

# Test Report

**Report No.: MTi211215003-01C1**

**Date of Issue: December 24, 2021**

**Client: Shenzhen Jinhui Tongda Electronic Technology Co.,  
LTD**

**Product: Cable**

**Test Type: Commissioned Inspection**

**Shenzhen Microtest Co., Ltd.**

<http://www.mtitest.com>



# Instructions

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2. The test results of this report are only responsible for the samples submitted ;

3. This report is invalid without the seal and signature of the laboratory ;

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<b>Basic Information</b>			
Client	Shenzhen Jinhui Tongda Electronic Technology Co., LTD		
Client Address	A3, building 3, Zuxing Industrial Park, huangmabu village, Xi Township, Bao'an District, Shenzhen, Guangdong, China		
Manufacturer	Shenzhen Jinhui Tongda Electronic Technology Co., LTD		
Manufacturer Address	A3, building 3, Zuxing Industrial Park, huangmabu village, Xi Township, Bao'an District, Shenzhen, Guangdong, China		
<b>Sample Information</b>			
Product	Cable	Model	CNE-USBM1B,CNE-USBM1W,CNE-USBC1B,CNE-USBC1W,CNE-USBC2B,CNE-USBC4B,CNE-CFI1B,CNE-CFI1W
Serial Model	CNE-USBxxx CNE-CFI3XX(XX stands for A to Z), CNE-USBC3B,CNS-USBC5DG,CNS-USBC6DG,CNS-USBM5DG	Brand/ Trademark	CANYON
Sample Number	8	Sample Description	/
<b>Testing Information</b>			
Sample Receive Date	December 16, 2021	Sample Source	Customer provided
Test Specification	With reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU .		
Date of Tests	December 16, 2021- December 24, 2021		
Test Address	Chemistry lab		
Test Results:	Please refer to next page(s).		

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Conclusion:	The submitted sample(s) complied with the Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content requirement according to RoHS Directive (EU) 2015/863 amending 2011/65/EU.		
Compiled:	<i>Noak Zhang</i>	Reviewed:	<i>Tobey Lin</i> Approved: <i>olima</i>

### Test Method:

1. With reference to IEC 62321-2:2013, review was performed for the samples disjointed from the submitted articles.

2. With reference to IEC 62321-1:2013, tests were performed for the samples indicated by

the photos in this report:

(1) With reference to IEC 62321-3-1:2013, screening by XRF spectroscopy.

(2) Wet chemical test method.

a. With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.

b. With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.

c. With reference to IEC 62321-4:2013+A1:2017, determination of Mercury by ICP-OES.

d. With reference to IEC 62321-7-1:2015 & IEC 62321-7-2:2017, determination of Hexavalent chromium by Colorimetric method using UV-Vis.

e. With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

3. With reference to IEC 62321-8: 2017, determination of phthalates by GC-MS.

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## Testing Result:

Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
1	Black plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
2	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
3	White plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
4	Solder	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	

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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
5	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
6	Copper metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
7	Blue plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
8	Black plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
9	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	

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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
10	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
11	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
12	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
13	Black plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
14	Green PCB	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	X	N.D.	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	

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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
15	Solder	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
16	Black line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
17	Silver metal line	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
18	Copper metal line	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
19	Silver foil	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	



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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
20	Red line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
21	Black line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
22	Silver metal line	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
23	White line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
24	Green line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	

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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
25	Blue wire	Pb	BL	/	Pass
		Cd	OL	N.D.	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
26	White plastic	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
27	White line skin	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	N.D.	
28	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	
29	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP \DEHP\DIBP)	--	--	

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Part No.	Sample Description	Test item	XRF Result	Chemical Test (mg/kg)	Conclusion
30	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
31	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
32	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
33	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	
34	Silvery metal	Pb	BL	/	Pass
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	X	N.D.	
		Br(PBBs&PBDEs)	--	--	
		Phthalate(DBP\BBP\DEHP\DIBP)	--	--	

Remark: Samples 15、31 were re-tested as supplementary samples and re-tested on December 24, 2021

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### Remark:

- (1) (a) It is the result on total Br while test item on restricted substances is PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr<sup>6+</sup>.
- (b) Results are obtained by XRF for primary screening, and further 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 the concentration exceeds the below warning value according to IEC62321-3-1:2013 (unit: mg/kg).

