



# TEST REPORT

**Report No.** ..... : WTN24N11257311A1C

**Applicant** ..... : Ningbo Ehome electronic Co.,Ltd

**Address** ..... : Yonghe Road, Qiaotouhu Industrial Zone, Ninghai, Ningbo, China

**Manufacturer** ..... : Ningbo Ehome electronic Co.,Ltd

**Address** ..... : Yonghe Road, Qiaotouhu Industrial Zone, Ninghai, Ningbo, China

**Sample Name** ..... : sensor

**Sample Model** ..... : ST759B

**Reference Sample Model** ..... : Refer to following pages

**Test Requested** ..... : As applicant's requirement, in accordance with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863, to determine the Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium [Cr (VI)], polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), dibutyl phthalate (DBP), butyl benzyl phthalate (BBP), di (2-ethylhexyl) phthalate (DEHP), diisobutyl phthalate (DIBP) content in the submitted sample

**Test Conclusion**..... : **PASS** (Please refer to following pages for details)

**Date of Receipt sample** ..... : 2024/11/5

**Testing period** ..... : 2024/11/5~2024/11/21

**Date of Issue** ..... : 2024/11/21

**Test Result** ..... : Refer to following pages

## Prepared By:

**Waltek Testing Group (Ningbo) Co., Ltd.**

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Signed for and on behalf of  
Waltek Testing Group (Ningbo) Co., Ltd.

*Steven Song*

**Reference Sample Model:**

ST701,ST701C,ST701G,ST701D,ST701E,ST701F,ST701H,ST701K,ST701R,ST701RB,ST701P,ST701Q,  
ST701H-DC,ST701MA,ST701MB,ST701N,ST701,ST701DB,ST701HD,ST700CA,ST700CF,ST700,ST700D,  
ST701KU,ST760,ST730A,ST730AA,ST730B,ST730C,ST730D,ST731A,ST700BR,ST753BR,ST701RC,ST731B,  
ST731C,ST731D,ST736A,ST736B,ST737,ST756,ST757,ST758B,ST754B,ST754W,ST759A,ST759C,ST759D,  
ST759E,ST759HA,ST759HB,ST759HC,ST759HD,ST759HE,ST759AR,ST759BR,ST759CR,ST759DR,ST759ER,  
ST751,ST755,ST768,ST765B,ST752G,ST752,ST765,ST753,ST754,ST754C,ST766,ST754P,ST761,ST762,  
ST330,ST331,ST300,ST321,ST301,ST302,ST303,ST305-3,ST305-4,ST305-3P,ST306,ST309A,ST309B,ST309C,  
ST309PA,ST309PB,ST309PC,ST307A,ST307B,ST308,ST308B,ST312,ST323,ST314,ST304,ST315,ST315B,  
ST316,ST316B,ST320,ST321,ST472,ST301P,ST301D,ST319A,ST319B,ST319C,ST753B,ST312D,ST304,  
ST312D,ST753FBR ST753F ,ST701HD

**Test Results:**

1. Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs and PBDEs:

Test Method:

- (1) With reference to IEC 62321-2:2021, disassembly, disjunction and mechanical sample preparation;
- (2) With reference to IEC 62321-3-1:2013, screening - Lead, Mercury, Cadmium, total Chromium and total Bromine by X-ray fluorescence spectrometry;
- (3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES;
- (4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES;
- (5) With reference to IEC 62321-7-2:2017 and IEC 62321-7-1:2015, determination of Hexavalent Chromium by UV-VIS;
- (6) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.

Unit: mg/kg

Part No.	Part description	Result of EDX					Result of Wet Chemical Testing	Conclusion
		Cd	Pb	Hg	Cr	Br		
1	Silvery metal bolt	BL	BL	BL	IN	N/A	Cr (VI): Negative	<b>PASS</b>
2	Silvery metal screw	BL	BL	BL	IN	N/A	Cr (VI): Negative	<b>PASS</b>
3	Silvery metal frame	BL	BL	BL	BL	N/A	---	<b>PASS</b>
4	Silvery metal frame	BL	BL	BL	BL	N/A	---	<b>PASS</b>
5	Silvery metal screw	BL	BL	BL	IN	N/A	Cr (VI): Negative	<b>PASS</b>
6	White foam strip	BL	BL	BL	BL	BL	---	<b>PASS</b>
7	White plastic cover	BL	BL	BL	BL	BL	---	<b>PASS</b>
8	White plastic box body	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	<b>PASS</b>
9	Silvery plastic label sticker	BL	BL	BL	BL	BL	---	<b>PASS</b>





