

Report No.: 18300RC20129501

# Test Report

Client Name : Ugreen Group Limited

Address : Ugreen Building, Longcheng Industrial Park, Longguanxi Road, Longhua, ShenZhen, China

Product Name : USB C M to USB 2.0 AM Cable

Date : Apr. 27, 2022

**Shenzhen Anbotek Compliance Laboratory Limited**



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**Applicant** : Ugreen Group Limited  
**Address** : Ugreen Building, Longcheng Industrial Park, Longguanxi Road,  
Longhua, ShenZhen, China

The submitted sample and sample information was/were submitted and identified by/on the behalf of the client

**Sample Name** : USB C M to USB 2.0 AM Cable

**Test Model No.** : US176

**Reference Model No.** : Please refer to the following page(s)

**Manufacturer** : Ugreen Group Limited

**Trade Mark** : **UGREEN**

**Sample Received Date** : Mar. 30, 2022

**Testing Period** : Mar. 30, 2022 to Apr. 24, 2022

**Test Requested** :

As specified by client, to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyl(PBBs), Polybrominated Diphenyl Ethers (PBDEs), Diisobutyl phthalate (DIBP), Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP) in selected material of the submitted sample in accordance with Statutory Instruments 2012 No. 3032.

**Conclusion**

Pass

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

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

Edited by Beryl Jiam

Reviewed by Zarbi

Authorized Signatory Wendy Wang

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**Reference Model No.** :

70875, 20855, 20857, 20856, 10228, 10228P, 10228CA, 10228US, 10228MX, 10228JP, 10228KSA, 10228UAE, 10228AU, 10228SG, 10228DE, 10228UK, 10228FR, 10228IT, 10228ES, 10228NL, 10228PL, 10228TR, 10228SE, 10228PCA, 10228PUS, 10228PMX, 10228PJP, 10228PKSA, 10228PUAE, 10228PAU, 10228PSG, 10228PDE, 10228PUK, 10228PFR, 10228PIT, 10228PES, 10228PNL, 10228PPL, 10228PTR, 10228PSE, 10248, 10248P, 10248CA, 10248US, 10248MX, 10248JP, 10248KSA, 10248UAE, 10248AU, 10248SG, 10248DE, 10248UK, 10248FR, 10248IT, 10248ES, 10248NL, 10248PL, 10248TR, 10248SE, 10248PCA, 10248PUS, 10248PMX, 10248PJP, 10248PKSA, 10248PUAE, 10248PAU, 10248PSG, 10248PDE, 10248PUK, 10248PFR, 10248PIT, 10248PES, 10248PNL, 10248PPL, 10248PTR, 10248PSE, 10249, 10249P, 10249CA, 10249US, 10249MX, 10249JP, 10249KSA, 10249UAE, 10249AU, 10249SG, 10249DE, 10249UK, 10249FR, 10249IT, 10249ES, 10249NL, 10249PL, 10249TR, 10249SE, 10249PCA, 10249PUS, 10249PMX, 10249PJP, 10249PKSA, 10249PUAE, 10249PAU, 10249PSG, 10249PDE, 10249PUK, 10249PFR, 10249PIT, 10249PES, 10249PNL, 10249PPL, 10249PTR, 10249PSE, 20855P, 20855CA, 20855US, 20855MX, 20855JP, 20855KSA, 20855UAE, 20855AU, 20855SG, 20855DE, 20855UK, 20855FR, 20855IT, 20855ES, 20855NL, 20855PL, 20855TR, 20855SE, 20855PCA, 20855PUS, 20855PMX, 20855PJP, 20855PKSA, 20855PUAE, 20855PAU, 20855PSG, 20855PDE, 20855PUK, 20855PFR, 20855PIT, 20855PES, 20855PNL, 20855PPL, 20855PTR, 20855PSE, 20856P, 20856CA, 20856US, 20856MX, 20856JP, 20856KSA, 20856UAE, 20856AU, 20856SG, 20856DE, 20856UK, 20856FR, 20856IT, 20856ES, 20856NL, 20856PL, 20856TR, 20856SE, 20856PCA, 20856PUS, 20856PMX, 20856PJP, 20856PKSA, 20856PUAE, 20856PAU, 20856PSG, 20856PDE, 20856PUK, 20856PFR, 20856PIT, 20856PES, 20856PNL, 20856PPL, 20856PTR, 20856PSE, 20857P, 20857CA, 20857US, 20857MX, 20857JP, 20857KSA, 20857UAE, 20857AU, 20857SG, 20857DE, 20857UK, 20857FR, 20857IT, 20857ES, 20857NL, 20857PL, 20857TR, 20857SE, 20857PCA, 20857PUS, 20857PMX, 20857PJP, 20857PKSA, 20857PUAE, 20857PAU, 20857PSG, 20857PDE, 20857PUK, 20857PFR, 20857PIT, 20857PES, 20857PNL, 20857PPL, 20857PTR, 20857PSE, 60783, 60783P, 60783CA, 60783US, 60783MX, 60783JP, 60783KSA, 60783UAE, 60783AU, 60783SG, 60783DE, 60783UK, 60783FR, 60783IT, 60783ES, 60783NL, 60783PL, 60783TR, 60783SE, 60783PCA, 60783PUS, 60783PMX, 60783PJP, 60783PKSA, 60783PUAE, 60783PAU, 60783PSG, 60783PDE, 60783PUK, 60783PFR, 60783PIT, 60783PES, 60783PNL, 60783PPL, 60783PTR, 60783PSE, 70875P, 70875CA, 70875US, 70875MX, 70875JP, 70875KSA, 70875UAE, 70875AU, 70875SG, 70875DE, 70875UK, 70875FR, 70875IT, 70875ES, 70875NL, 70875PL, 70875TR, 70875SE, 70875PCA, 70875PUS, 70875PMX, 70875PJP, 70875PKSA, 70875PUAE, 70875PAU, 70875PSG, 70875PDE, 70875PUK, 70875PFR, 70875PIT, 70875PES, 70875PNL, 70875PPL, 70875PTR, 70875PSE