Element	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	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$

(c) OL=Over Limit, BL=Below Limit, X=inconclusive, LOD=Limit of Detection, NA=not applicable, -- = No Testing

(d) The XRF screening test for RoHS elements-The reading may be different to the actual content

in the sample be of non-uniformity composition

(2) (a) mg/kg=ppm=0.0001%, N.D.=not detected (<MDL)

(b) Unit and Method Detection Limit(MDL) in wet chemical test

Test Items	Unit	MDL	Limit
Pb	mg/kg	2	1000
Cd	mg/kg	2	100
Hg	mg/kg	2	1000
DBP	mg/kg	30	1000
BBP	mg/kg	30	1000
DEHP	mg/kg	30	1000
DIBP	mg/kg	30	1000

The MDL for single compound of PBBs & PBDEs is 20mg/kg, MDL of Cr<sup>6+</sup> for metal sample is 0.10µg/cm<sup>2</sup>. and MDL of Cr<sup>6+</sup> for polymer & composite sample is 8 mg/kg.

(c) Metal sample:

-The sample is positive for Cr<sup>6+</sup> if the Cr<sup>6+</sup> concentration is greater than 0.13 µg/cm<sup>2</sup>.

The sample coating is considered to contain Cr<sup>6+</sup>.

-The sample is negative for Cr<sup>6+</sup> if Cr<sup>6+</sup> is ND (concentration less than 0.10 µg/cm<sup>2</sup>).

The coating is considered a non- Cr<sup>6+</sup> based coating

-The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive, unavoidable coating variations may influence the determination

Information on storage conditions and production date of the tested sample is unavailable and thus Cr<sup>6+</sup> results represent status of the sample at the time of testing.

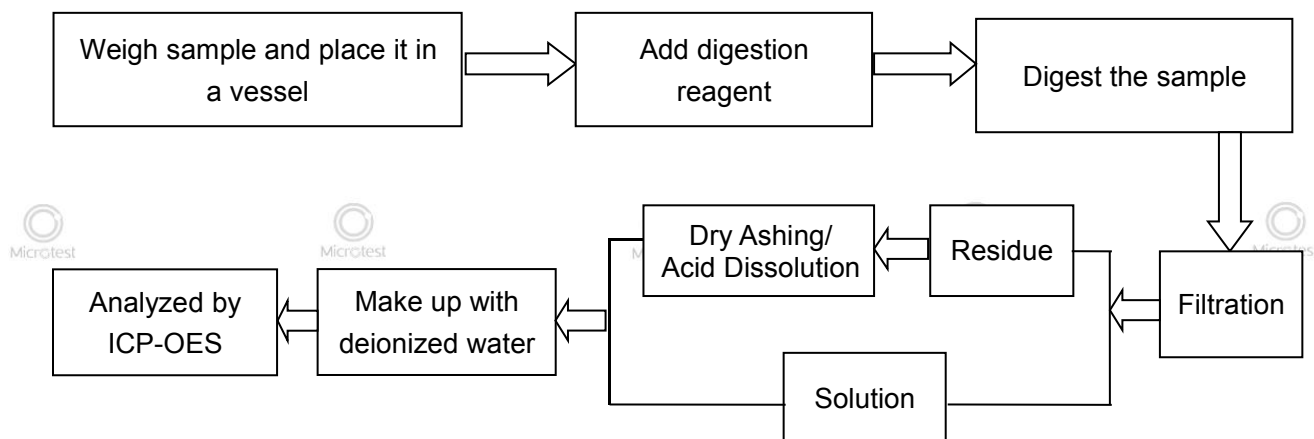
(3) As specified by client to test the specified materials only.

(4) \*=According to the declaration from the client, Lead (Pb) in the sample are exempted by EU RoHS Directive 2011/65/EU based on ANNEX III 6(c): Copper alloy containing no more than 4% lead by weigh