Part No.	Part description	Result of EDX					Result of Wet Chemical Testing	Conclusion
		Cd	Pb	Hg	Cr	Br		
10	Silvery plastic label sticker	BL	BL	BL	BL	BL	---	PASS
11	White plastic screw cap	BL	BL	BL	BL	BL	---	PASS
12	Black rubber sleeve	BL	BL	BL	BL	BL	---	PASS
13	White plastic sleeve	BL	BL	BL	BL	BL	---	PASS
14	White silicone gasket	BL	BL	BL	BL	BL	---	PASS
15	White plastic nut	BL	BL	BL	BL	BL	---	PASS
16	Silvery metal solder	BL	BL	BL	BL	N/A	---	PASS
17	White plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
18	Yellow plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
19	Red plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
20	Blue plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
21	Brown plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
22	Black plastic wire jacket	BL	BL	BL	BL	BL	---	PASS
23	Copper metal wire core	BL	BL	BL	BL	N/A	---	PASS
24	Black plastic wire	BL	BL	BL	BL	BL	---	PASS
25	Silvery metal needle	BL	BL	BL	BL	N/A	---	PASS
26	Black plastic frame	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
27	Yellow patch capacitor	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
28	Yellow brown patch capacitor	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
29	Black patch resistor	BL	IN	BL	BL	IN	Pb: 1.23×10 <sup>3</sup> # PBBs: ND PBDEs: ND	PASS
30	Black integrated circuit chip	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS



Part No.	Part description	Result of EDX					Result of Wet Chemical Testing	Conclusion
		Cd	Pb	Hg	Cr	Br		
31	Red dialer	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
32	Green PCB board	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
33	Transparent LED	BL	BL	BL	BL	BL	---	PASS
34	White PVC silicone fiberglass sleeve	BL	BL	BL	BL	BL	---	PASS
35	Silvery metal cover	BL	BL	BL	BL	N/A	---	PASS
36	Green PCB board	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
37	White relay	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
38	Green colored ring resistor	BL	BL	BL	IN	BL	Cr (VI): ND	PASS
39	Yellow safety capacitor	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
40	Yellow transformer	BL	BL	BL	BL	BL	---	PASS
41	Blue capacitor	BL	BL	BL	BL	BL	---	PASS
42	Light blue capacitor	BL	BL	BL	BL	BL	---	PASS
43	Yellow inductor	BL	BL	BL	BL	BL	---	PASS
44	Green plastic capacitor cover	BL	BL	BL	BL	BL	---	PASS
45	Blue plastic capacitor cover	BL	BL	BL	BL	BL	---	PASS
46	Silvery capacitor	BL	BL	BL	BL	BL	---	PASS
47	Black diode	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
48	Black rectifier bridge	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
49	Green PCB board	BL	BL	BL	BL	IN	PBBs: ND PBDEs: ND	PASS
50	Silvery metal solder	BL	BL	BL	BL	N/A	---	PASS





## 2. Phthalates:

Test Method:

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

Unit: mg/kg

Serial No.	Part No.	Results				Conclusion
		DBP	BBP	DEHP	DIBP	
T01	6+9+10 <sup>△</sup>	ND	ND	ND	ND	PASS
T02	7+8+11+13+15 <sup>△</sup>	ND	ND	ND	ND	PASS
T03	12+14+17 <sup>△</sup>	ND	ND	ND	ND	PASS
T04	18+19+20 <sup>△</sup>	ND	ND	221	ND	PASS
T05	21+22+24 <sup>△</sup>	ND	ND	191	ND	PASS
T06	26	ND	ND	ND	ND	PASS
T07	27+28+29+30+31 <sup>△</sup>	ND	ND	ND	ND	PASS
T08	32+33+36+37+38 <sup>△</sup>	ND	ND	ND	ND	PASS
T09	39+40+41+42+43 <sup>△</sup>	ND	ND	ND	ND	PASS
T10	46+47+48+49 <sup>△</sup>	ND	ND	ND	ND	PASS
T11	34	ND	ND	ND	ND	PASS
T12	44	ND	ND	ND	ND	PASS
T13	45	ND	ND	ND	ND	PASS