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**Test Method:**

**A. XRF Screening Test**

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

Element	Limit of IEC 62321-3-1:2013 Unit (mg/kg)		
	Polymers	Metals	Composite material
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	$BL \leq (300-3\sigma) < X$	N.A.	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

**Note:**

- N.A. = Not Applicable
- BL = Under the XRF screening limit
- OL = Further chemical test will be conducted while result is above the screening limit
- X= The symbol “X” marks the region where further investigation is necessary
- 3σ= The reproducibility of analytical instruments
- LOD= Detection limit

**B. Chemical Test**

Test Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	IEC 62321-5:2013	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013		2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017		2 mg/kg	1000 mg/kg
Hexavalent Chromium Cr(VI)	IEC 62321-7-1:2015	UV-VIS	0.10µg/cm <sup>2</sup>	---
	IEC 62321-7-2:2017		8 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015		5 mg/kg	1000 mg/kg
Phthalates (DIBP, DBP, BBP, DEHP)	IEC 62321-8:2017		50 mg/kg	1000 mg/kg

**Remark:**

- The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to BS EN 62321 series.

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**Test Results:**

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test Unit (mg/kg)	Conclusion
1	Copper-colored metal cable clip	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
2	Silvery metal soldering tin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
3	Green PCB board	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	X	N.D.	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
DIBP	N.A.	N.D.			

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
4	Gray inner plastic	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
5	Silvery metal plug	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	X	Negative	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
6	Silvery metal pin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
DIBP	N.A.	/			

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
7	Metal shell with silvery-gray oxide layer	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
8	Black plastic scarfskin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
9	Black braided wire sleeve	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
DIBP	N.A.	N.D.			

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
10	Black plastic wire sleeve	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
11	Silvery metal foil plate	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
12	Silvery metal wire	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
DIBP	N.A.	/			



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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
13	White plastic jacket	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
14	White cotton silk	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	528	
15	Red plastic jacket	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
DIBP	N.A.	N.D.			

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
16	Green plastic jacket	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
17	Silvery metal soldering tin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
18	Black inner plastic	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	X	N.D.	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
DIBP	N.A.	N.D.			

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
19	Silvery metal plug	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
20	Copper-colored metal pin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	N.A.	/	
		DBP	N.A.	/	
		BBP	N.A.	/	
		DEHP	N.A.	/	
21	Black plastic scarfskin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI) )	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		DBP	N.A.	N.D.	
		BBP	N.A.	N.D.	
		DEHP	N.A.	N.D.	
DIBP	N.A.	N.D.			