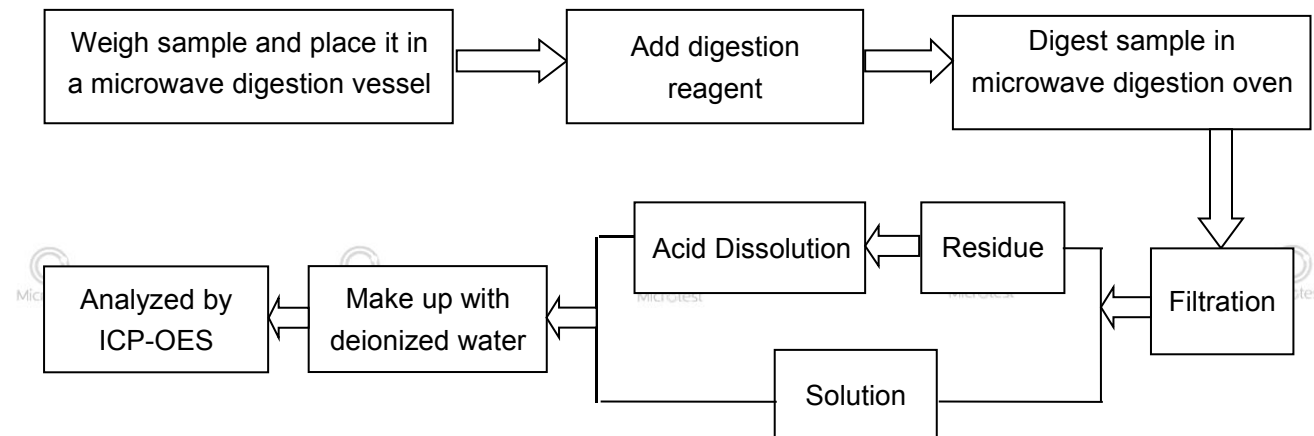
(5) #=According to the declaration from the client, Lead (Pb) in the sample are exempted by EU RoHS Directive 2011/65/EU based on ANNEX III 7(c)-I, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors

