TEST REPORT

Applicant	:	**2Service B.V.**
Address	:	**Santkamp 5, 6836 BE, Arnhem, The Netherlands**
Manufacturer	:	**2Service B.V.**
Address	:	**Santkamp 5, 6836 BE, Arnhem, The Netherlands**

Report on the submitted samples said to be:

Sample Name	:	Samsung Galaxy watch Charger Mobileparts
Tested model	:	MS-30016
Date of Sample Received	:	December 25, 2023
Testing Period	:	December 25, 2023 ~ January 03, 2024
Results	:	Please refer to next page(s).

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TEST REQUEST

According to the customer's request, based on the performed tests on submitted sample, the result of Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, Dibutyl Phthalate (DBP), Benzyl butyl Phthalate (BBP), Bis(2-ethylhexyl) Phthalate (DEHP), Diispbutyl phthalate (DIBP) content comply with the limit as set of RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863.

CONCLUSION

Pass

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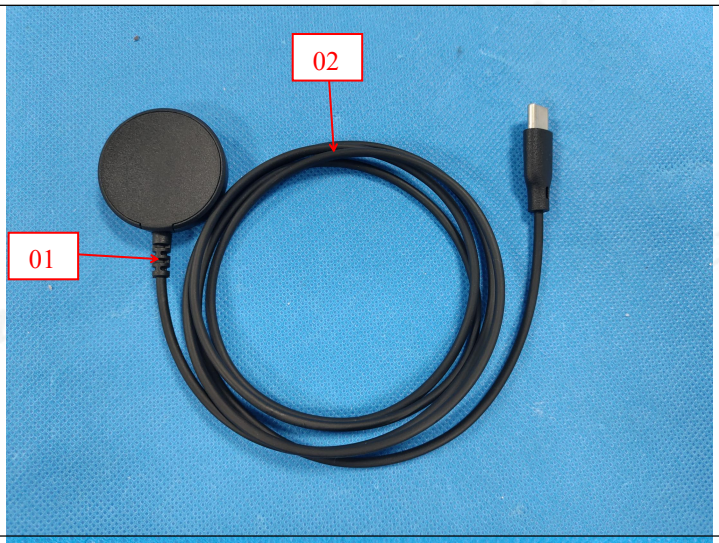
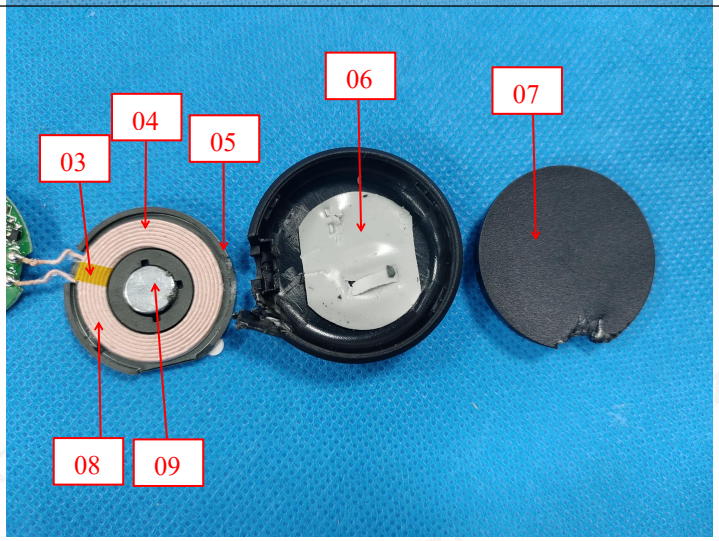
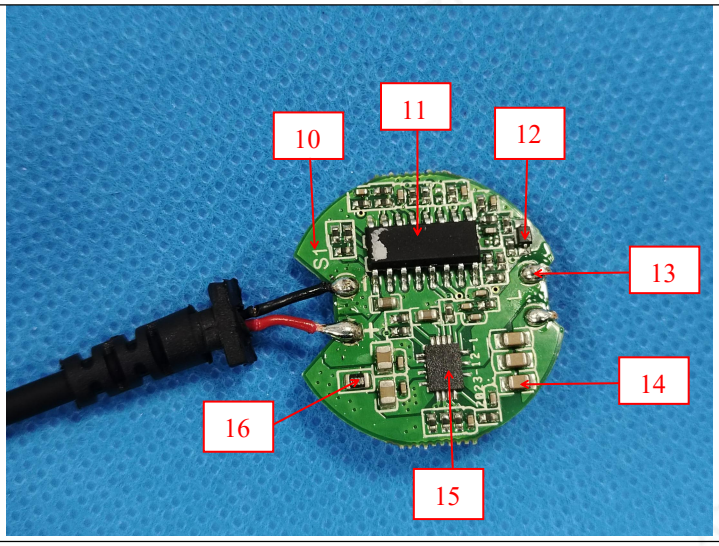
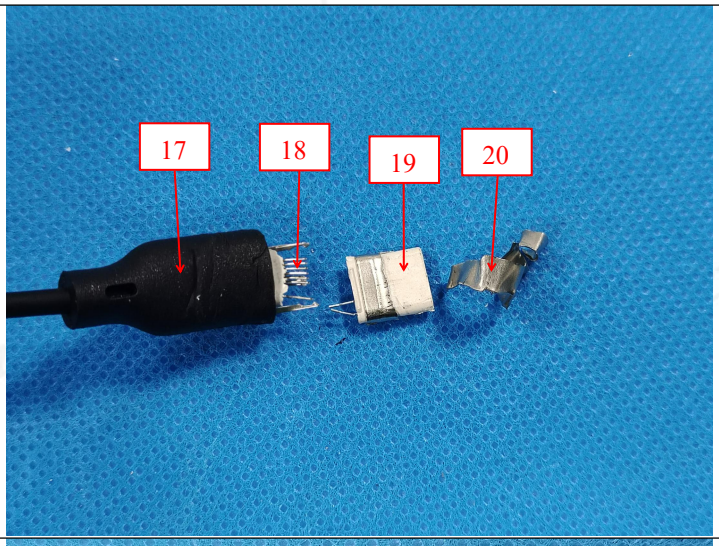
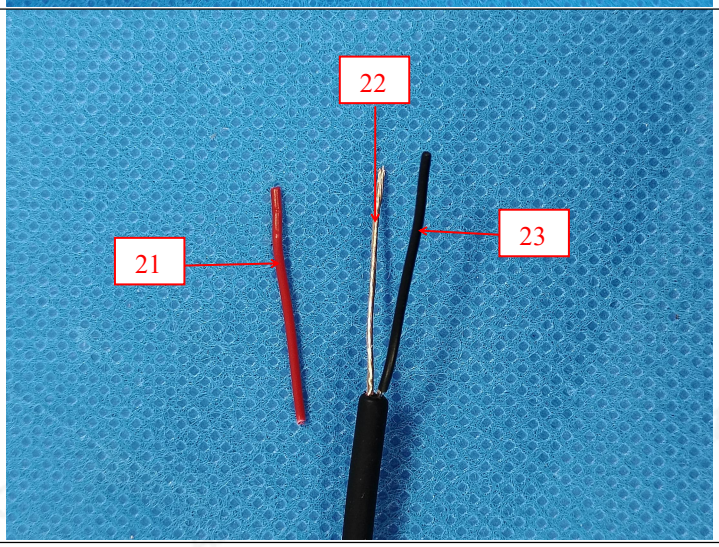
Signed for and on behalf of AZT

