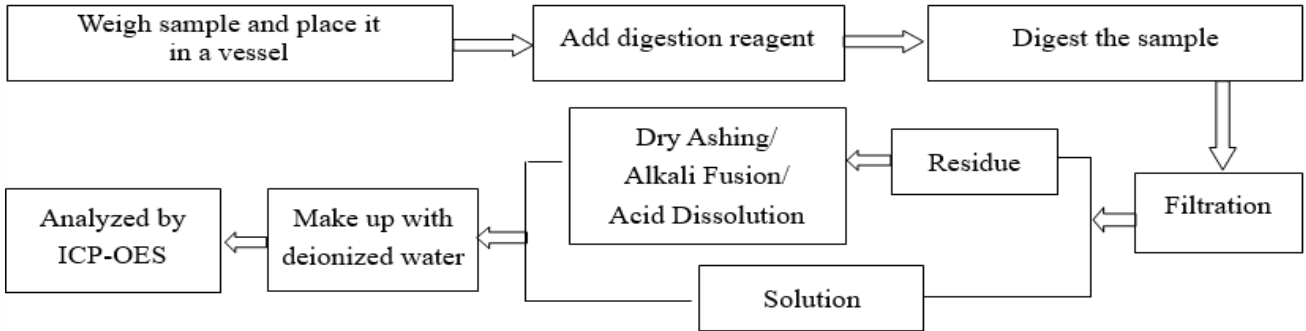
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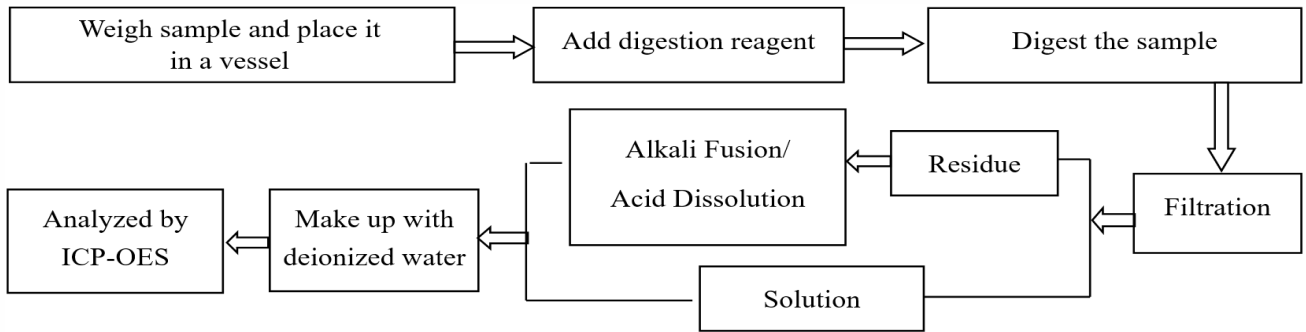
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Test Process

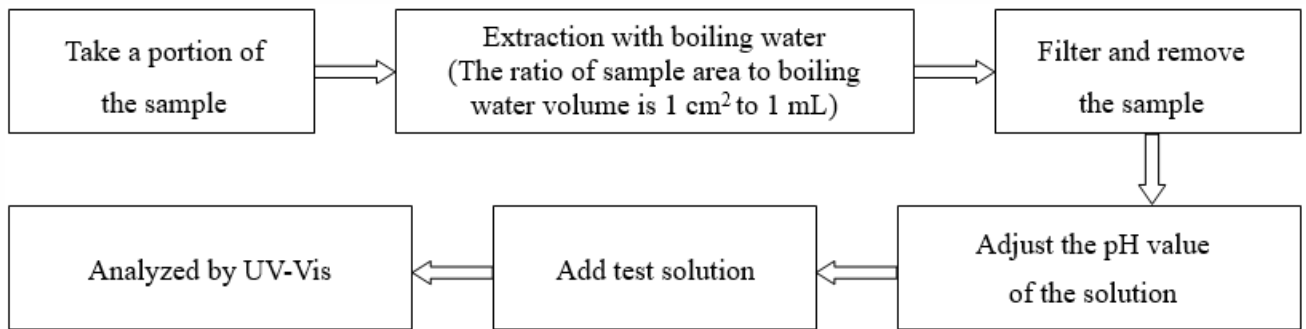
1. Lead (Pb), Cadmium (Cd)