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**Note:**

- The screening results are only used for reference.
- 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.
- BL = Under the XRF screening limit
- OL = Further chemical test will be conducted while result is above the screening limit
- X= The symbol "X" marks the region where further investigation is necessary
- LOD= Detection limit
- MDL = Method Detection Limit
- N.A. = Not Applicable
- N.D. = Not Detected (<MDL)
- /=Not tested
- 1mg/kg = 1ppm = 0.0001%
- $\mu\text{g}/\text{cm}^2$  = microgramme per square centimetre
- "---"=
  - a. -Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than  $0.10\mu\text{g}/\text{cm}^2$ .
  - b. -Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than  $0.13\mu\text{g}/\text{cm}^2$ .
  - c. The result is between  $0.10\mu\text{g}/\text{cm}^2$  with  $0.13\mu\text{g}/\text{cm}^2$  is considered to be inconclusive-unavoidable coating variations may influence the determination.

# Test Report

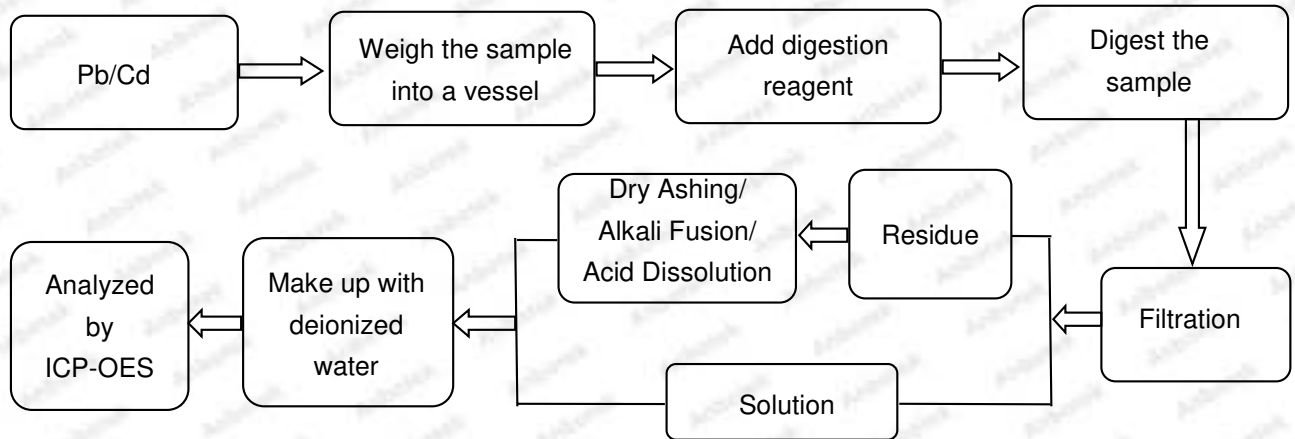
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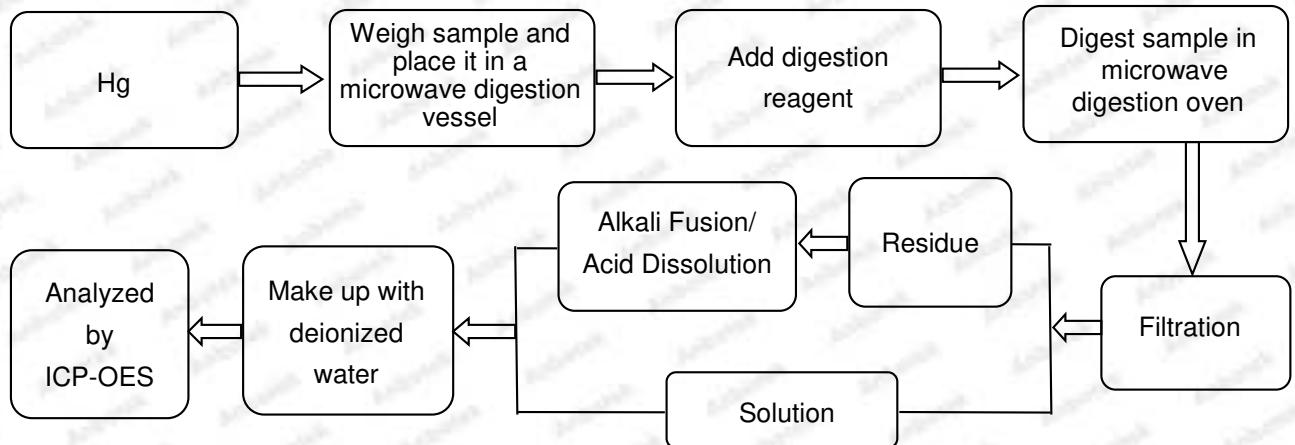
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**Test Process:**

