中国认可
国际互认
检测
TESTING
CNAS L11379

TEST REPORT

Company Name Shown on Report:	Seeed Technology Co.,Ltd.
Address:	9F,Building G3,TCL International E city,Shuguang Community,Xili street,Nanshan,Shenzhen, Guangdong Province, P.R.C

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

Sample Name:	Seeed Studio Wio-LR2021 Wireless module
Sample Model:	Seeed Studio Wio-LR2021 Wireless module
Sample Received Date:	Aug.06, 2026
Test Period:	Aug.06, 2026 - Aug.18, 2026
Date of Issue:	Aug.20, 2026

ISSUED BY:
Guangdong TI COBO Testing Co., Ltd.

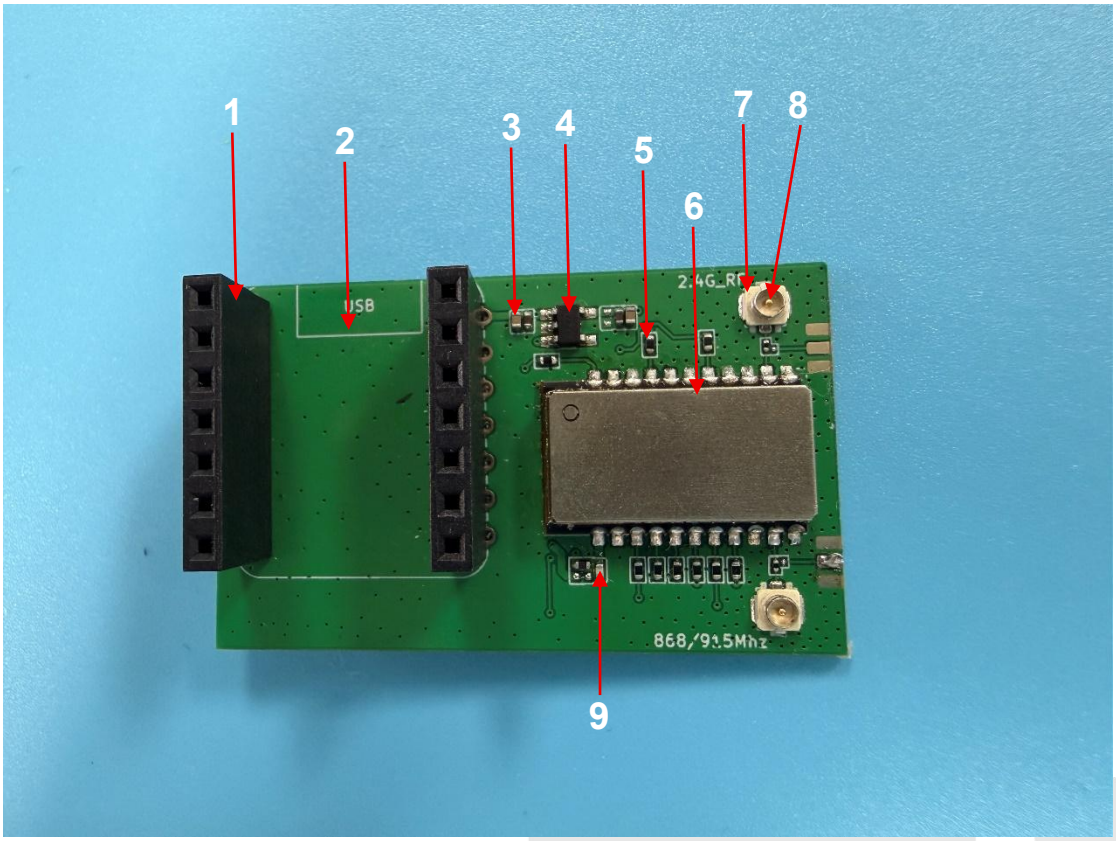
Editor:	Judy	**Checked by:**	Cd lan	**Approved by:**	Sam Xie