## Notes:

(1) EDX test:

(a) For the restricted substances PBBs/PBDEs, the EDX results show the total Br content; for the restricted substance Cr (VI), the EDX results show the total Cr content;

(b) Results were obtained by EDX for primary screening, and further chemical testing are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013;

Unit: mg/kg

Elements	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	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$



Elements	Polymers	Metals	Composite material
Br	$BL \leq (300-3\sigma) < X$	---	$BL \leq (250-3\sigma) < X$

(c) BL=Below Limit by EDX analysis, OL=Over Limit by EDX analysis, IN=Inconclusive, LOD = The limit of detection, "----" = Not regulated, X=need further chemical analysis;

(d) For composite material, the EDX results may be different to the actual content in the sample.

(2) Chemical test and Regulatory limits:

Test Items		CAS No.	MDL	Limit (by weight in homogeneous materials)
Pb		---	2 mg/kg	1000 mg/kg
Cd		---	2 mg/kg	100 mg/kg
Hg		---	2 mg/kg	1000 mg/kg
Cr (VI)	Metal	---	0.10 $\mu\text{g}/\text{cm}^2$	1000 mg/kg
	Others	---	8 mg/kg	
PBBs		---	5 mg/kg (Each)	1000 mg/kg (Sum)
PBDEs		---	5 mg/kg (Each)	1000 mg/kg (Sum)
Dibutyl phthalate (DBP)		(84-74-2)	50 mg/kg	1000 mg/kg
Benzyl butyl phthalate (BBP)		(85-68-7)	50 mg/kg	1000 mg/kg
Di(2-ethylhexyl) phthalate (DEHP)		(117-81-7)	50 mg/kg	1000 mg/kg
Di-iso-butyl phthalate (DIBP)		(84-69-5)	50 mg/kg	1000 mg/kg

(3) "#" = According to Annex III of European Council Directive 2011/65/EU, exemptions were granted a few materials and Clause 7(c)-I is reiterated here "Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic capacitors, e. g. piezoelectronic devices, or in a glass or ceramic matrix compound.". Test Item(s) was (were) claimed as is by client (received as is). Therefore, this (these) Test Item(s) containing the found Lead level should be exempted.

(4) According to IEC 62321-7-1:2015, determined of Cr (VI) on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.

Boiling water extraction:

Negative = Absence of Cr (VI) coating, the detected concentration in boiling water extraction solution is less than 0.10 $\mu\text{g}/\text{cm}^2$ .

Positive = Presence of Cr (VI) coating, the detected concentration in boiling water extraction solution is greater than 0.13 $\mu\text{g}/\text{cm}^2$ .

When the concentration of Cr (VI) is between 0.10 $\mu\text{g}/\text{cm}^2$  and 0.13 $\mu\text{g}/\text{cm}^2$ , it is not possible to directly determine whether Cr (VI) is detected.

Because different individuals may influence the determination results of the surface of the sample differences.

(5) ND = Not Detected;

(6) mg/kg = milligram per kilogram = ppm (parts per million);

(7)  $\mu\text{g}/\text{cm}^2$  = microgram per square centimetre;

(8) MDL = Method Detection Limit;

(9) "----" = Not regulated;