◆ **IEC 62321-5:2013**



◆ **IEC 62321-4:2013+AMD1:2017**



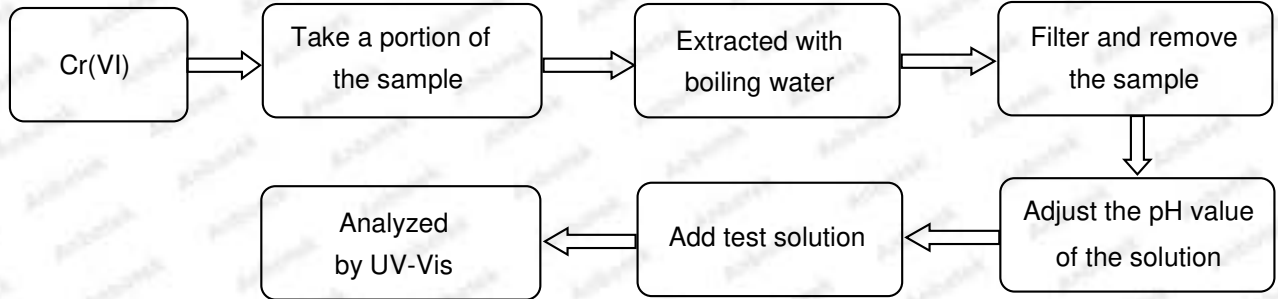
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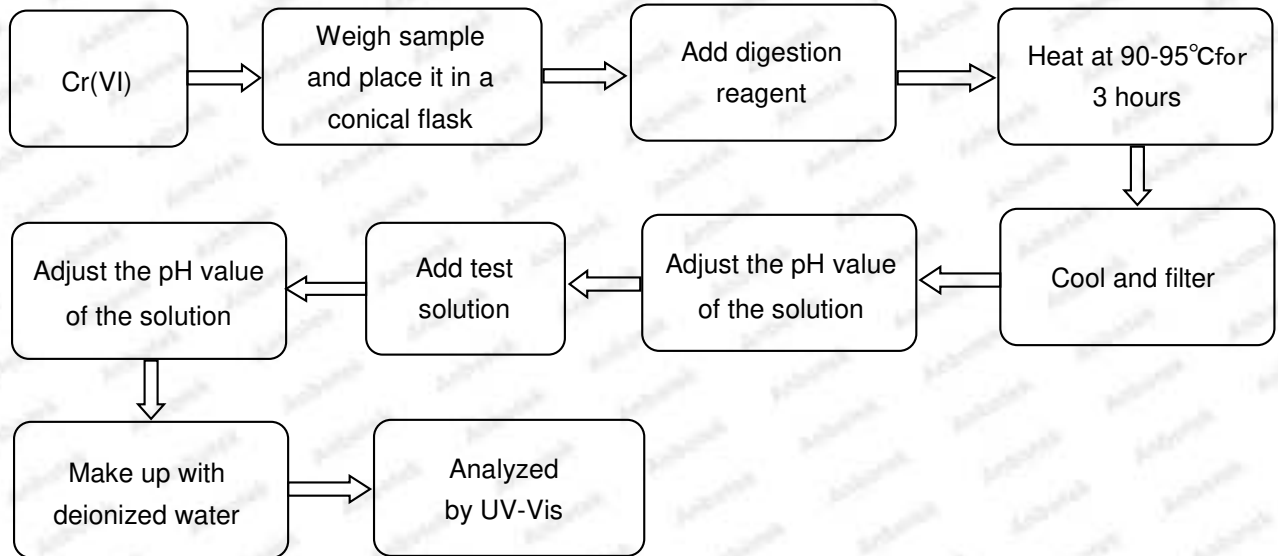
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◆ IEC 62321-7-1:2015



