TEST REPORT

REPORT No.: DTI2025EE200516 Date: 2025-05-22

Applicant Company Name： NEO Smart Technology (GuangDong) Co.， LTD

Applicant Company Address： Floor 7, 8, 9, 10, Building 28, No. 29, Licheng Industrial Avenue, Shuikou Street, Huicheng District, Huizhou City

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

Sample Name	:	Water valve
Model No.	:	NAS-WV02W，NAS-WV07W
Trademark	:	NEO
Manufacturer	:	NEO Smart Technology (GuangDong) Co.， LTD
Sample Receiving Date	:	May 16, 2025
Testing Period	:	From May 16, 2025 to May 22, 2025
Results	:	Please refer to next page(s).

****

Summary of Test Results:

TEST REQUEST	**CONCLUSION**
A EU RoHS Directive 2011/65/EU and its amendment directives 2015/863/EU (**RoHS**)	**Pass**

****

Shenzhen Deesev Testing International Corp

Approved by: _____ lab manager

Results:

1、EU RoHS Directive 2011/65/EU and its amendment directives on XRF

Test method: With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
1	White Plastic Case	BL	BL	BL	BL	BL
2	Golden Metal	BL	BL	BL	BL	N/A
3	Black Plastic Cover	BL	BL	BL	BL	BL
4	Golden Metal Bush	X	BL	BL	BL	N/A
5	Black Plastic Case	BL	BL	BL	BL	BL
6	White Plastic Case	BL	BL	BL	BL	BL
7	Grey Coating	BL	BL	BL	BL	BL
8	White Plastic Cover	BL	BL	BL	BL	BL
9	Golden Metal Screw	X	BL	BL	BL	N/A
10	Golden Metal Nut	X	BL	BL	BL	N/A
11	Silver Metal Block	BL	BL	BL	X	N/A
12	Black Metal Gear	BL	BL	BL	X	N/A
13	Silver Metal Shaft	BL	BL	BL	X	N/A
14	Golden Metal Gear	X	BL	BL	BL	N/A
15	Blue Plastic Gear	BL	BL	BL	BL	BL
16	White Plastic Gear	BL	BL	BL	BL	BL
17	Silver Metal Sheet	BL	BL	BL	X	N/A
18	Silver Metal Shaft	BL	BL	BL	X	N/A
19	Silver Metal Sheet	BL	BL	BL	BL	N/A
20	White Plastic Plug-In	BL	BL	BL	BL	BL

****

TEST REPORT

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
21	Silvery Metal Terminal	BL	BL	BL	BL	N/A
22	Black Plastic Nut	BL	BL	BL	BL	X
23	Silver Metal Sheet	BL	BL	BL	BL	N/A
24	Black Plastic Case	BL	BL	BL	BL	X
25	Golden Meat Needle	X	BL	BL	BL	N/A
26	Golden Metal Socket	BL	BL	BL	BL	N/A
27	Patch Coil Inductor	BL	BL	BL	BL	BL
28	Copper Winding	BL	BL	BL	BL	N/A
29	White Plastic Case	BL	BL	BL	BL	BL
30	Silver Metal Sheet	BL	BL	BL	BL	N/A
31	Silver Metal Cover	BL	BL	BL	BL	N/A
32	Beige Plastic Cover	BL	BL	BL	BL	BL
33	Brush Spring Sheet	BL	BL	BL	BL	N/A
34	Gold Metal Bush	BL	BL	BL	BL	N/A
35	Gold Metal Gear	X	BL	BL	BL	N/A
36	Silver Metal Case	BL	BL	BL	BL	N/A
37	Black Soft Magnet	BL	BL	BL	BL	BL
38	White Plastic Gasket	BL	BL	BL	BL	BL
39	White Plastic Frame	BL	BL	BL	BL	BL
40	Black Magnetic Ring	BL	BL	BL	BL	BL

****

TEST REPORT

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
41	Silicon Steel Laminated Thin Iron Sheet	BL	BL	BL	BL	N/A
42	Rotor Cooper Coils	BL	BL	BL	BL	N/A
43	Silver Metal Shaft	BL	BL	BL	X	N/A
44	Black Plastic Case	BL	BL	BL	BL	BL
45	Golden Plastic Sheet	BL	BL	BL	BL	BL
46	Red Plastic Button	BL	BL	BL	BL	BL
47	Silver Metal Screw	BL	BL	BL	X	N/A
48	Gold Metal Plug	BL	BL	BL	BL	N/A
49	Electrolytic Capacitor Silver Metal Case	BL	BL	BL	BL	N/A
50	Electrolytic Capacitor Internal Sticker	BL	BL	BL	BL	BL

****

Remark:

(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.