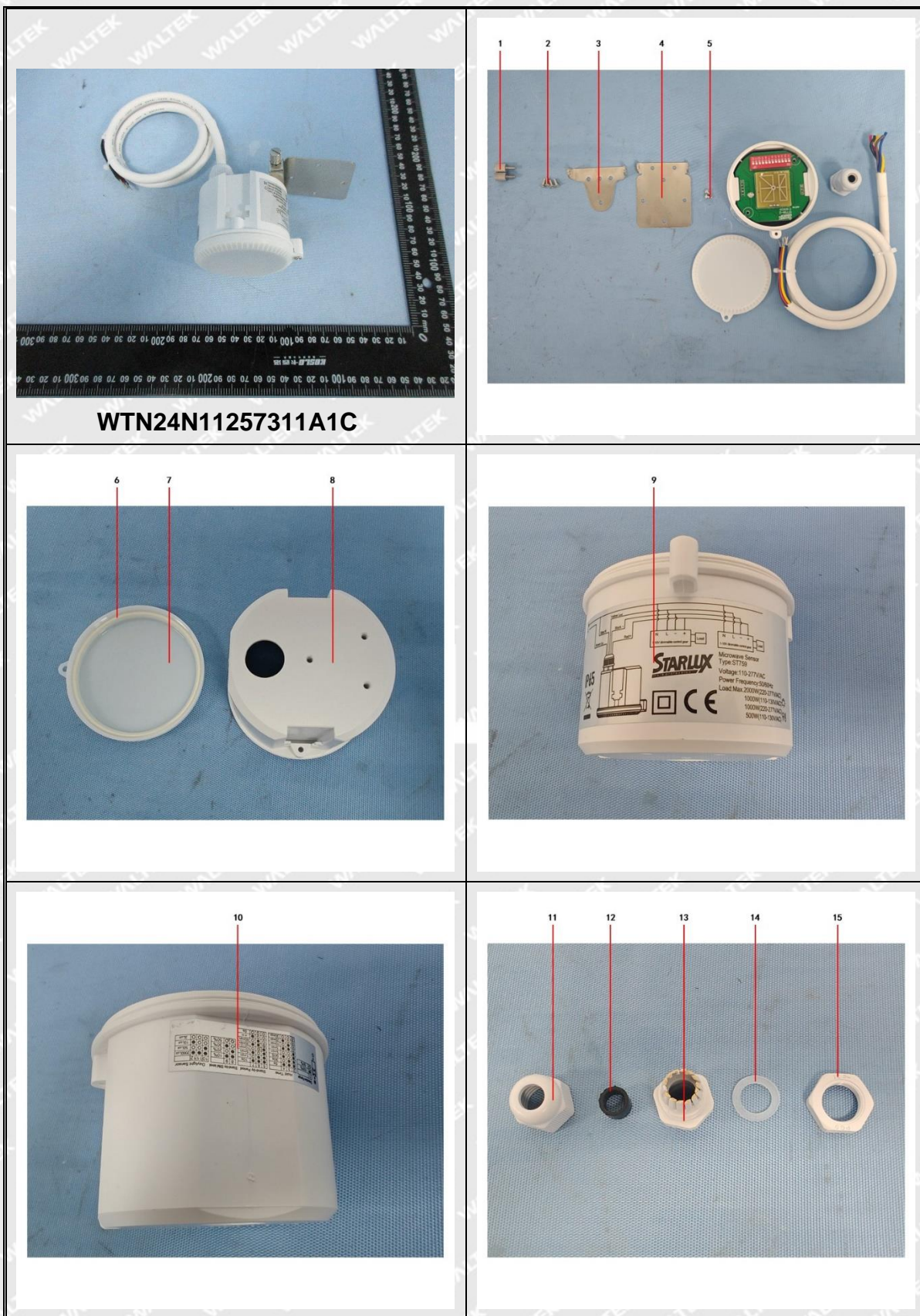
(10) N/A = Not Applicable;

(11)  $\Delta$  = As client's requirement, the testing was conducted based on mixed components. Results are calculated by the minimum weight of mixed components.