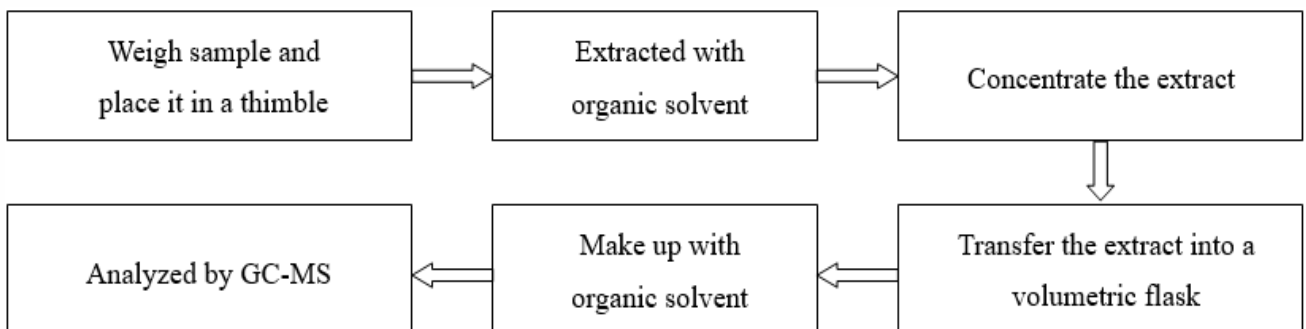
2. Mercury (Hg)



3. Hexavalent Chromium (Cr(VI))



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

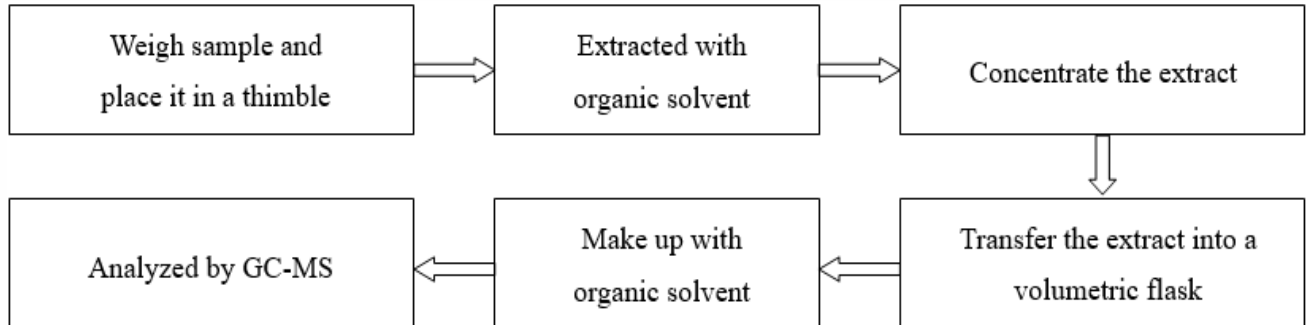


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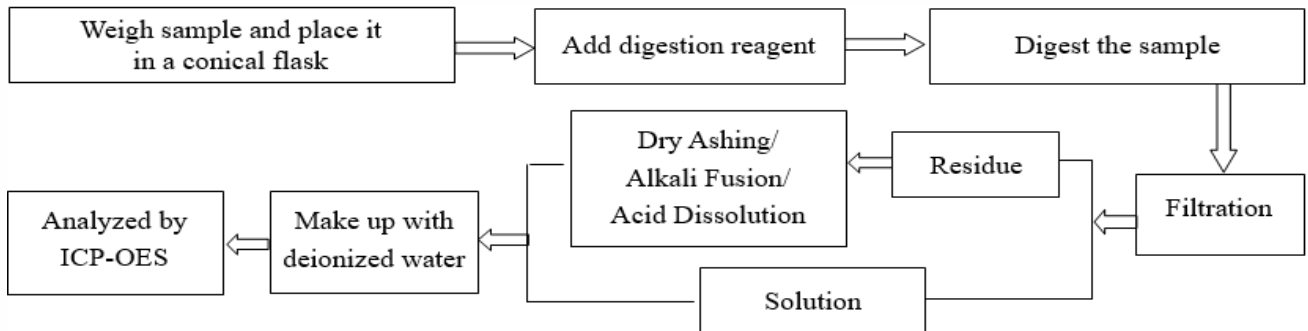
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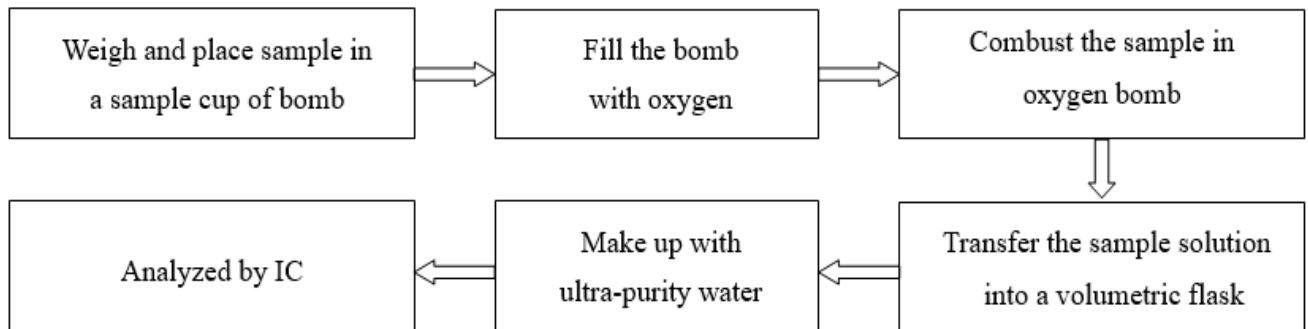
5. Phthalates (DBP, BBP, DEHP, DIBP)