◆ IEC 62321-7-2:2017



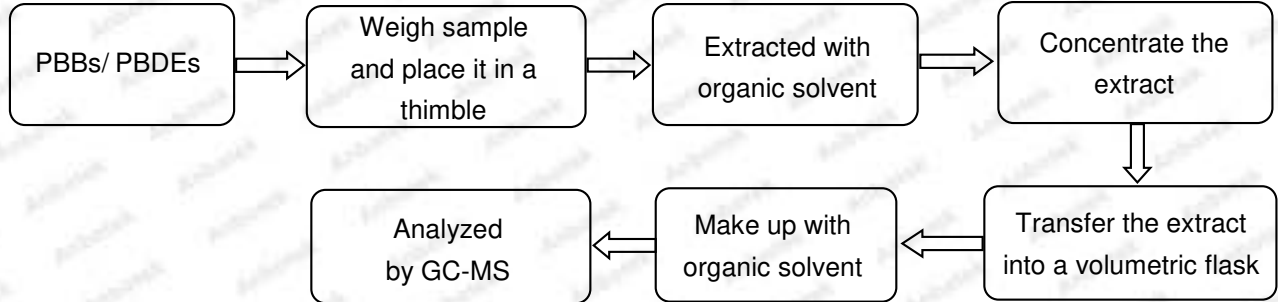
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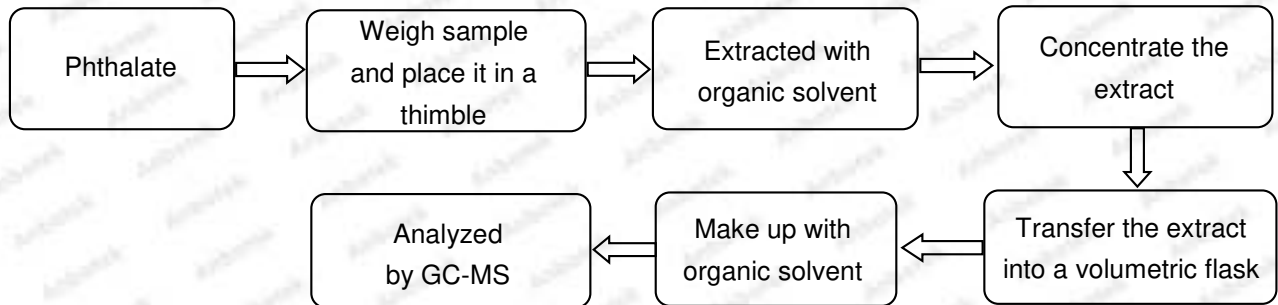
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◆ IEC 62321-6:2015



◆ IEC 62321-8:2017



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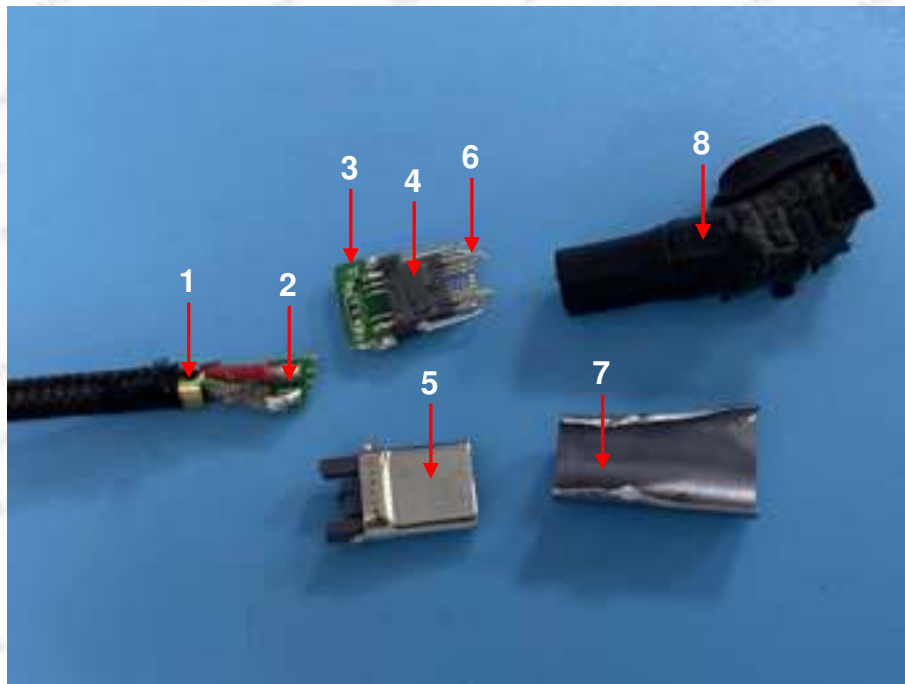
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## Photograph of Sample



