

Test Report

Report No.: U00905200529613E

Query Password: QW9610

Date: Jun. 3, 2020

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Applicant: Guangzhou Aipu EleGtron TeGhndogy Co.,Ltd**Contact information:** 3rd Floor,Building 4,HEDY Kechuang Park,No.63,Punan Road,Huangpu District,
Guangzhou city ,China**The following sample(s) was (were) submitted and identified by client as:**

Sample Description : DC-DC POWER MODULE

Model No. : FN1-05S05A,FN1-05S05B,FN1-12S05A,FN1-24S05A,FN1-05S05AN,FN1-12
S05AN,FN1-24S05AN,FN1-05S05BN,FN1-05S05B3N,FN1-12S05BN,FN1-2
4S05BN

Sample Received Date : May 29, 2020

Testing Period : From May 29, 2020 to Jun. 3, 2020

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

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

Signed for and on behalf of Shen Zhen UONE Test Co., LTD.

Prepared by

Checked by

Approved by

Marcia Deng_____
Nora Deng_____
Levent Liang

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Summary of test results:**TEST REQUEST**

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

(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test

CONCLUSION**PASS****PASS**

DRAFT

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Test Material List

Material No.	Description (Location)	Photo(s) of tested materials
1	Black plastic shell	
2	Black glue	
3	Silver metal pin	
4	Capacitor (PCB)	
5	Silver solder (PCB)	
6	Resistance (PCB)	
7	Transistor (PCB)	
8	Green PCB	
9	Copper color metal coil	
10	Green metal coil	
11	Purple metal coil	
12	Gray magnet	

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	BL	—	—	PASS
2	BL	BL	BL	BL	BL	—	—	PASS
3	BL	BL	BL	BL	NA	—	—	PASS
4	BL	BL	BL	BL	BL	—	—	PASS
5	BL	BL	BL	BL	NA	—	—	PASS
6	BL	BL	BL	BL	BL	—	—	PASS
7	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			
8	BL	BL	BL	BL	BL	—	—	PASS
9	BL	BL	BL	BL	NA	—	—	PASS
10	BL	BL	BL	BL	NA	—	—	PASS
11	BL	BL	BL	BL	NA	—	—	PASS
12	BL	BL	BL	BL	BL	—	—	PASS

Remark:

(1) ① Results 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).

② OL = Over Limit, BL = Below Limit, X = Inconclusive, NA = Not Applicable.

③ The 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	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

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 RL).

② Unit and RL (Report 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
RL	2	2	2	2	5	5

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③ According 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	
RL (mg/kg)	30	30	30	30	
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
4	N.D.	N.D.	N.D.	N.D.	PASS
6	N.D.	N.D.	N.D.	N.D.	PASS
7	N.D.	N.D.	N.D.	N.D.	PASS
8	N.D.	N.D.	N.D.	N.D.	PASS
12	N.D.	N.D.	N.D.	N.D.	PASS

- Note:**
1. mg/kg = milligram per kilogram (ppm).
 2. RL = report limit.
 3. N.D.=not detected(less than RL).

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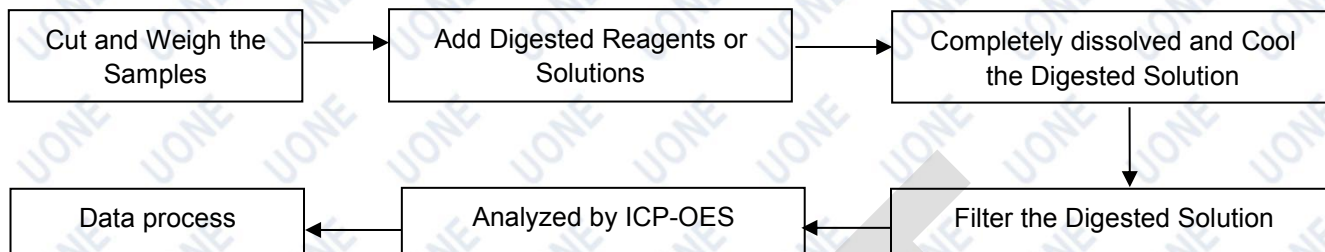
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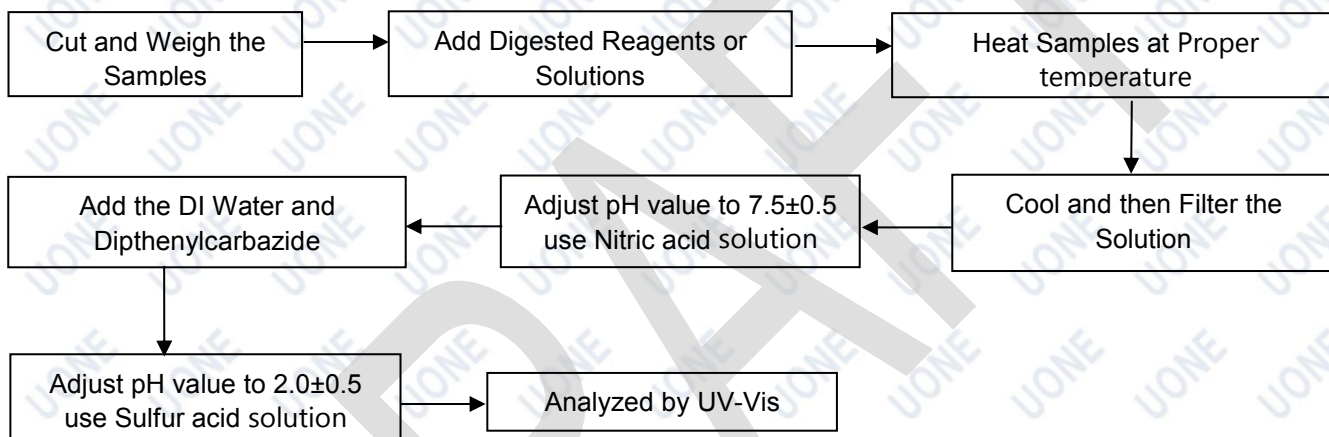
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Test Process Flow

