

TEST REPORT

Applicant: Coolgear Inc
Address: 5120 110th Ave N Clearwater FL 33760 U.S.A
Manufacturer: Coolgear Inc
Address: 5120 110th Ave N Clearwater FL 33760 U.S.A

The following sample(s) was /were submitted and identified on behalf of the clients as:

Sample Name: USB Type-C PD Charger

Trademark: 

Model Number: CG-PD99PPS, WTF-PD99UL

Sample Received Date: Dec. 16, 2024

Testing Period: Dec. 16, 2024 - Dec. 24, 2024

Report No.: SiCT2412161862R

Test Requested:

1. As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr)and Bromine(Br)in the submitted sample(s)by XRF.
2. As specified by client, when screening results exceed the XRF screening limit in IEC62321:2013 Edition 1.0, further use of wet chemical methods are required to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutylphthalate (DBP), and Diisobutyl phthalate (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).

Test Conclusion: The test results comply with the limits of RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

Compiled by:



Daisy Wei

Reviewed by:



Sky Wang

Approved by:



Andy Wang/Manager



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen SiCT Technology Co., Ltd.

Test Method:

when screening results exceed the XRF screening limit in IEC 62321-3-1:2013, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs) and Polybrominated Diphenyl Ethers(PBDEs)

1. XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013

Element	Limit of IEC 62321-3-1:2013 (mg/kg)		
	Polymers	Metals	Composite material
Pb	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cd	$BL \leq (70-3\sigma) < X$ $< (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X$ $< (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma)$ $\leq OL$
Hg	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	/	$BL \leq (250-3\sigma) < X$

Note: BL=Under the XRF screening limit OL=Over the XRF screening limit
 X=The symbol "X" marks the region where further investigation is necessary.
 3σ =The reproducibility of analytical instruments LOD= Detection limit

2. Chemical Test

Test item	Test method	Test instrument	MDL	Limit
Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES	10 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES	10 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	10 mg/kg	1000 mg/kg
Hexavalent Chromium(Cr(VI))	IEC 62321-7-1:2015 Ed.1.0	UV-Vis	0.10 μg/cm ²	1000 mg/kg
	IEC 62321-7-2:2017 Ed.1.0		10 mg/kg	
Polybrominated Biphenyls(PBBs)	IEC 62321-6:2015 Ed.1.0	GC-MS	100 mg/kg	1000 mg/kg
Polybrominated, Diphenyl Ethers(PBDEs)	IEC 62321-6:2015 Ed.1.0	GC-MS	100 mg/kg	1000 mg/kg
Bis-(2-ethylhexyl) Phthalate (DEHP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Benzyl butyl Phthalate (BBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Dibutyl Phthalate (DBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg
Diisobutyl Phthalate(DIBP)	IEC 62321-8:2017 Ed.1.0	GC-MS	50 mg/kg	1000 mg/kg

Test Results:

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
1.	Ferrous metal shell	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
2.	Label sticker	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
3.	Black metal screws	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
4.	Silver metal screws	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
DIBP	/	/			

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
5.	PCB	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	IN	N.D.	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
6.	Chip	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
7.	Capacitor	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
8.	Resistor	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
9.	Indicator light	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
10.	Green plastic terminal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
11.	Black plastic terminal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
12.	Metal terminal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
13.	DC metal port	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
14.	DC plastic seat	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
15.	USB metal port	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
16.	USB plastic card slot	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	