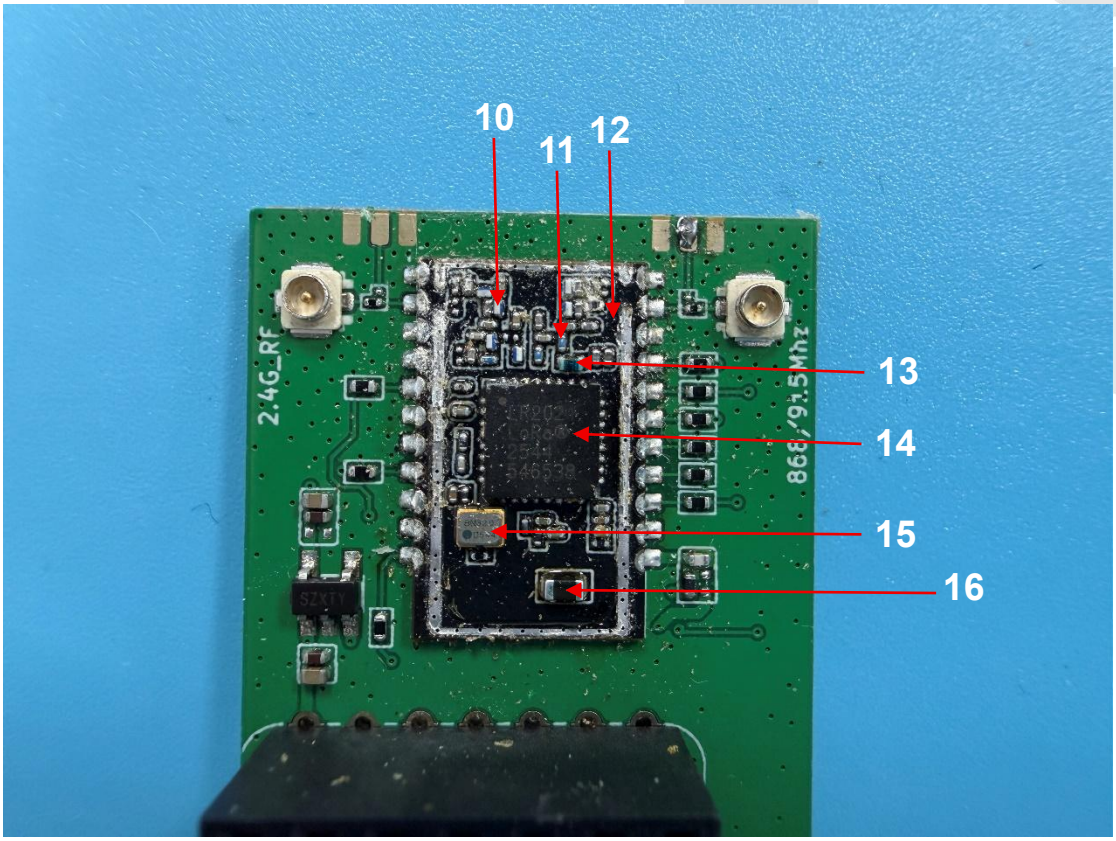
1. Test Requested and Test Conclusion:

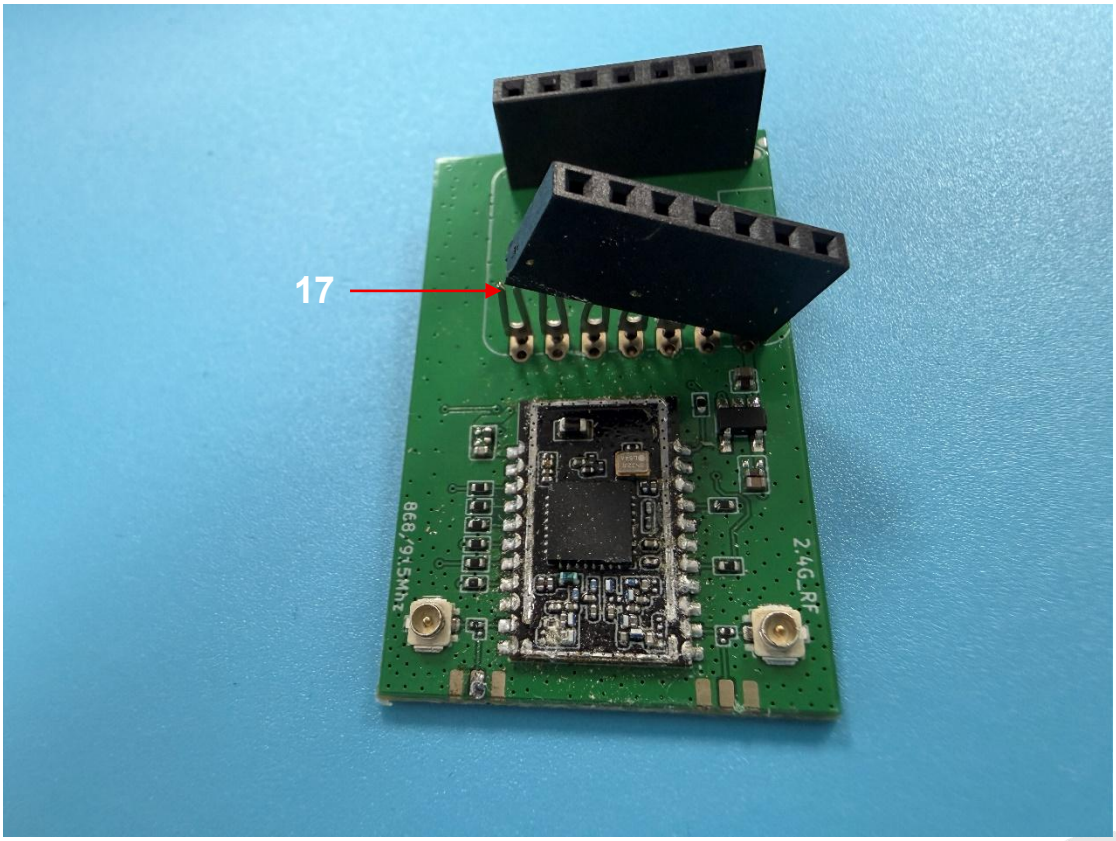
Based on the performed tests on submitted sample(s).