Jack Zhong

Test Item Description And Photo List

No.	Tested Part(s)	The photo of the sample
1	Black plastic	
2	Black wire jacket	
3	Yellow transparent tape	
4	White line	
5	Black magnet	
6	Light grey glue	
7	Black plastic	
8	Copper metal wire	
9	Silvery metal magnet	
10	Green PCB	
11	IC	
12	Diode	
13	Soldering tin	
14	Chip capacitor	
15	IC	
16	Chip resistor	

No.	Tested Part(s)	The photo of the sample
17	Black plastic	
18	Silvery metal pin	
19	White plastic	
20	Silvery metal	
21	Red wire jacket	
22	Copper metal core	
23	Black wire jacket	

Results:

A. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863 on XRF
Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

No.	Tested Part(s)	Results					
		Cd	Pb	Hg	Cr▼	Br▼	
						PBBs	PBDEs
1	Black plastic	BL	BL	BL	BL	BL	BL
2	Black wire jacket	BL	BL	BL	BL	BL	BL
3	Yellow transparent tape	BL	BL	BL	BL	BL	BL
4	White line	BL	BL	BL	BL	BL	BL
5	Black magnet	BL	BL	BL	BL	/	/
6	Light grey glue	BL	BL	BL	BL	BL	BL
7	Black plastic	BL	BL	BL	BL	BL	BL
8	Copper metal wire	BL	BL	BL	BL	/	/
9	Silvery metal magnet	BL	BL	BL	BL	/	/
10	Green PCB	BL	BL	BL	BL	BL	BL
11	IC	BL	BL	BL	BL	BL	BL
12	Diode	BL	BL	BL	BL	BL	BL
13	Soldering tin	BL	BL	BL	BL	/	/
14	Chip capacitor	BL	BL	BL	BL	BL	BL
15	IC	BL	BL	BL	BL	BL	BL
16	Chip resistor	BL	BL	BL	BL	BL	BL
17	Black plastic	BL	BL	BL	BL	BL	BL
18	Silvery metal pin	BL	BL	BL	BL	/	/
19	White plastic	BL	BL	BL	BL	BL	BL
20	Silvery metal	BL	BL	BL	X	/	/
21	Red wire jacket	BL	BL	BL	BL	BL	BL
22	Copper metal core	BL	BL	BL	BL	/	/
23	Black wire jacket	BL	BL	BL	BL	BL	BL