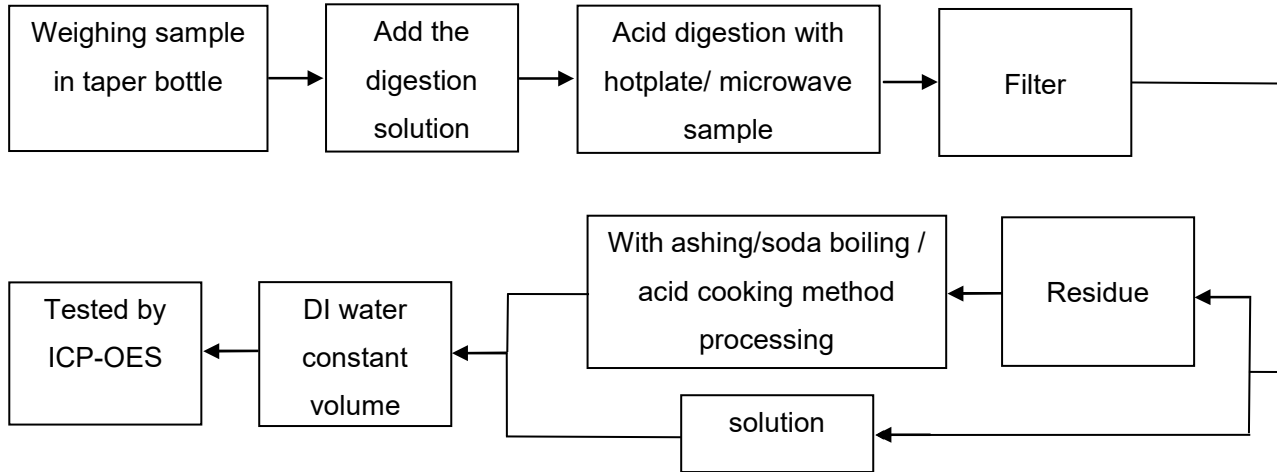
Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
17.	Type-C metal port	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
18.	Type-C plastic card slot	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	/	N.D.	
		DEHP	/	N.D.	
		BBP	/	N.D.	
		DIBP	/	N.D.	
19.	Metal PIN	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	
20.	Metal solder	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
		DBP	/	/	
		DEHP	/	/	
		BBP	/	/	
		DIBP	/	/	

Note: 1.N.D. = Not Detected (<MDL) MDL = Method Detection Limit
mg/kg = ppm =0.0001% /=Not Regulated or Not Applicable
2. BL = Under the XRF screening limit
IN = Further chemical test will be conducted when the screening result inconclusive
OL = Further chemical test will be conducted while the result is above the screening limit.
3. For metal samples, the sample is negative for Cr(VI), if the Cr(VI) concentration is less than
0.10 $\mu\text{g}/\text{cm}^2$, the coating is considered a non- Cr(VI) based coating;
The sample is positive for Cr(VI), if the Cr(VI) concentration is greater than 0.13
 $\mu\text{g}/\text{cm}^2$, The sample coating is considered to contain Cr(VI);
The result is considered to be inconclusive, the Cr(VI) concentration is between the
0.10 $\mu\text{g}/\text{cm}^2$ and 0.13 $\mu\text{g}/\text{cm}^2$, Unavoidable coating variations may influence the
determination. Because the storage condition and production date of the sample are not
known, the test results of the sample of hexavalent chromium can only represent the state
of hexavalent chromium in the samples tested.

Remark: 1. The screening results are only used for reference.
2. When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br
Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced
to
screen Chromium exclusively.
3. According to the client's statement , the material of the sample(s) comply with
RoHS directive 2011/65/EU Annex III Exemption, Corresponding exemption clause:
#1 6(c) Lead is exempted as copper alloy containing up to 4% lead by weight .
#2 7(a) Lead is exempted as Lead in high melting temperature type solders (i.e. lead-
based alloys containing 85 % by weight or more lead).

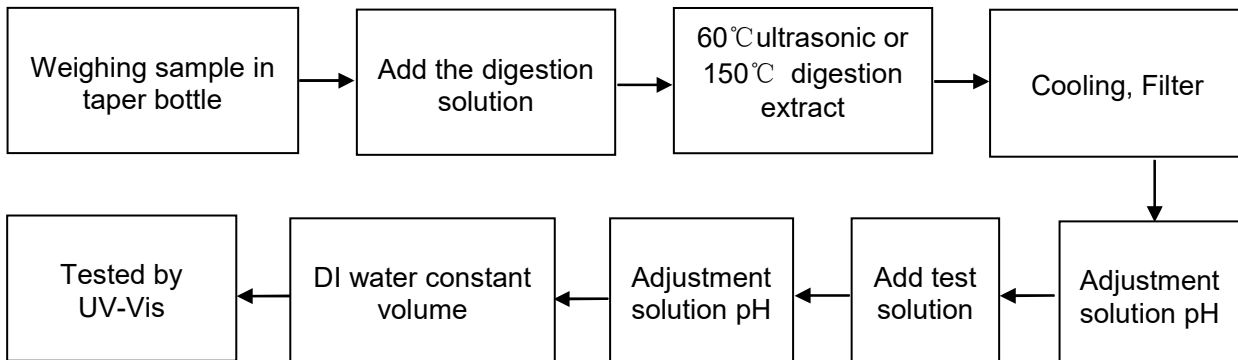
Test Flow:

1. Lead(Pb), Cadmium(Cd) , Mercury (Hg)

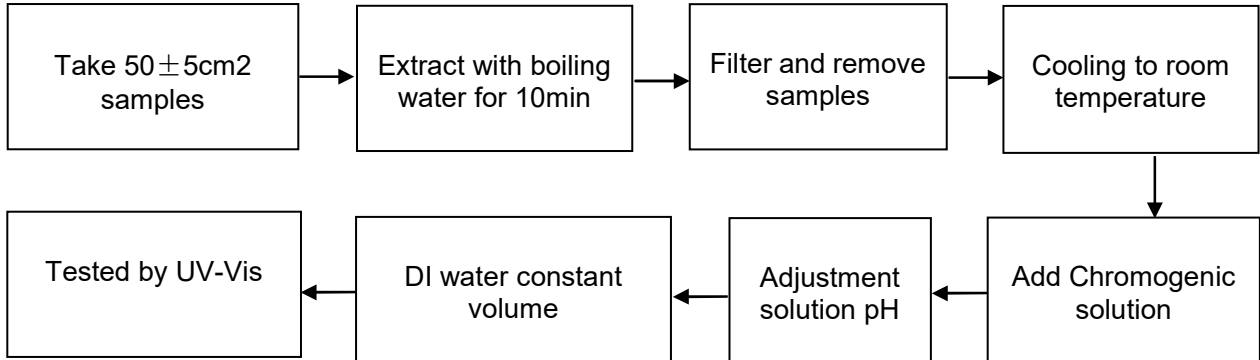


2. Hexavalent Chromium(Cr(VI))

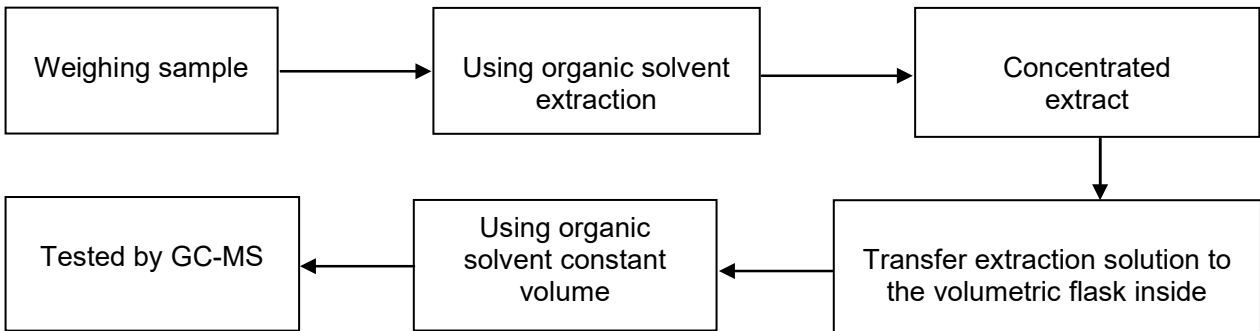
2.1 Non- metal sample(s)



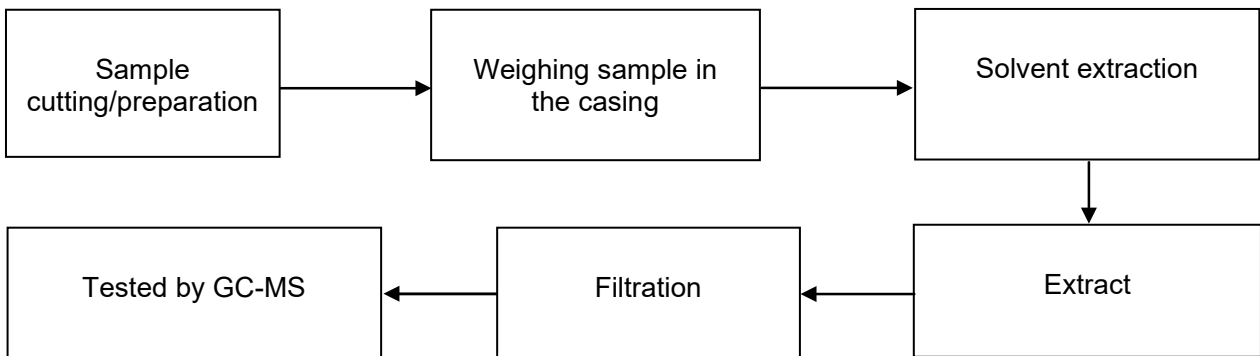
2.2 Metal sample(s)