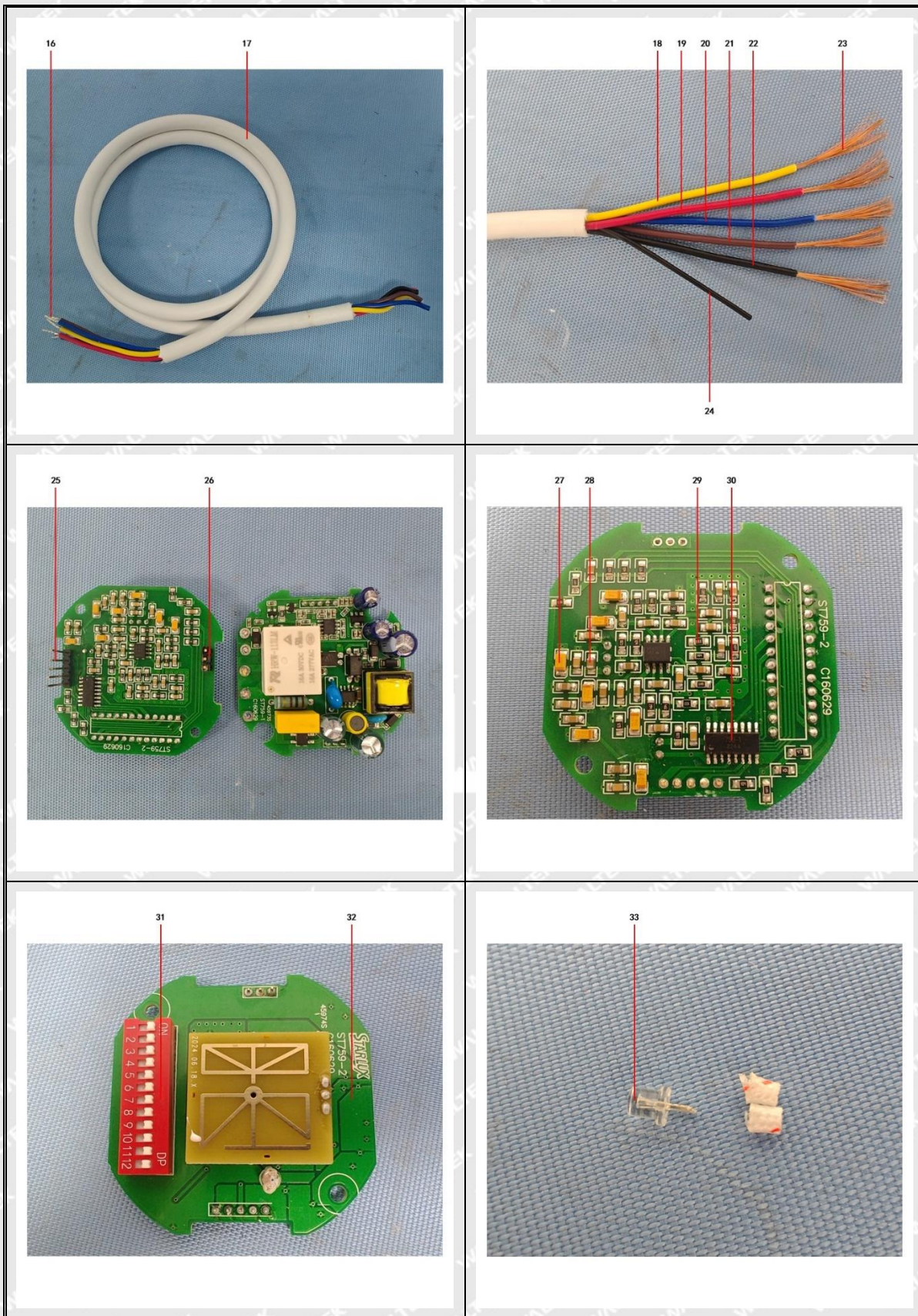