## Photo(s) of the tested component(s)



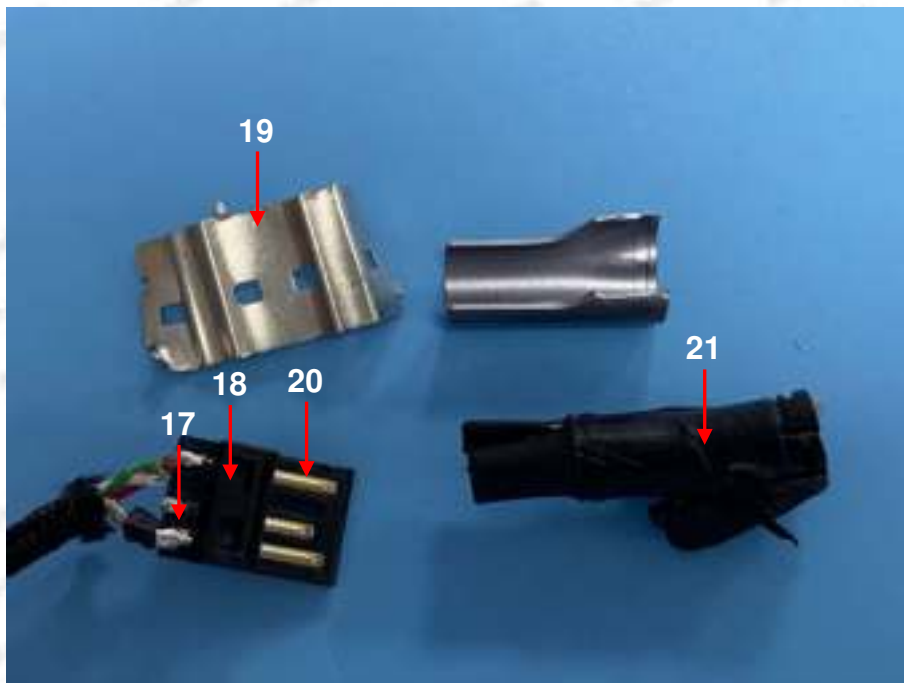
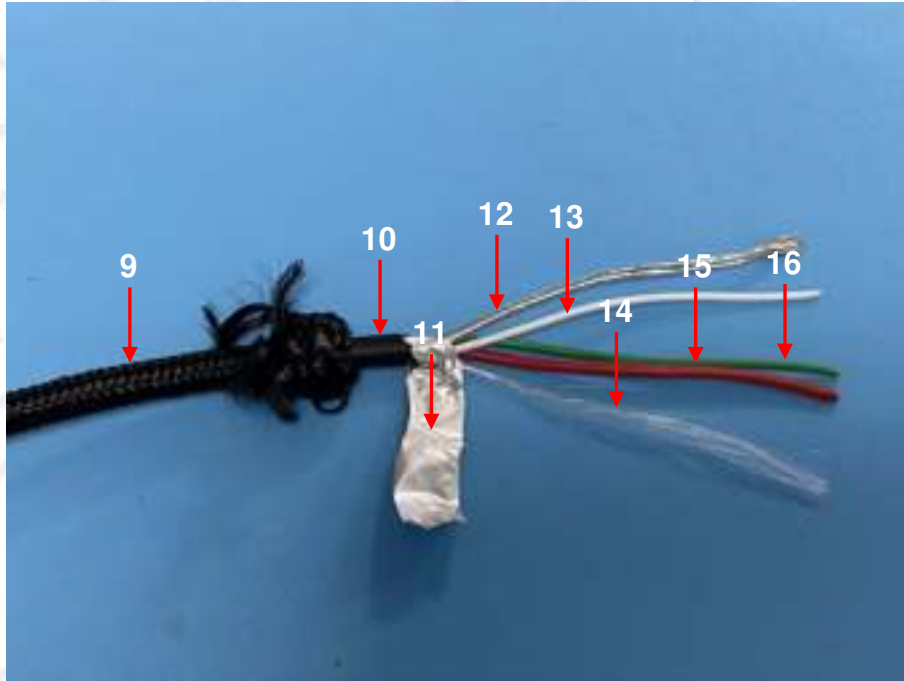


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\*\*\*\* End of Report \*\*\*\*

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