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
N/A = Not Applicable

(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 document 2011/65/EU and its amendment directives 2015/863/EU:

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
Polybrominate ddiphenylethers (PBDEs)	≤1000
Di-2-ethylhexyl phthalate (DEHP)	≤1000
Benzyl-n-butyl phthalate (BBP)	≤1000
Di-n-butyl phthalate (DBP)	≤1000
Di-iso-butyl phthalate (DIBP)	≤1000

****

2、The Test Results of Chemical Method:

Test method:

Lead, Cadmium, Mercury Content:
With reference to IEC 62321-5:2013 and IEC 62321-4:2013+AMD1:2017, by acid digestion and analysis was performed by Inductively Coupled Plasma- Optical Emission Spectrophotometer (ICP-OES)

Hexavalent Chromium Content (For metal material):
With reference to IEC 62321-7-1:2015, by boiling-water-extraction and analysis was performed by UV-visible spectrophotometer (UV-Vis)

Hexavalent Chromium Content (For non-metal material):
With reference to IEC 62321-7-2:2017, by alkaline digestion and analysis was performed by UV-visible spectrophotometer (UV-Vis)

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

DEHP, BBP, DBP&.DIBP content:
With reference to IEC 62321-8:2017 by solvent extraction and analysis was performed by gas chromatographic -mass spectrometer (GC-MS)

****

1) The test results of Cr (VI)

Item	Unit	MDL	Results					Limit
			11	12	13	17	18	
Hexavalent Chromium (Cr (VI)) (Metal material)	μg/cm²	/	Negative	Negative	Negative	Negative	Negative	#
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

Item	Unit	MDL	Results		Limit
			43	47	
Hexavalent Chromium (Cr (VI)) (Metal material)	μg/cm²	/	Negative	Negative	#
Conclusion	/	/	**Pass**	**Pass**	/

Note:

- ND = Not Detected
- MDL = Method Detection Limit
- Negative= Sample Cr(VI) concentration is less than 0.10 μg/cm²
  Positive = Sample Cr(VI) concentration is greater than 0.13 μg/cm²
- # =
  Positive indicates the presence of Cr(VI) on the tested areas and the test results are considered to be incompatible with Directive 2011/65/EU (RoHS) requirement.

  Negative indicates the absence of Cr(VI) on the tested areas and the test results are considered to be consistent with Directive 2011/65/EU (RoHS) requirement.
- mg/kg = ppm

****

2) The test results of Pb

Item	Unit	MDL	Results					Limit
			4	9	10	14	25	
Lead(Pb)	mg/kg	2	22031^	24517^	23844^	14772^	13963^	≤1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

Item	Unit	MDL	Results	Limit
			35	
Lead(Pb)	mg/kg	2	15248^	≤1000
Conclusion	/	/	**Pass**	/

Note:

- ND = Not Detected
- MDL = Method Detection Limit
- mg/kg = ppm
- ^=According to the declaration from the client, Lead (Pb) in the sample is exempted by EU RoHS Directive 2011/65/EU based on 6(c): Copper alloy containing up to 4% (40000mg/kg) lead by weight.

3) The test results of PBBs & PBDEs

Item	Unit	MDL	Results		Limit
			22	24	
Polybrominated Biphenyls (PBBs)					
Monobromobiphenyl	mg/kg	5	ND	ND	/
Dibromobiphenyl	mg/kg	5	ND	ND	/
Tribromobiphenyl	mg/kg	5	ND	ND	/
Tetrabromobiphenyl	mg/kg	5	ND	ND	/
Pentabromobiphenyl	mg/kg	5	ND	ND	/
Hexabromobiphenyl	mg/kg	5	ND	ND	/
Heptabromobiphenyl	mg/kg	5	ND	ND	/
Octabromobiphenyl	mg/kg	5	ND	ND	/
Nonabromodiphenyl	mg/kg	5	ND	ND	/
Decabromodiphenyl	mg/kg	5	ND	ND	/
Total content	mg/kg	/	ND	ND	≤1000
Polybrominated Diphenylethers (PBDEs)(Mon-Deca)					
Monobromodiphenyl ether	mg/kg	5	ND	ND	/
Dibromodiphenyl ether	mg/kg	5	ND	ND	/
Tribromodiphenyl ether	mg/kg	5	ND	ND	/
Tetrabromodiphenyl ether	mg/kg	5	ND	ND	/
Pentabromodiphenyl ether	mg/kg	5	ND	ND	/
Hexabromodiphenyl ether	mg/kg	5	ND	ND	/
Heptabromodiphenyl ether	mg/kg	5	ND	ND	/
Octabromodiphenyl ether	mg/kg	5	ND	ND	/
Nonabromodiphenyl ether	mg/kg	5	ND	ND	/
Decabromodiphenyl ether	mg/kg	5	ND	ND	/
Total content	mg/kg	/	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	/