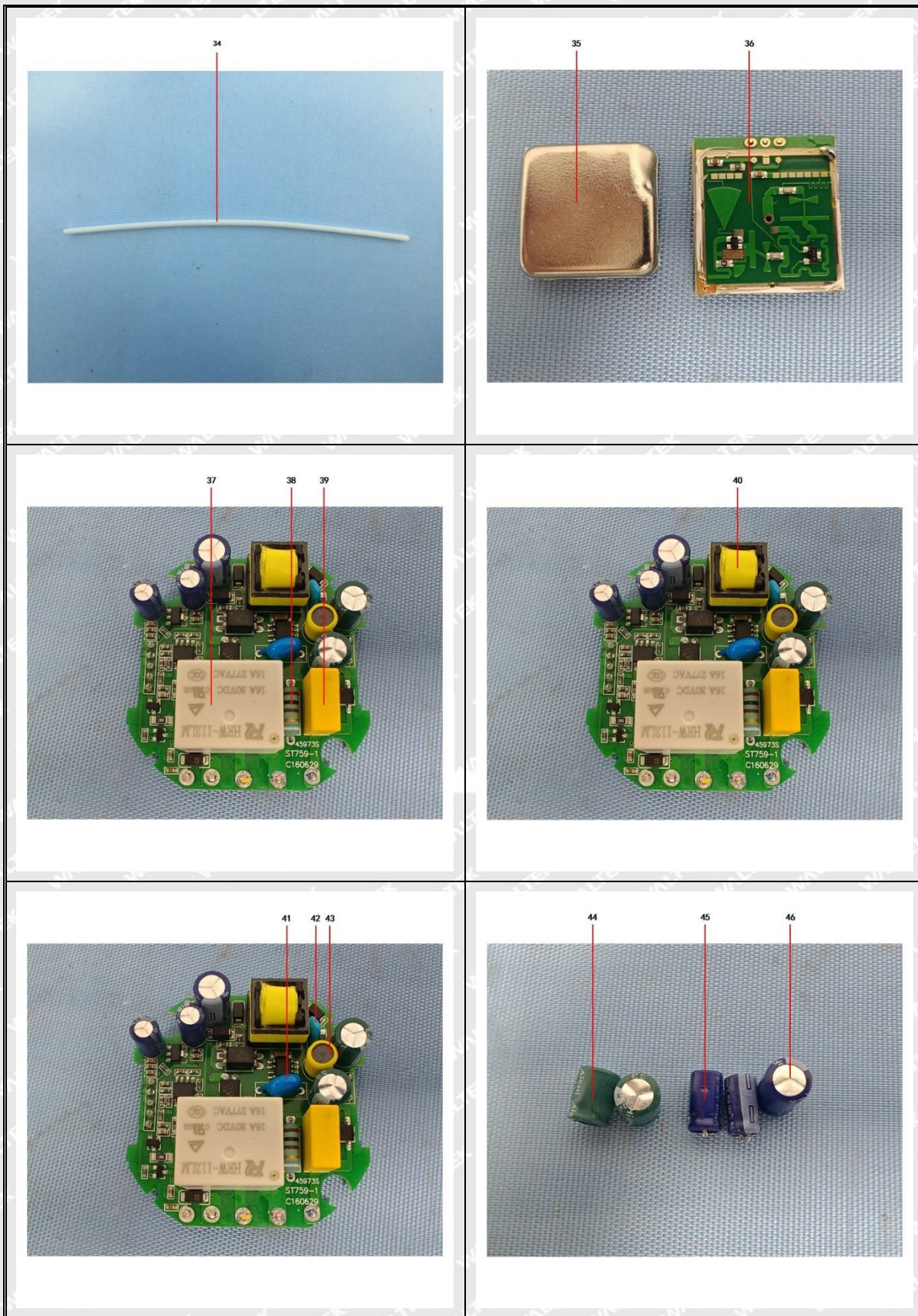
Sample Photo(s):