Note:
(1) Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-Vis (for Cr(Ⅵ)) and GC-MS (for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013.

XRF screening limits for different materials:

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	BL≤70-3σ<X <130+3σ≤OL	BL≤70-3σ<X <130+3σ≤OL	BL≤50-3σ<X <150+3σ≤OL
Pb	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Hg	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Cr	mg/kg	BL≤700-3σ<X	BL≤700-3σ<X	BL≤500-3σ<X
Br	mg/kg	BL≤300-3σ<X	--	BL≤250-3σ<X

Note:
BL = Below Limit
OL = Over Limit
X = Inconclusive

(2) The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

(3) The maximum permissible limit is quoted from the RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863

(4) ▼=For restricted substances PBBs and PBDEs, the results show the total Br content; The restricted substance was Cr (Ⅵ), and the results showed the total Cr content.

RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium (Cd)	100
Lead (Pb)	1000
Mercury (Hg)	1000
Hexavalent Chromium (Cr(Ⅵ))	1000
Polybrominated biphenyls (PBBs)	1000
Polybrominated diphenyl ethers (PBDEs)	1000
Dibutyl Phthalate (DBP)	1000
Benzyl butyl Phthalate (BBP)	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	1000
Diispbutyl Phthalate (DIBP)	1000

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

B. RoHS Directive 2011/65/EU Annex II amending Directive (EU)2015/863 - Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content.

Test method:

Lead & Cadmium Content:
With reference to IEC 62321-5:2013, analysis was performed by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES).

Mercury Content:
With reference to IEC 62321-4:2013+AMD1:2017 CSV, analysis was performed by Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES).

Hexavalent Chromium Content:
With reference to IEC 62321-7-1:2015& IEC 62321-7-2:2017, analysis was performed by UV-visible spectrophotometer (UV-Vis).

PBBs & PBDEs Content:
With reference to IEC 62321-6:2015, analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

DBP, BBP, DEHP, DIBP Content:

With reference to IEC 62321-8:2017, analysis was performed by gas chromatographic-mass spectrometer (GC-MS).

1) The test results of Hexavalent Chromium (Cr (Ⅵ))(metal)

Test Item	Unit	MDL	Results	Limit
			20	
Hexavalent Chromium (Cr(Ⅵ))▼	μg/cm^2	0.10	Negative	--

Note:

- MDL = Method Detection Limit
- LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm^2
- mg/kg = ppm
- N.D.=Not Detected (<MDL or LOQ)
- ▼ = a. The sample is positive for Cr (Ⅵ) if the Cr (Ⅵ) concentration is greater than 0.13μg/cm^2. The sample coating is considered to contain Cr (Ⅵ).
  b. The sample is negative for Cr (Ⅵ) if Cr (Ⅵ) is N.D. (concentration less than 0.10μg/cm^2). The sample coating is considered a non- Cr (Ⅵ) based coating.
  c. The result between 0.10μg/cm^2 and 0.13μg/cm^2 is considered to be inconclusive, unavoidable coating variations may influence the determination.
- Positive = result be regarded as not comply with RoHS requirement
- Negative = result be regarded as comply with RoHS requirement

2) The test results of DBP, BBP, DEHP & DIBP

Test Items	CAS No.	Unit	MDL	Results		Limit
				1+2+17	6+21+23	
Dibutyl Phthalate (DBP)	84-74-2	mg/kg	50	N.D.	N.D.	1000
Benzyl butyl Phthalate (BBP)	85-68-7	mg/kg	50	N.D.	N.D.	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	mg/kg	50	N.D.	N.D.	1000
Diispbutyl Phthalate (DIBP)	84-69-5	mg/kg	50	N.D.	N.D.	1000