## Testing flow chart:

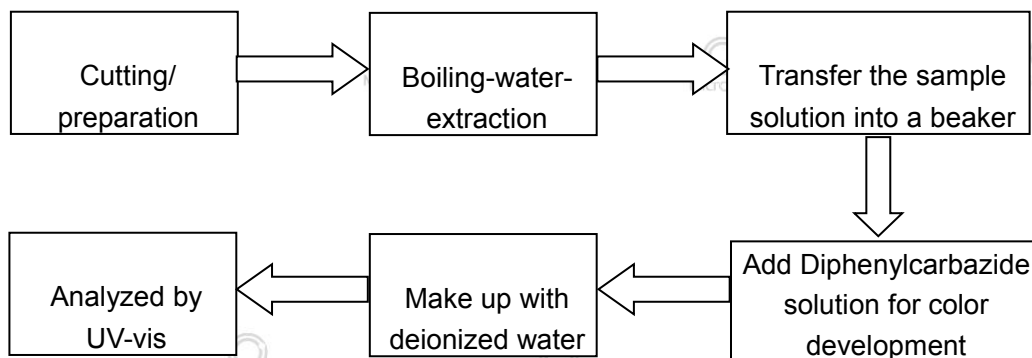
### 1. Lead, Cadmium



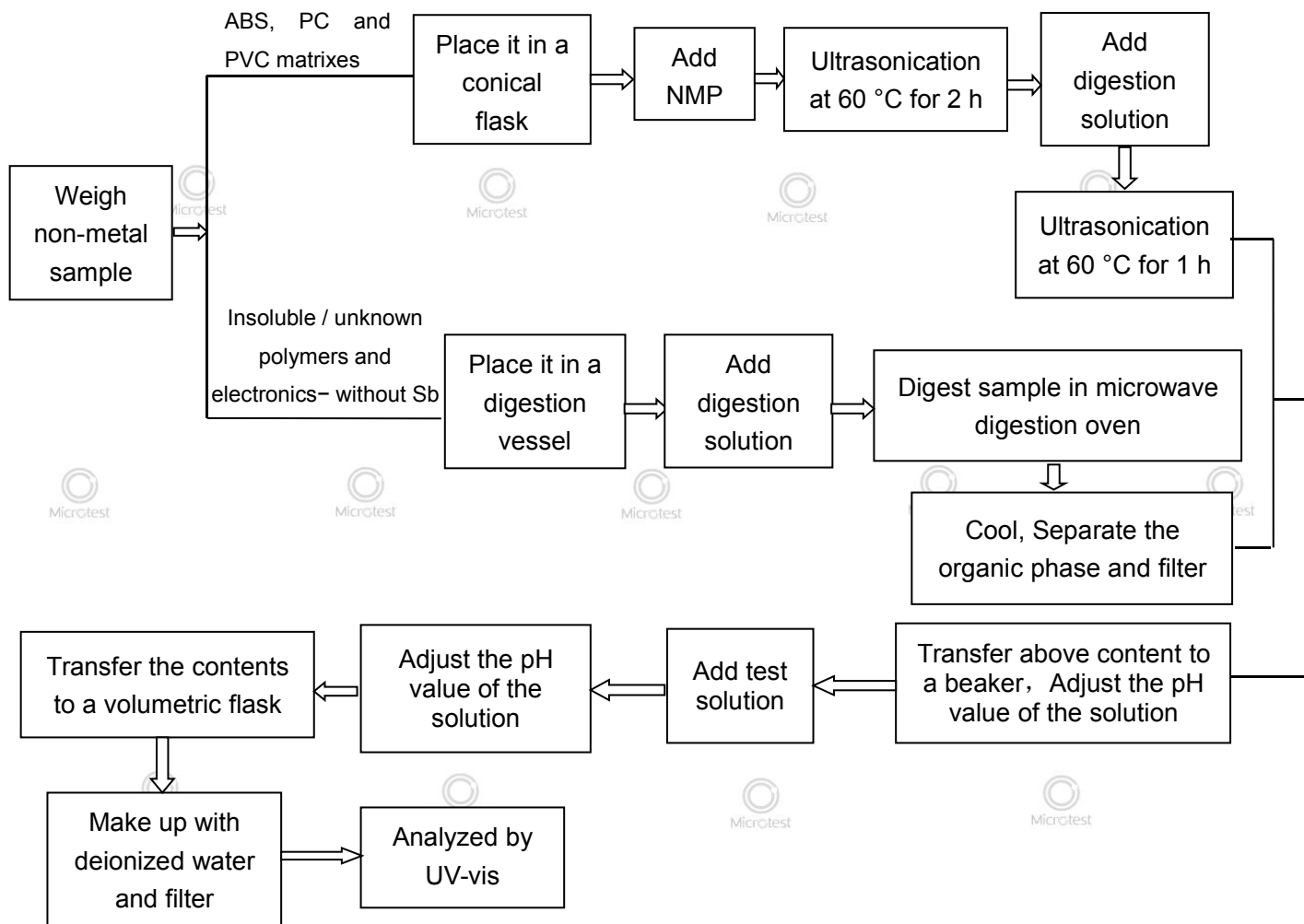
### 2. Mercury



### 3. Hexavalent Chromium (For metal material)



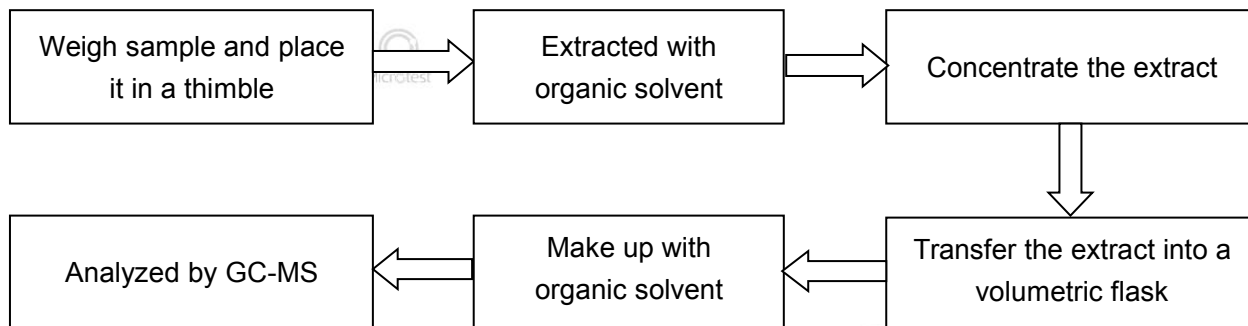
### 4. Hexavalent Chromium(For non-metal material):