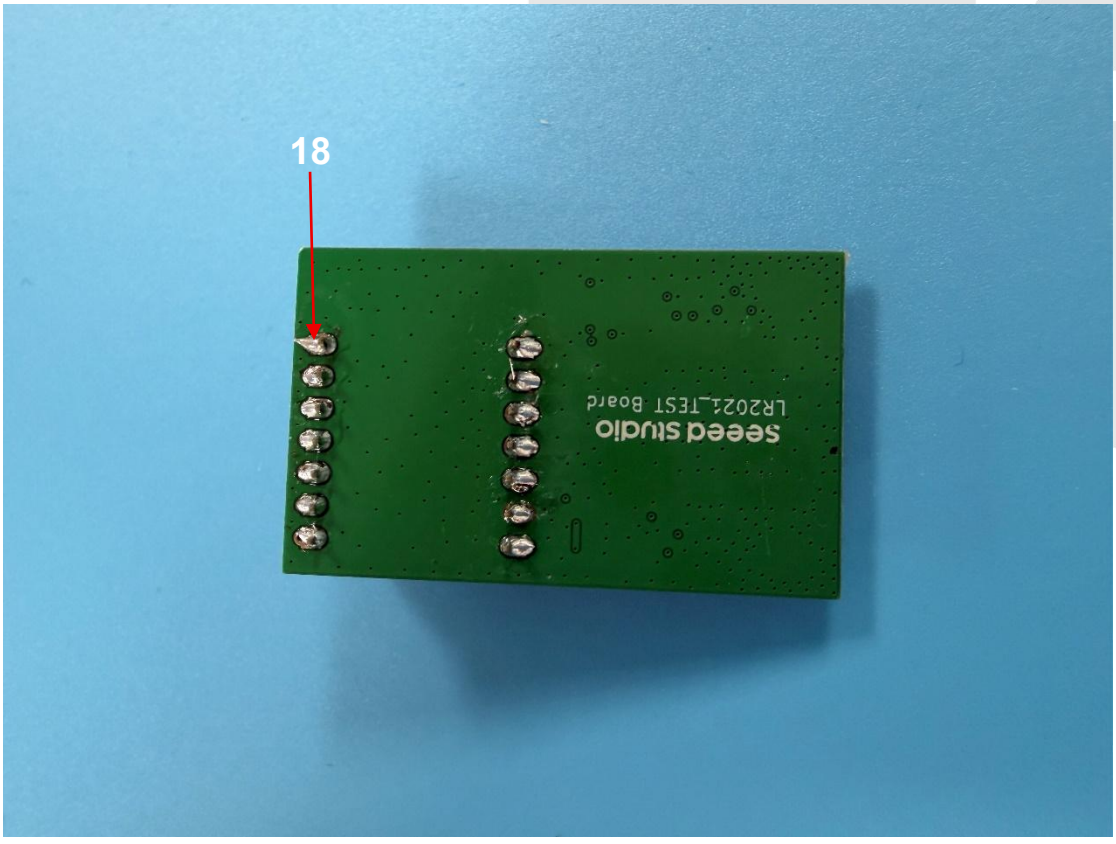
Test items	Conclusion
RoHS Directive 2011/65/EU Revised instructions (EU) 2015/863 of the European parliament and of the council on the restriction of the use of certain hazardous substances in electrical and electronic equipment	
– Lead (Pb)/ Cadmium(Cd)/ Mercury(Hg)/ Hexavalent Chromium(Cr^{6+}) content.	PASS
– Polybrominated biphenyls (PBBs) &Polybrominated diphenyl ethers (PBDEs) content.	PASS
– Di-(2-ethylhexyl) phthalate (DEHP), Dibutyl phthalate (DBP), Butyl benzyl phthalate (BBP), Diisobutyl phthalate (DIBP) content	PASS

Sample photo list--A






17
868/915Mhz
2.4G_RF


18
seeed studio
LR2021_TEST Board

2. Sample description

Sample No.	Description
A1	Black plastic
A2	Green PCB
A3	SMD capacitor
A4	SMD IC
A5	SMD resistor
A6	Silvery metal
A7	Beige plastic
A8	Golden metal
A9	SMD capacitor
A10	Electronic components
A11	Electronic components
A12	Black PCB
A13	Electronic components
A14	SMD IC
A15	SMD crystal oscillator
A16	SMD inductor
A17	Silvery metal
A18	Soldering tin

3. Test Result(s)

3.1 Screening Test

Test Method: With reference to IEC 62321-3-1:2013, Screening –Lead (Pb)/ Cadmium(Cd)/ Mercury(Hg)/ Total Chromium(Cr)/ Total Bromine by X-ray fluorescence spectrometry.

Test Item	Total Chromium (Cr)	Cadmium (Cd)	Total Bromine (Br)	Mercury (Hg)	Lead (Pb)
Screening Limit	500mg/kg	70mg/kg	250mg/kg	500mg/kg	500mg/kg
Material No.	XRF Result				
A1	BL	BL	61021[a]	BL	BL
A2	BL	BL	943[a]	BL	BL
A3	BL	BL	BL	BL	BL
A4	BL	BL	BL	BL	BL
A5	BL	BL	BL	BL	BL
A6	BL	BL	NA	BL	BL
A7	BL	BL	BL	BL	BL
A8	651[a]	Inc[a]	NA	BL	BL
A9	BL	BL	BL	BL	BL
A10	BL	BL	BL	BL	BL
A11	BL	BL	BL	BL	BL
A12	BL	BL	1373[a]	BL	BL
A13	BL	BL	BL	BL	BL
A14	BL	BL	BL	BL	BL
A15	BL	BL	BL	BL	BL
A16	BL	BL	BL	BL	BL
A17	BL	BL	NA	BL	BL
A18	BL	BL	NA	BL	BL

Note:

1. mg/kg = milligram per kilogram.
2. “BL” = Below Screening Limit.
3. “Inc” = Inconclusive.
4. “NA” = Not Applicable.
5. The XRF results show the total Br content, while the restricted substance is PBBS/PBDES; the XRF results show the total Cr content, while the restricted substance is hexavalent chromium [Cr(VI)].
6. “a” denotes further confirmation test was conducted, results are listed in sections3.2 and 3.3.