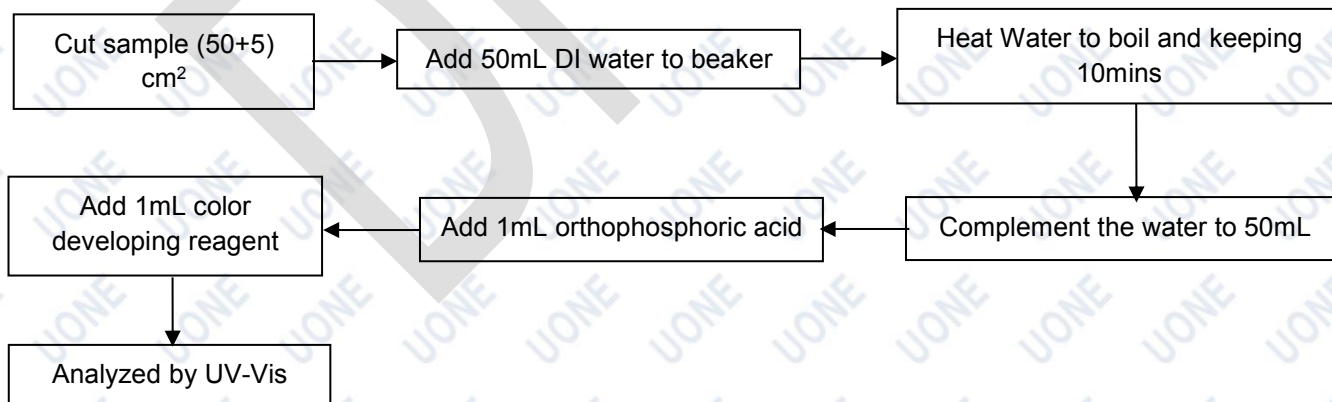
1. Lead, Cadmium, Mercury



2. Hexavalent Chromium (Non-metal)



Hexavalent Chromium (Metal)



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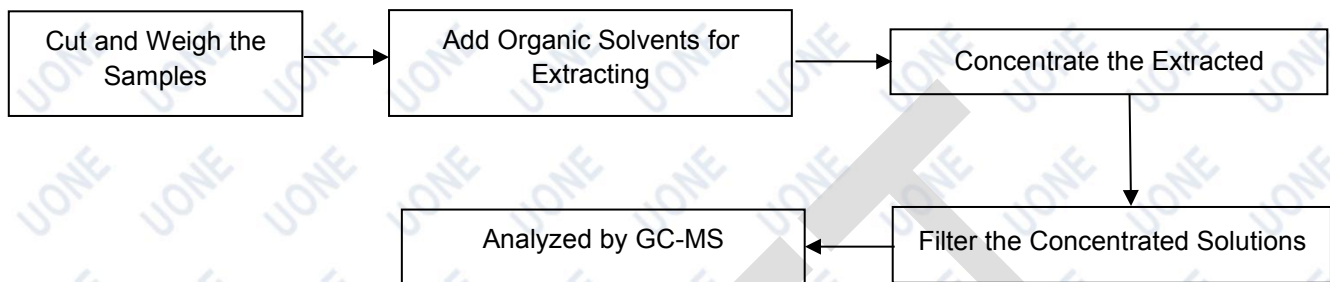
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Test Process Flow (Continued):

3. PBBs & PBDEs, Phthalates



Photo(s) of Sample:



End of Report

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