Note:

- ND = Not Detected
- mg/kg = ppm
- MDL = Method Detection Limit

****

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

Item	Unit	MDL	Results					Limit
			1	3	5	6	7	
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl-n-butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-n-butyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-iso-butyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

Item	Unit	MDL	Results					Limit
			8	15	16	20	22	
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl-n-butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-n-butyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-iso-butyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

Item	Unit	MDL	Results					Limit
			24	27	29	32	37	
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl-n-butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-n-butyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-iso-butyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

****

Item	Unit	MDL	Results					Limit
			38	39	40	44	45	
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl-n-butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-n-butyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Di-iso-butyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**	/

Item	Unit	MDL	Results		Limit
			46	50	
Di-2-ethylhexyl phthalate (DEHP)	mg/kg	30	ND	ND	≤1000
Benzyl-n-butyl phthalate (BBP)	mg/kg	30	ND	ND	≤1000
Di-n-butyl phthalate (DBP)	mg/kg	30	ND	ND	≤1000
Di-iso-butyl phthalate (DIBP)	mg/kg	30	ND	ND	≤1000
Conclusion	/	/	**Pass**	**Pass**	/

Note:

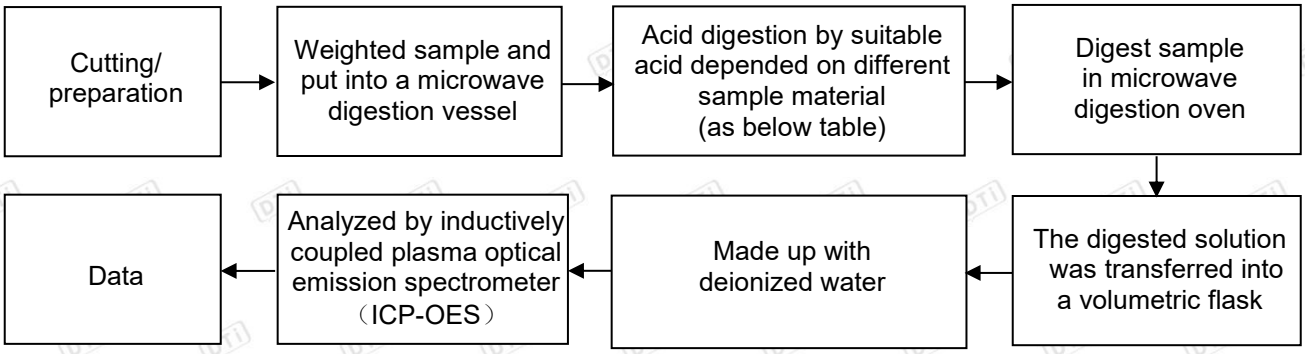
- ND = Not Detected
- 0.1%=1000mg/kg
- mg/kg = ppm
- MDL = Method Detection Limit
- Decision rule: According to DTI-CX-39《Decision rule for conformity of the test results》
- Flow chart appendix is included.
- Photo appendix is included.