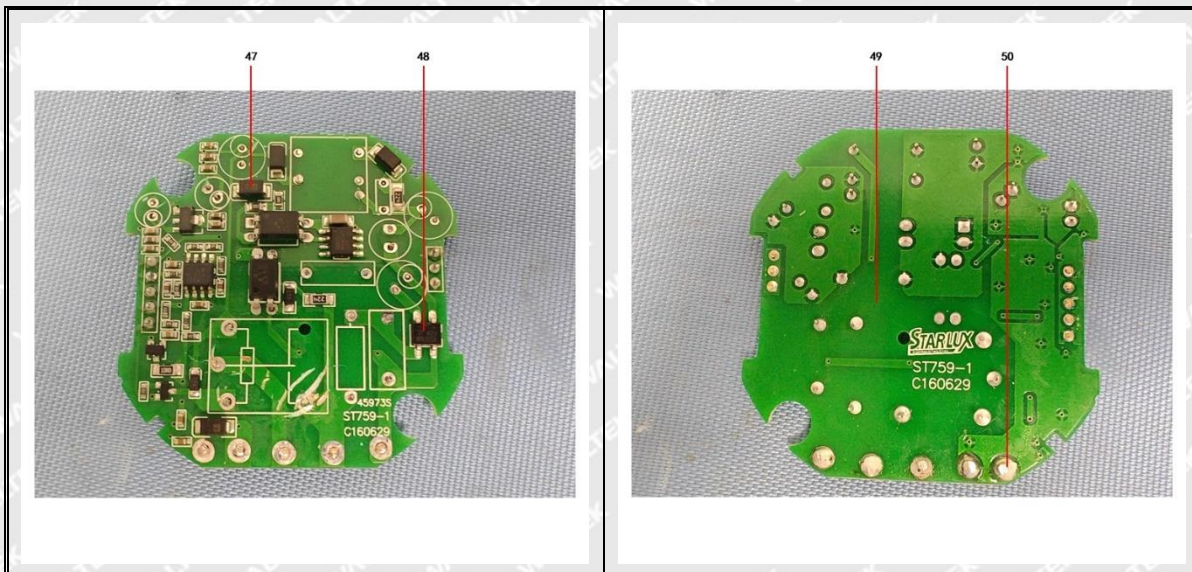






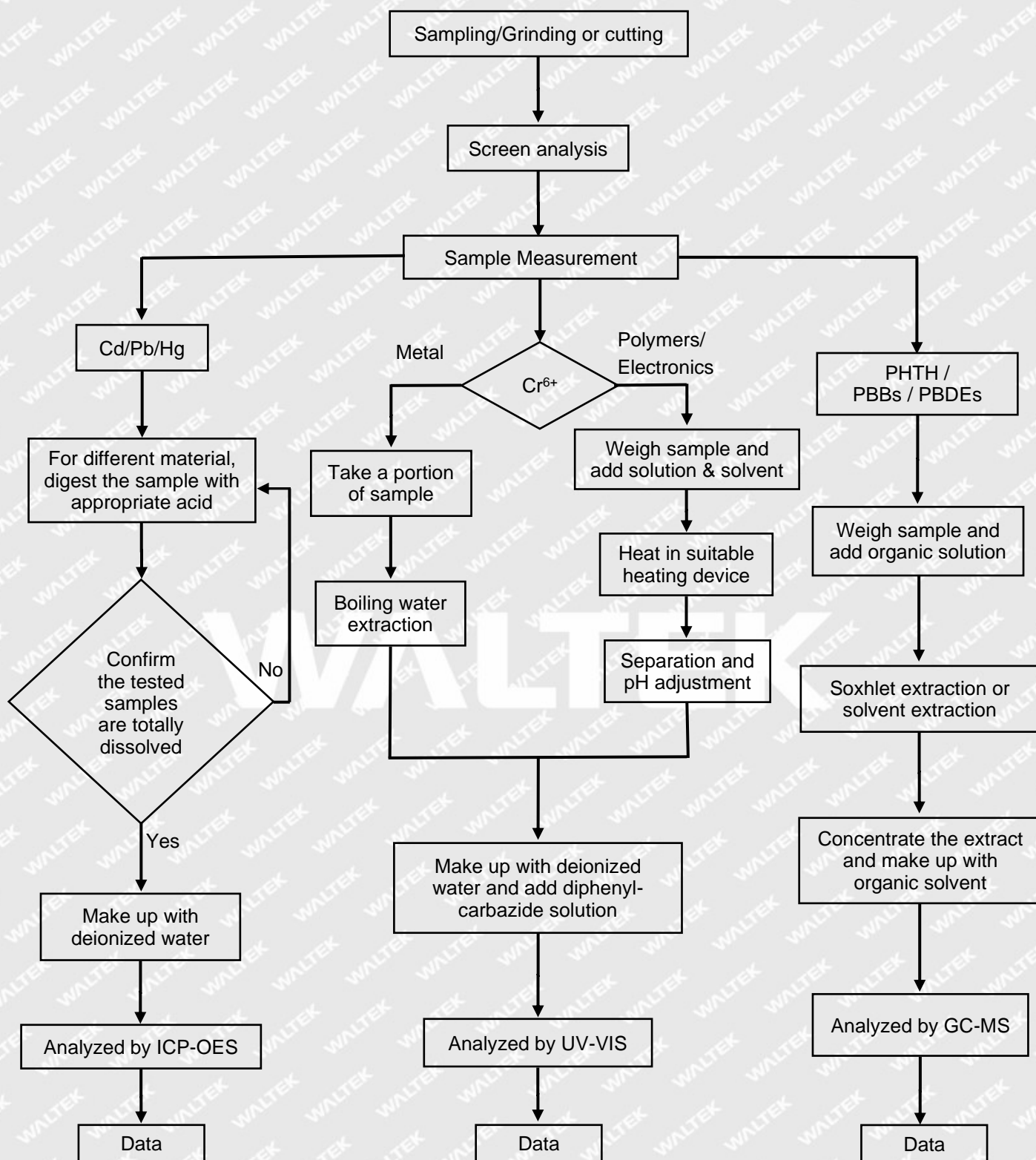






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**Test Flow Chart:**



**Remarks:**

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2. This test report cannot be reproduced, except in full, without prior written permission of the company;
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=====End of Report =====

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