3. PBBs/ PBDEs

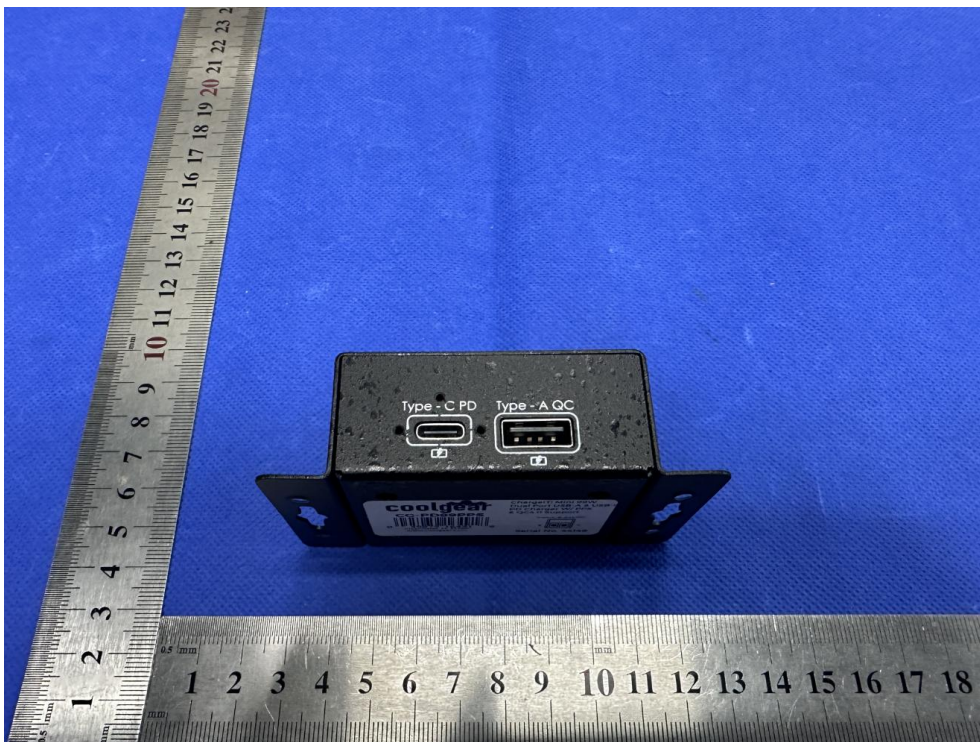
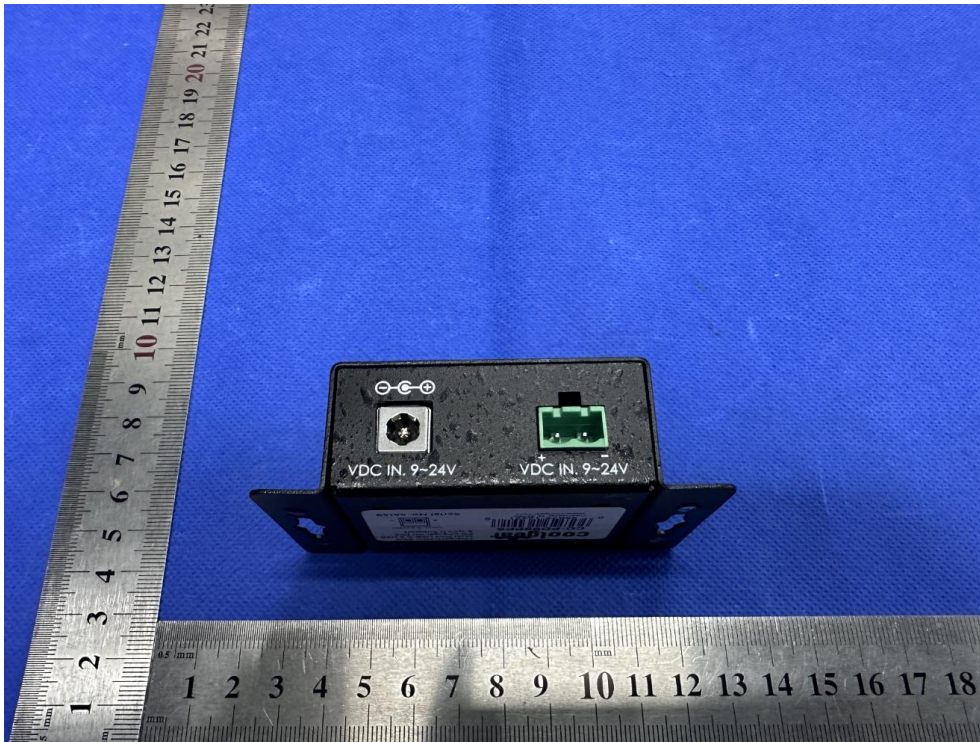