Appendix I

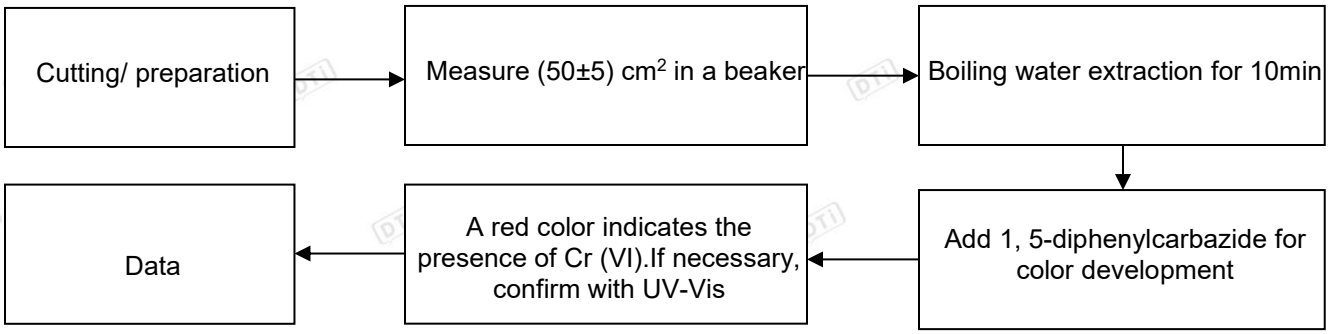
Test Flow chart

1. Test Flowchart for Cd / Pb /Hg content

These samples were dissolved totally by pre-conditioning method according to below flow chart.