3.2 Heavy Metal Content

Test Method:

Lead (Pb)/Cadmium(Cd): IEC 62321-5:2013, analysis was performed by Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES).

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

Hexavalent Chromium(Cr^{6+}): metal: IEC 62321-7-1:2015,nonmetal:IEC 62321-7-2:2017, analysis was performed by Ultraviolet–visible spectroscopy (UV-Vis).

Test Item	Hexavalent Chromium (Cr^{6+})	Hexavalent Chromium (Cr^{6+})	Cadmium (Cd)	Mercury (Hg)	Lead (Pb)
Limit	**1000 mg/kg**	**Negative**	**100 mg/kg**	**1000 mg/kg**	**1000 mg/kg**
Material No.	**Result**				
A8	NA	Negative	N.D.	--	--

Note:

1. LOQ=Limit of Quantitation: Pb, Cd, Hg: 10mg/kg;Cr^{6+}: nonmetal -40mg/kg, metal- Negative(<0.1μg/cm^2).
2. mg/kg = milligram per kilogram, μg/cm^2= micrograms per square centimeter.
3. N.D. = Not Detected (< LOQ).
4. NA = Not Applicable.
5. Negative = Surface of metal sample absence of Cr^{6+}, Positive = Surface of metal sample presence of Cr^{6+}.
6. “--” denotes tested by XRF, result is listed in sections3.1.

3.3 Polybrominated biphenyls (PBBs) & Polybrominated diphenyl ethers (PBDEs) Content

Test Method: IEC 62321-6:2015, analysis was performed by Gas Chromatograph-Mass Spectrometer (GC-MS).

Test Item		Limit (mg/kg)	MDL (mg/kg)	Result(mg/kg)		
				A1	A2	A12
PBBs	Monobromobiphenyl	--	100	N.D.	N.D.	N.D.
	Dibromobiphenyl	--	100	N.D.	N.D.	N.D.
	Tribromobiphenyl	--	100	N.D.	N.D.	N.D.
	Tetrabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Pentabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Hexabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Heptabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Octabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Nonabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Decabromobiphenyl	--	100	N.D.	N.D.	N.D.
	Sum of detected PBBs	1000	--	N.D.	N.D.	N.D.
PBDEs	Monobromodiphenylether	--	100	N.D.	N.D.	N.D.
	Dibromodiphenylether	--	100	N.D.	N.D.	N.D.
	Tribromodiphenylether	--	100	N.D.	N.D.	N.D.
	Tetrabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Pentabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Hexabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Heptabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Octabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Nonabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Decabromodiphenylether	--	100	N.D.	N.D.	N.D.
	Sum of detected PBDEs	1000	--	N.D.	N.D.	N.D.

Note:
1. mg/kg = milligram per kilogram.
2. MDL=Method Detection Limit
3. N.D. = Not Detected (< MDL).
4. "--" = Not Applicable.