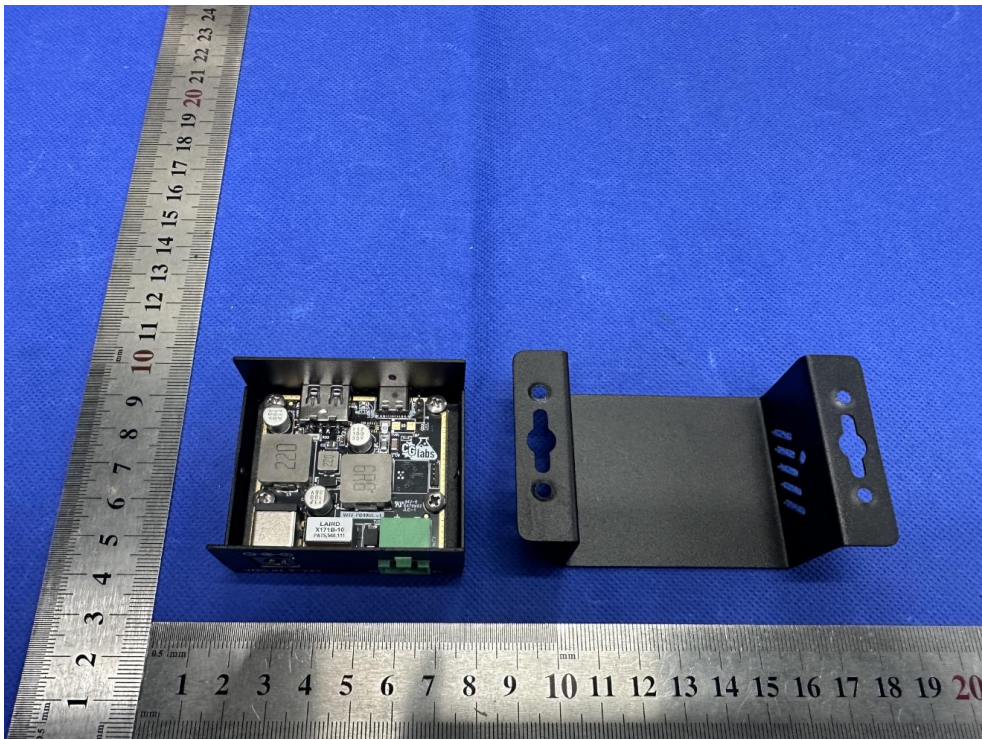
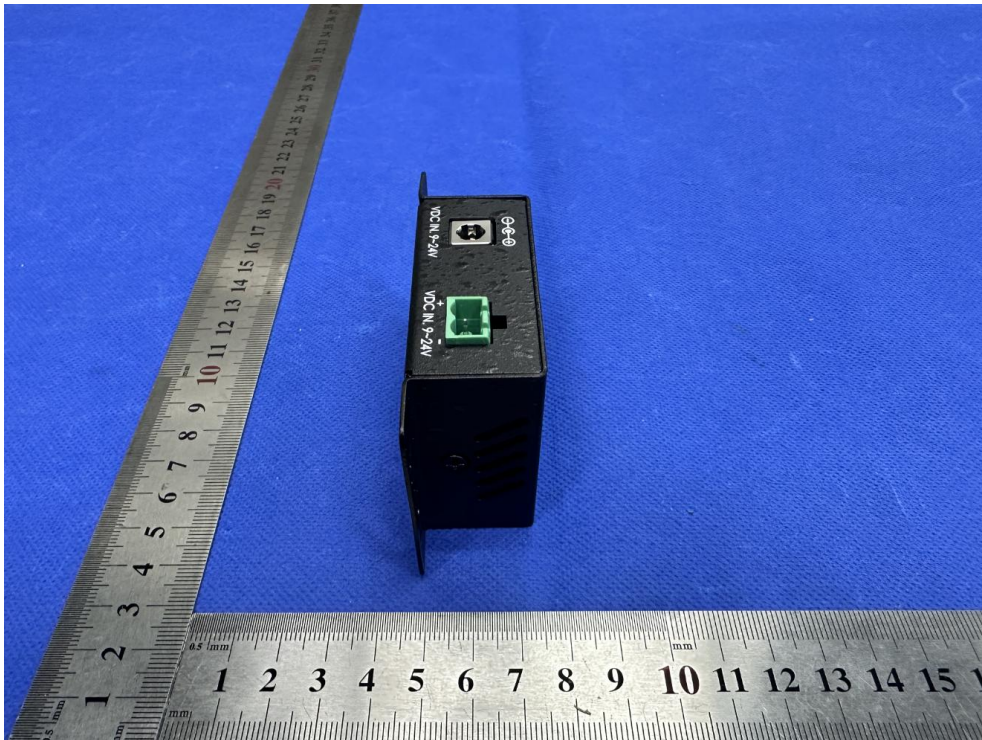
3. Phthalates