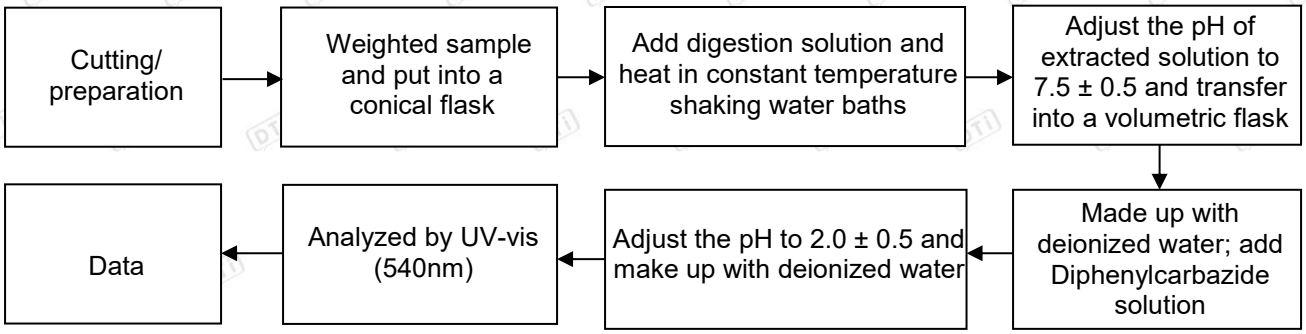


2. Test Flowchart for Cr^{6+} content (Metal material)

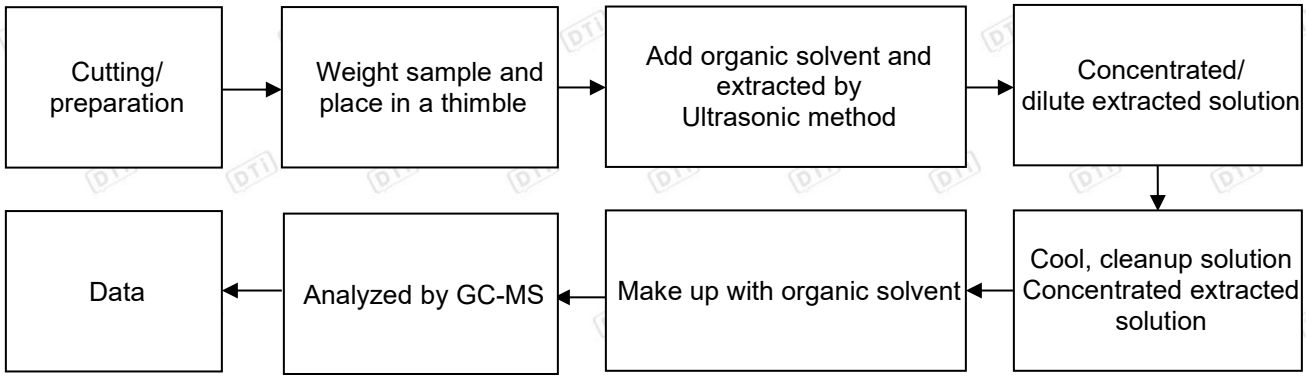


****

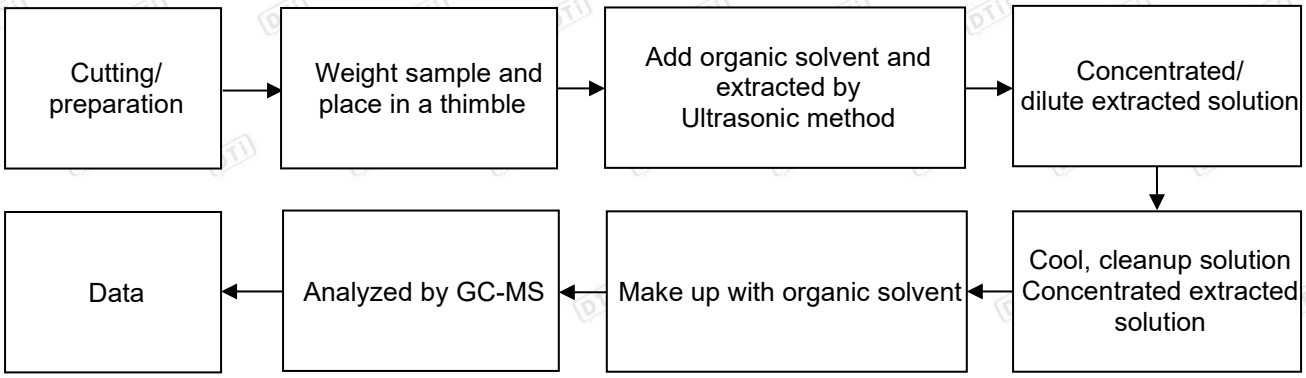