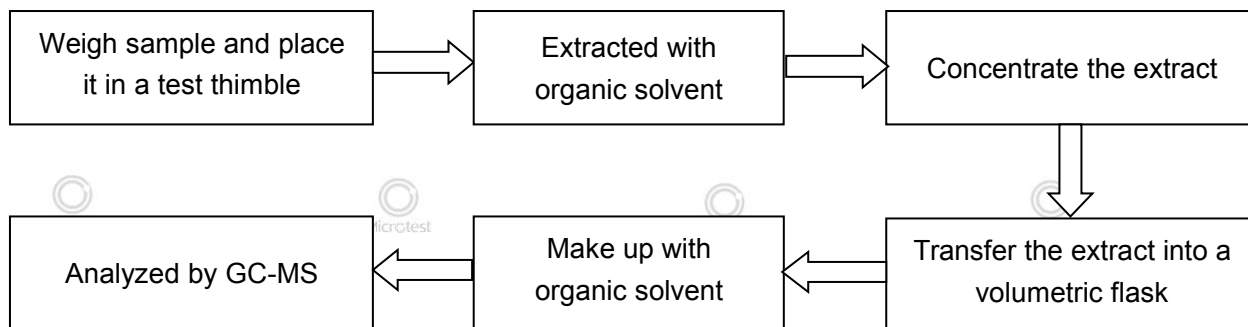
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## 5. Polybromobiphenyls (PBBs), Polybromodiphenyl ethers (PBDEs)



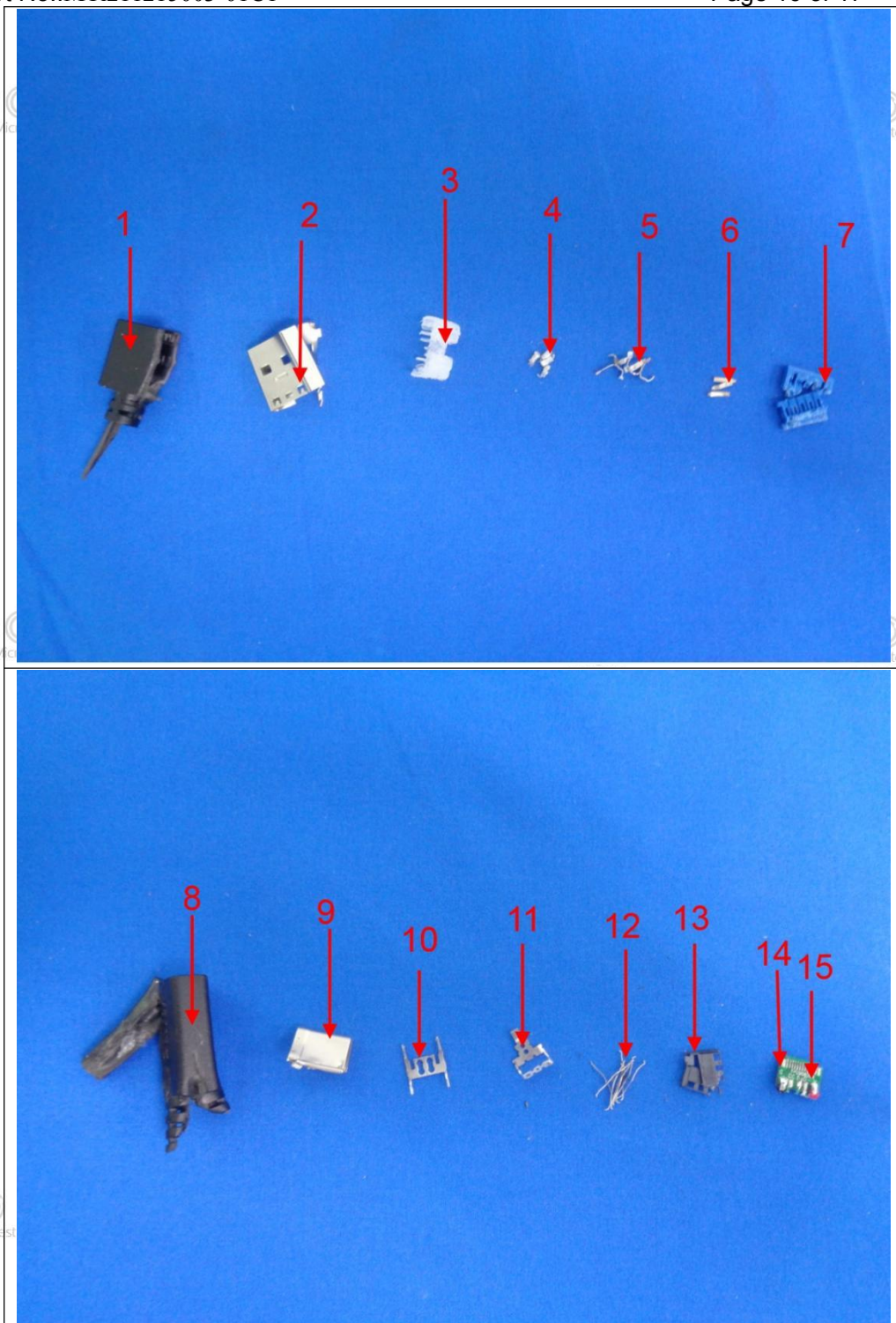
## 6. Phthalates(DBP, BBP, DEHP, DIBP)