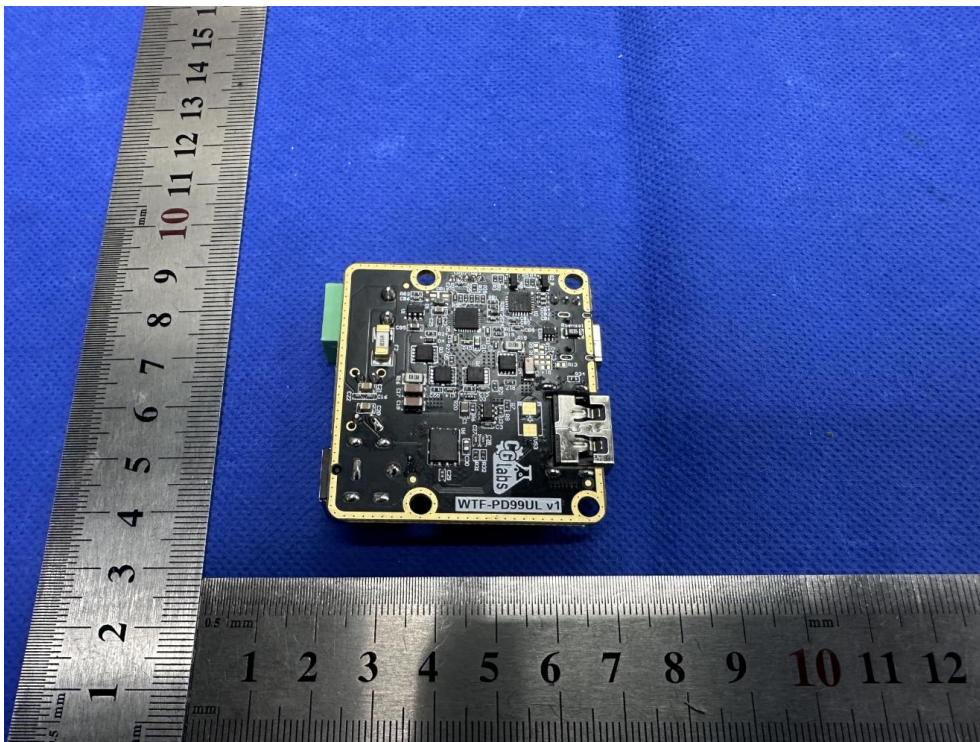


SAMPLE PHOTO(S):









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