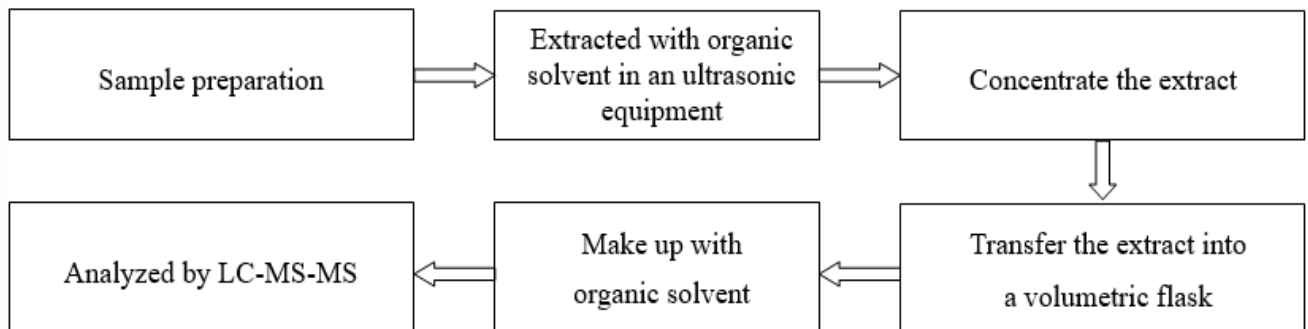
6. Beryllium(Be)



7. Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I)



8. Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA)

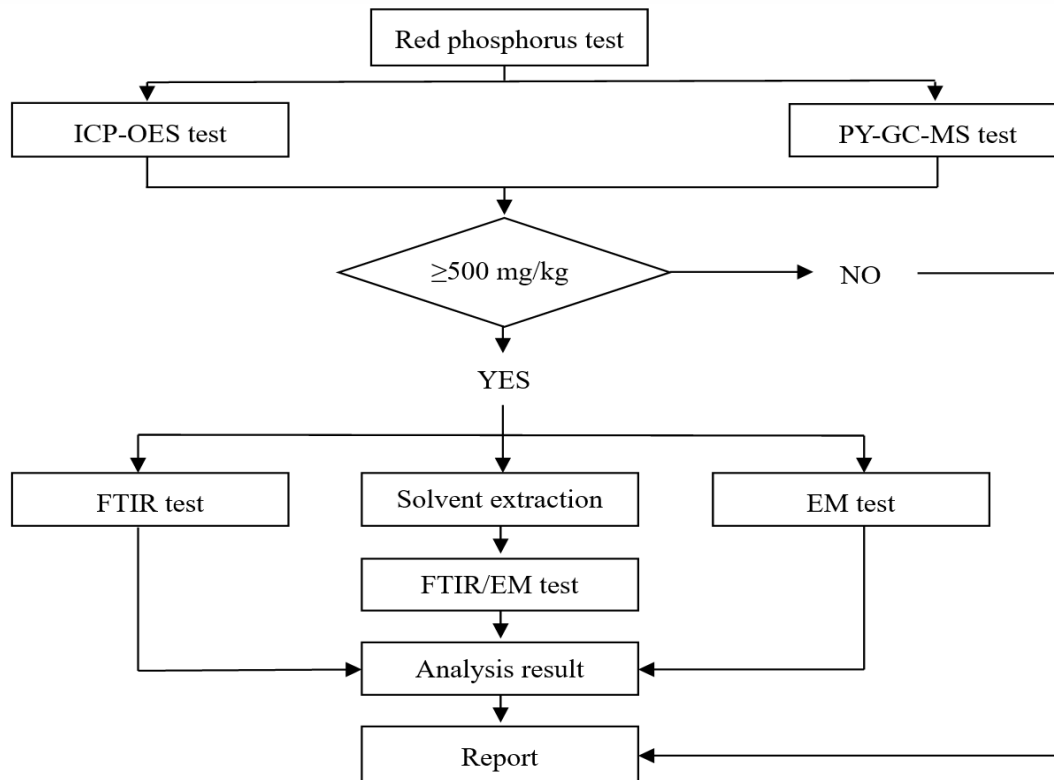


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9. Red phosphorus



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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 ***