**Pictures**

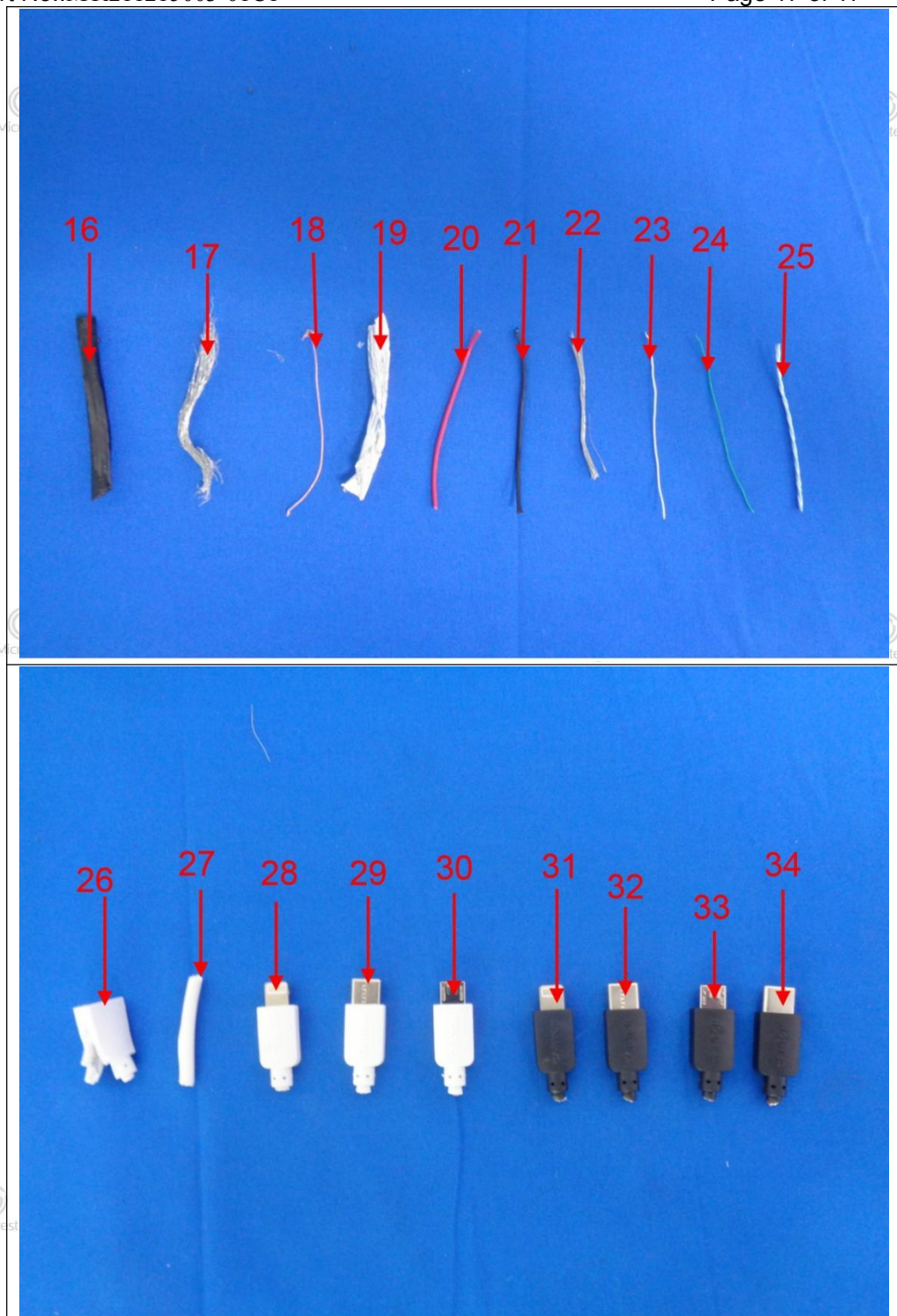






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