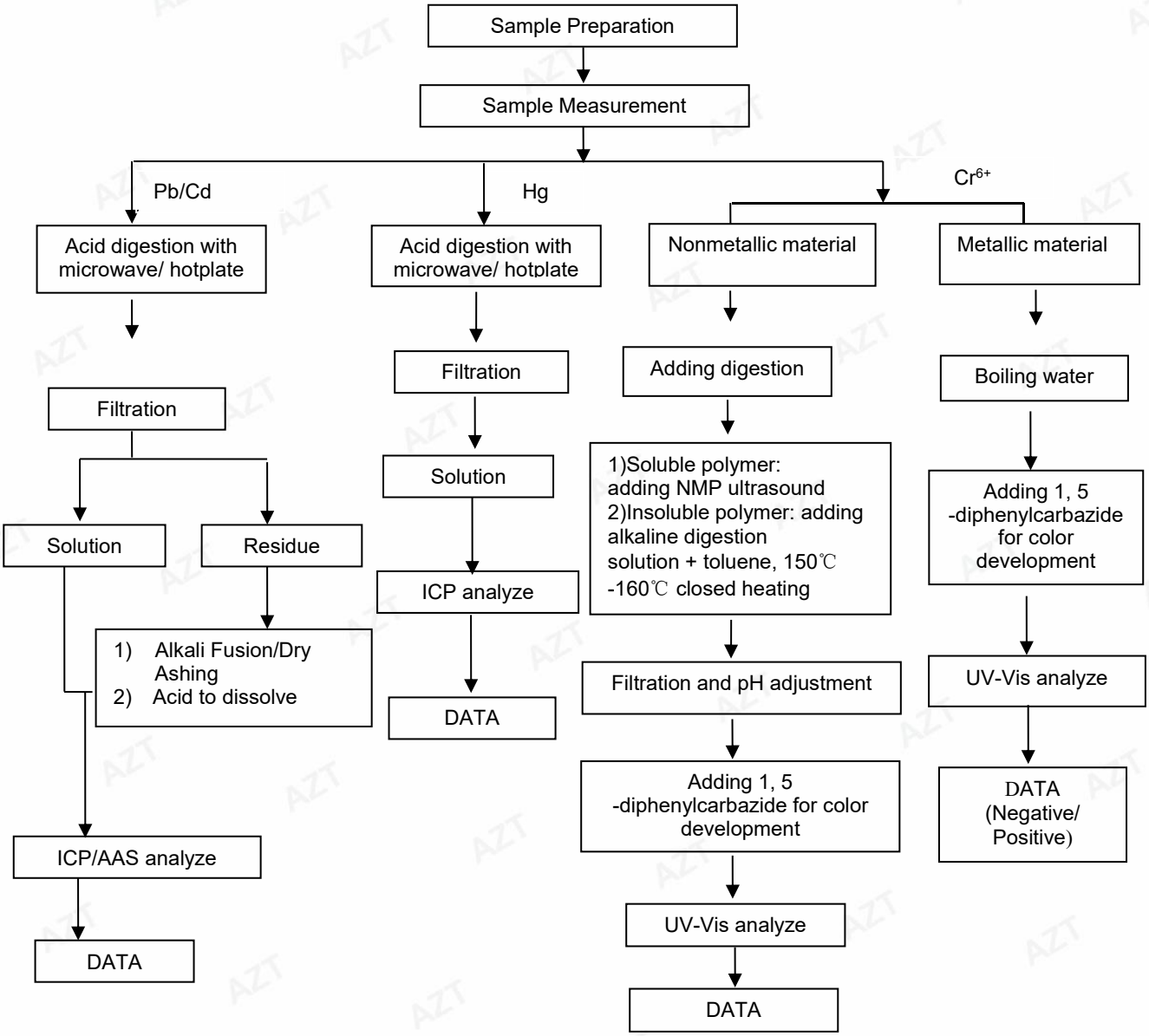
Test Items	CAS No.	Unit	MDL	Results	Limit
				7+10	
Dibutyl Phthalate (DBP)	84-74-2	mg/kg	50	N.D.	1000
Benzyl butyl Phthalate (BBP)	85-68-7	mg/kg	50	N.D.	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	117-81-7	mg/kg	50	N.D.	1000
Diispbutyl Phthalate (DIBP)	84-69-5	mg/kg	50	N.D.	1000

Remark:

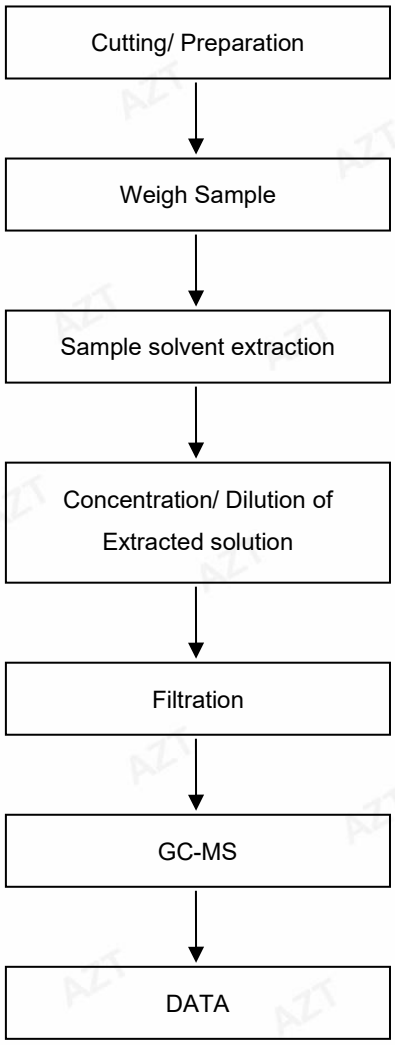
- mg/kg = ppm
- N.D. = Not detected
- MDL= Method detected limited
- The samples were mixed for phthalic acid test
- Tested part(s) was/were specified by client
- Flow chart appendix is included
- Photo appendix is included

Appendix

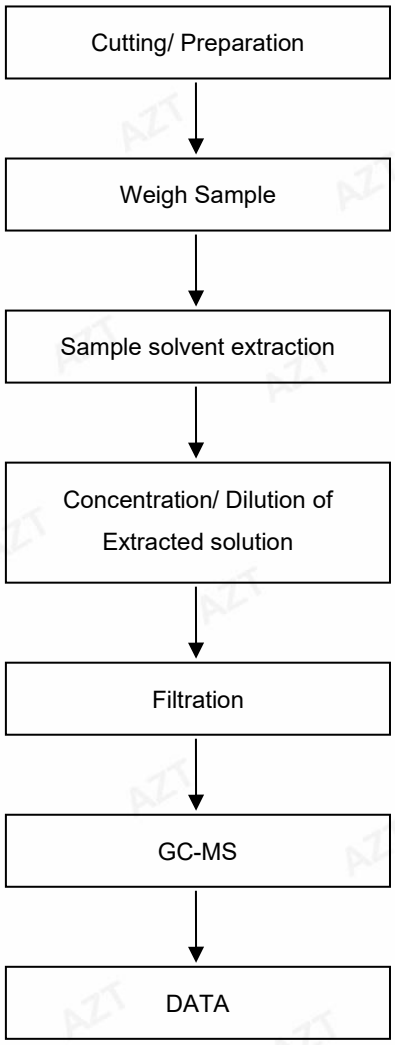
Pb/Cd/Hg/Cr^{6+} Testing Flow Chart



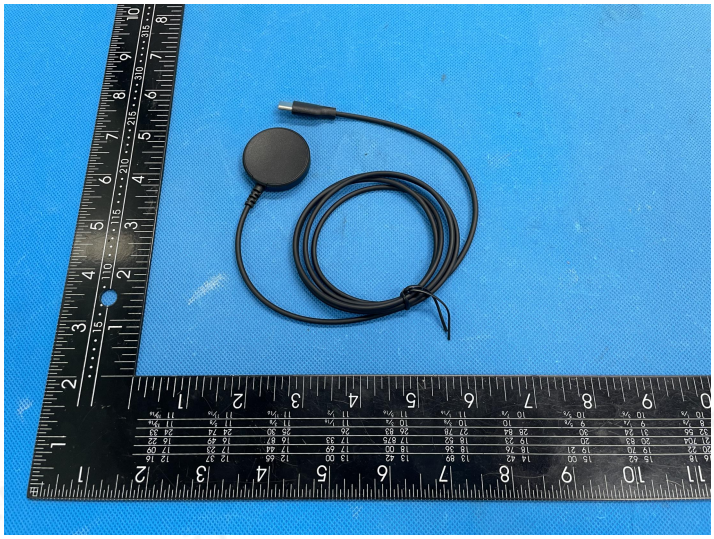
PBBs/PBDEs Testing Flow Chart



Phthalates Testing Flow Chart



The photo of the sample



AZT authenticate the photo on original report only

Note: All the results refer to test report AZT022312250467E-010.

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

Statement:

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2. The result(s) shown in this report refer only to the sample(s) tested.
3. Without written approval of AZT, this report can't be reproduced except in full.
4. The sample(s) and sample information was/were provided by the client who should be responsible for the authenticity which AZT hasn't verified.
5. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.
6. The test report is only for customer research, teaching, internal quality control, product development and other purposes, for reference only.