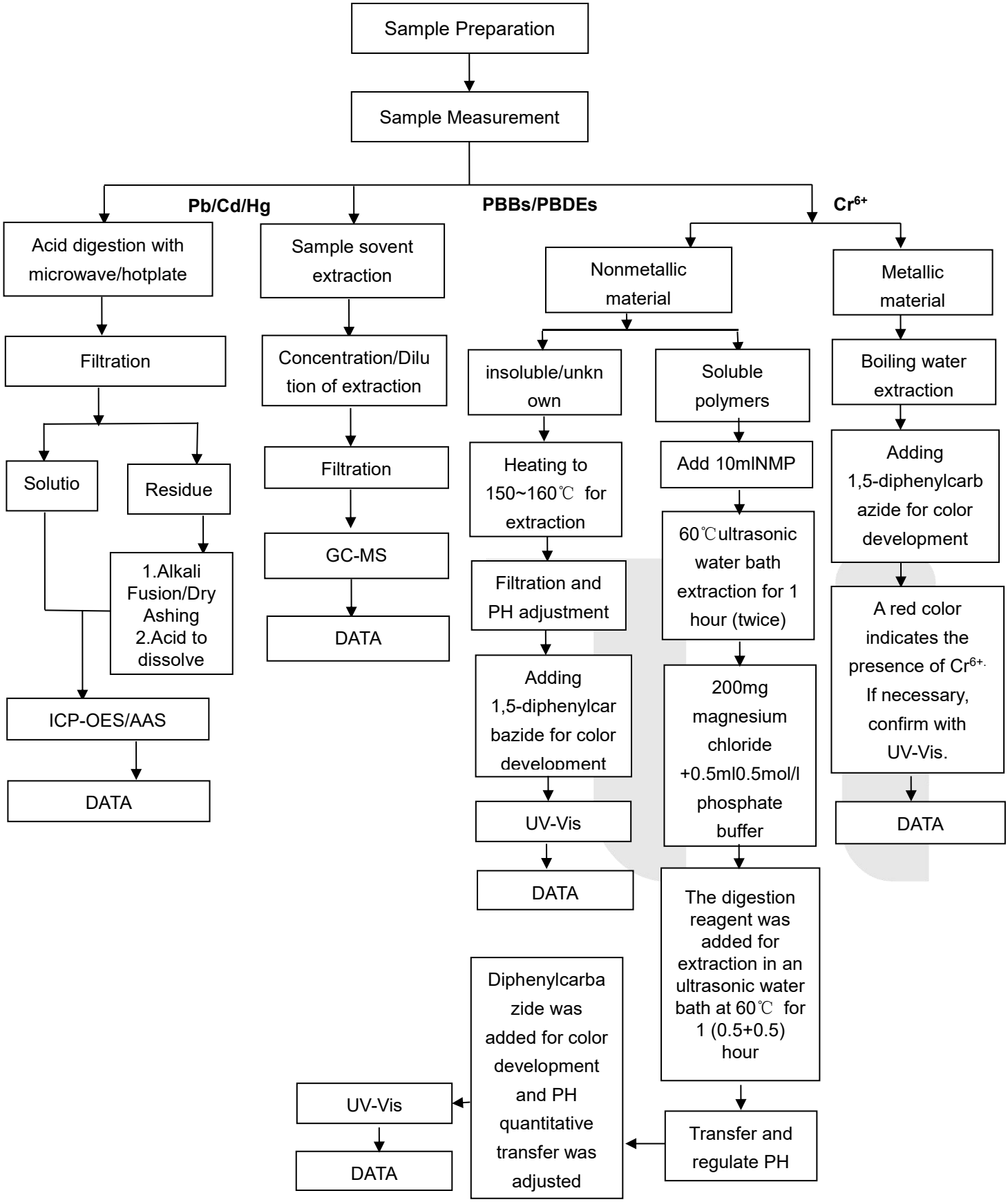
3.4 Phthalates Content

Test Method: IEC 62321-8:2017, analysis was performed by Gas Chromatograph-Mass Spectrometer (GC-MS).

Test Item	Di-(2-ethylhexyl) phthalate (DEHP)	Dibutyl phthalate (DBP)	Butyl benzyl phthalate (BBP)	Diisobutyl phthalate (DIBP)
CAS No.	117-81-7	84-74-2	85-68-7	84-69-5
Limit	1000 mg/kg	1000 mg/kg	1000 mg/kg	1000 mg/kg
Material No.	**Result (mg/kg)**			
A1+A7	N.D.	N.D.	N.D.	N.D.
A2+A12	N.D.	N.D.	N.D.	N.D.
A3+A9+A5	N.D.	N.D.	N.D.	N.D.
A4+A14+A16	N.D.	N.D.	N.D.	N.D.
A15+A10+A11	N.D.	N.D.	N.D.	N.D.
A13	N.D.	N.D.	N.D.	N.D.