3. Test Flowchart for Cr^{6+} content (Non-metal material)



4. Test Flowchart for PBBs & PBDEs content



5. Test Flowchart for DEHP, BBP, DBP & DIBP content



****

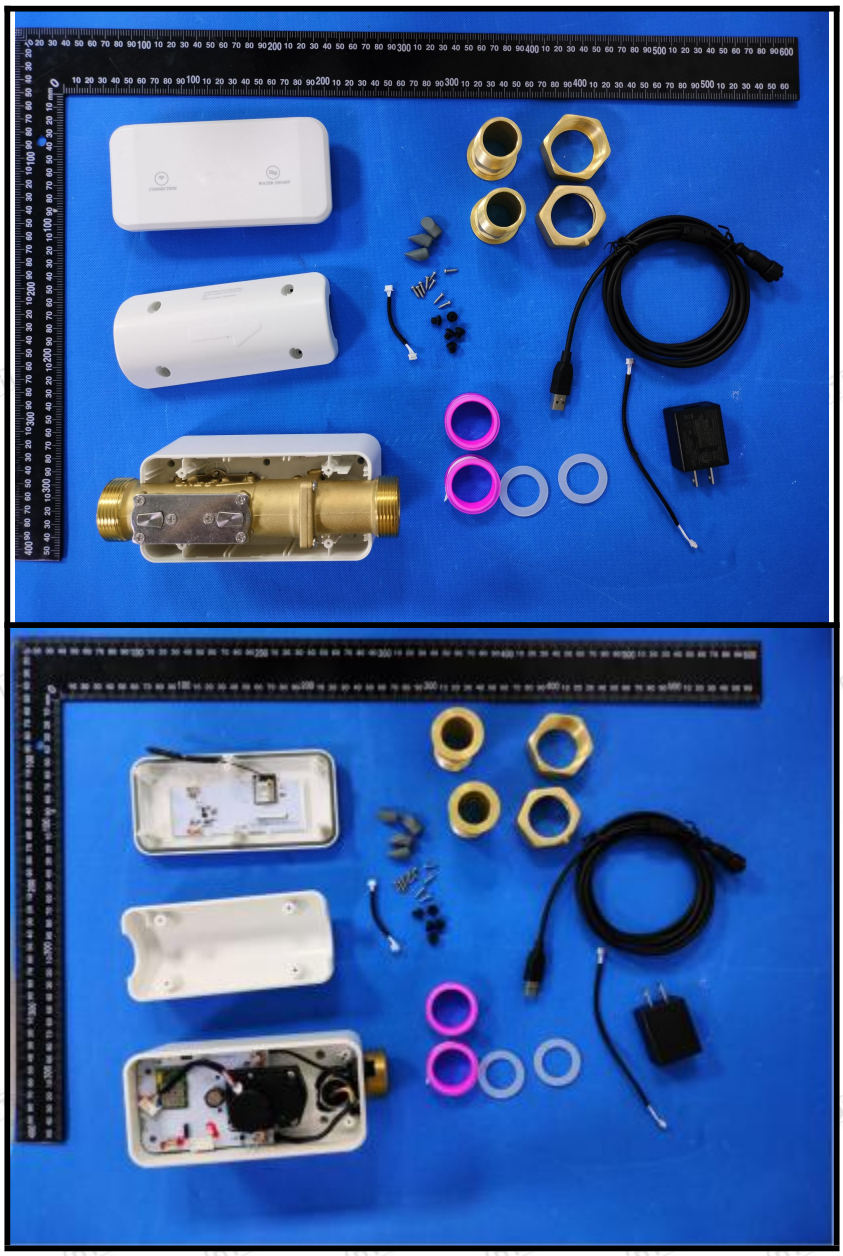
Table:

Sample material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO_3, HCl, HF, H_2O_2
Glass	HNO_3/HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO_3
Plastic	H_2SO_4, H_2O_2, HNO_3, HCl
Others	Any acid to total digestion

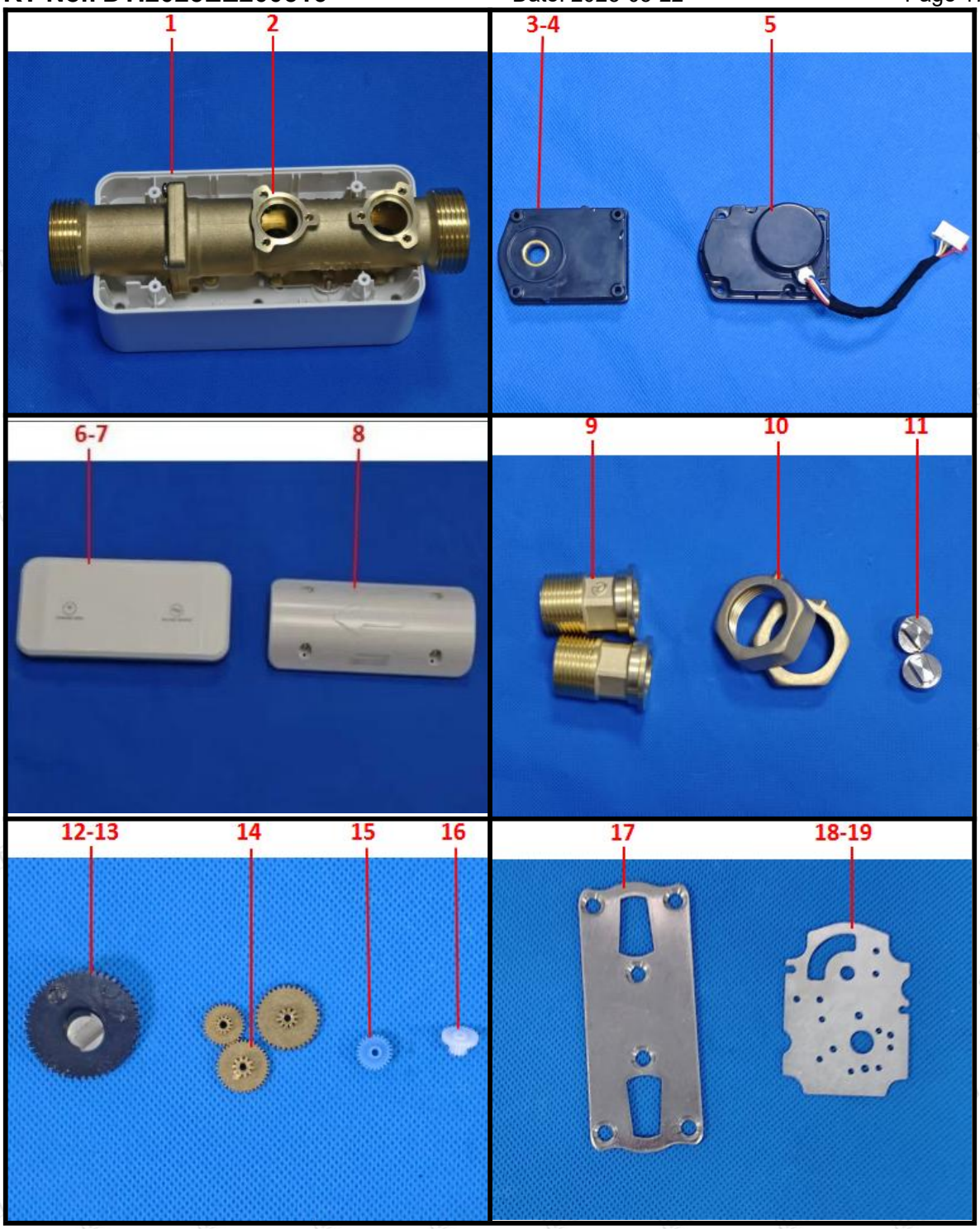
****

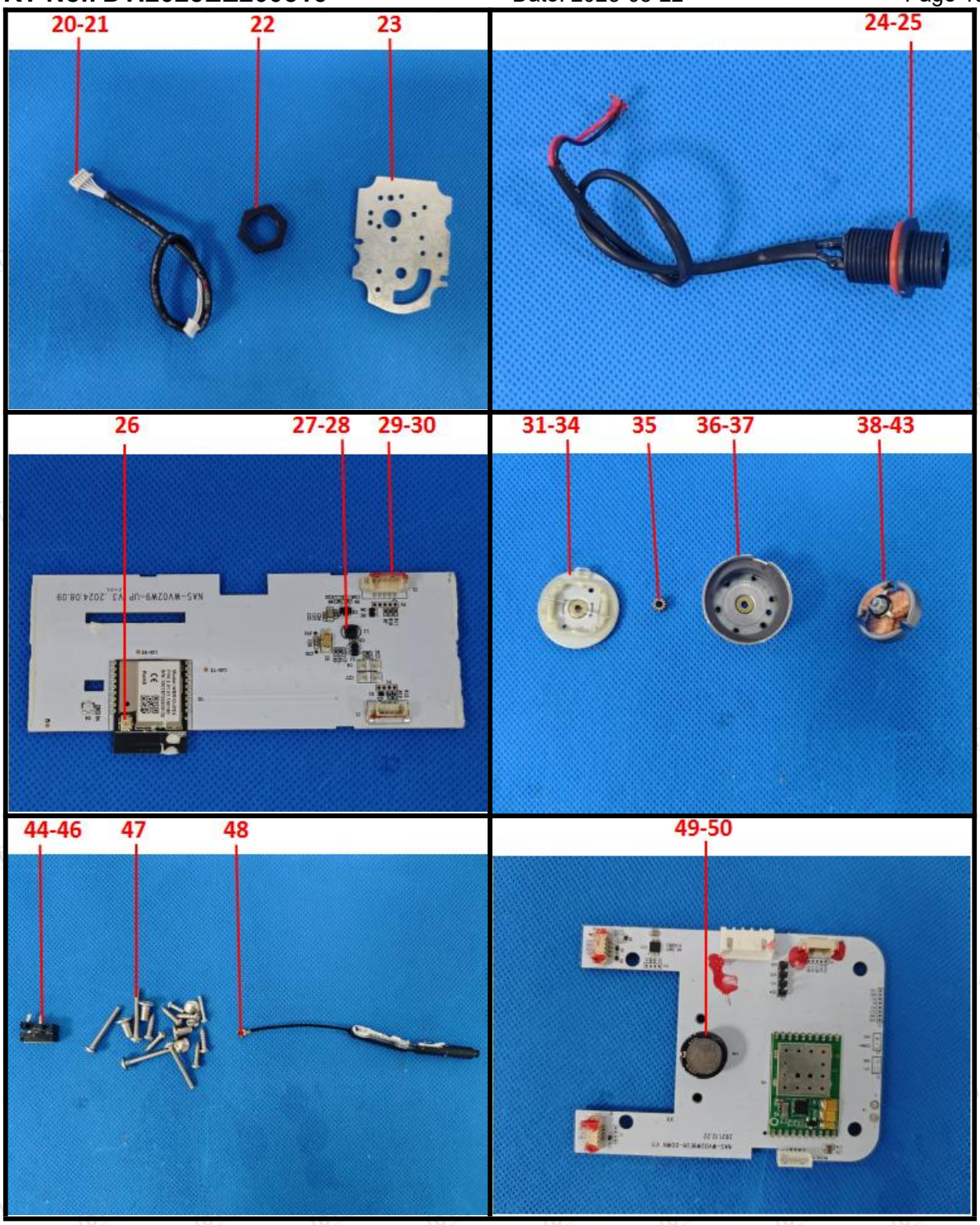
Appendix II

Photograph of Sample



****





*** End of Report ***