Note:
1. mg/kg = milligram per kilogram
2. Limit of Quantitation = 50mg/kg
3. N.D. = Not Detected (< LOQ)

RoHS Testing Flow Chart



Phthalates Testing Flow Chart

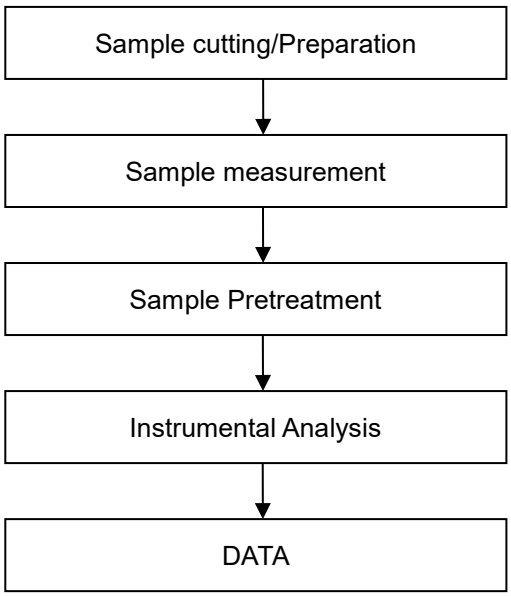
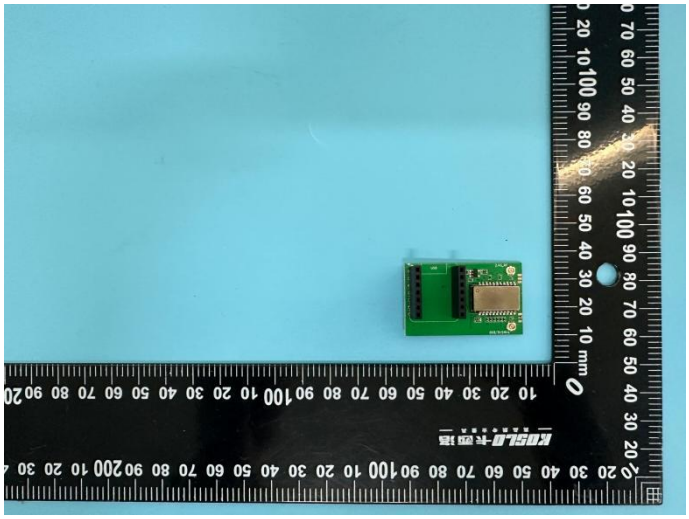
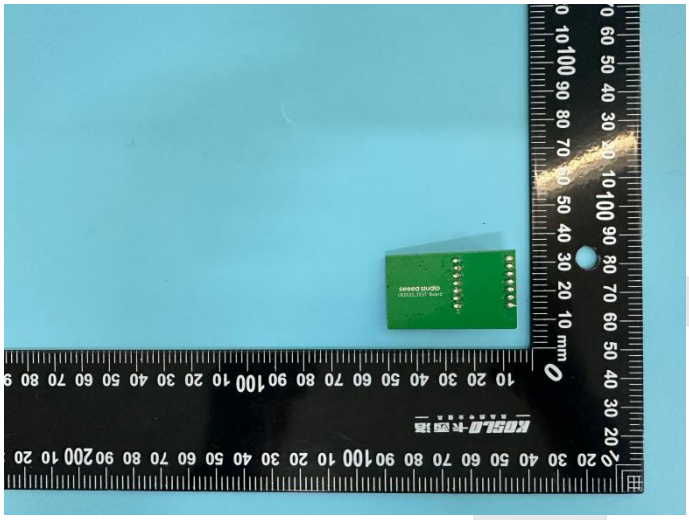


Photo of Sample





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