



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 1 of 16

Applicant Company Name: Particle Industries, Inc.

Applicant Company Address: 548 Market St, PMB 34833, San Francisco, CA 94104, USA

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

Sample Name : M-SoM LTE-M/2G/Satellite + Wi-Fi for Global
Model No. : M635e
Trademark : Particle
Manufacturer : Particle Industries, Inc.
Manufacturer Address : 548 Market St, PMB 34833, San Francisco, CA 94104, USA
Factory : Wistron NeWeb Corp
Factory Address : 20 Park Avenue II, Hsinchu Science Park Hsinchu 308, Taiwan, R.O.C.
Sample Receiving Date : May 29, 2026
Testing Period : From May 29, 2026 to June 03, 2026
Results : Please refer to next page(s).

Summary of Test Results:

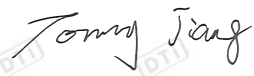
TEST REQUEST

CONCLUSION

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

Pass

Shenzhen Deesev Testing International Corporation

Approved by: 
Tommy Jiang / Lab Manager

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 2 of 16

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	Black Plastic Case	BL	BL	BL	BL	BL
2	Black Plastic Case	BL	BL	BL	BL	BL
3	Silver Metal	X	BL	BL	BL	N/A
4	Internal White Plastic	BL	BL	BL	BL	BL
5	Solder Point	BL	BL	BL	BL	N/A
6	Golden Metal Needle	X	BL	BL	BL	N/A
7	Silver Metal Case	X	BL	BL	BL	N/A
8	Red Soft Plastic	BL	BL	BL	BL	BL
9	Black Adhesive	BL	BL	BL	BL	BL
10	Black Plastic Frame	BL	BL	BL	BL	BL
11	PCB	BL	BL	BL	BL	BL
12	Solder Point	BL	BL	BL	BL	N/A
13	PCB	BL	BL	BL	BL	BL
14	Solder Point	BL	BL	BL	BL	N/A
15	Triode	BL	BL	BL	BL	BL
16	Crystal Oscillator	BL	BL	BL	BL	N/A
17	Black Ceramic Body Chip	BL	BL	BL	BL	BL
18	Patch Resistor	BL	BL	BL	BL	BL
19	Multiplayer Ceramic Chip Capacitors	BL	BL	BL	BL	BL
20	Patch Coil Inductor	BL	BL	BL	BL	BL

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 3 of 16

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
21	Copper Winding	BL	BL	BL	BL	N/A
22	Patch Diode	X	BL	BL	BL	BL
23	White Plastic Base	BL	BL	BL	BL	BL
24	Golden Metal Case	BL	BL	BL	BL	N/A
25	Golden Metal Needle	BL	BL	BL	BL	N/A
26	PCB	BL	BL	BL	BL	BL
27	Solder Point	BL	BL	BL	BL	N/A
28	Black Ceramic Body Chip	BL	BL	BL	BL	BL
29	Patch Resistor	BL	BL	BL	BL	BL
30	Multiplayer Ceramic Chip Capacitors	BL	BL	BL	BL	BL
31	Crystal Oscillator	BL	BL	BL	BL	N/A
32	PCB	BL	BL	BL	BL	BL
33	Solder Point	BL	BL	BL	BL	N/A
34	Double-Sided Adhesive	BL	BL	BL	BL	BL
35	White Plastic Patch	BL	BL	BL	BL	BL
36	Golden Metal Case	BL	BL	BL	BL	N/A
37	Internal White Plastic	BL	BL	BL	BL	BL
38	Black Plastic Wire Outer Skin	BL	BL	BL	BL	BL
39	Wire Internal Metal Wire	BL	BL	BL	BL	N/A
40	FPC	BL	BL	BL	BL	BL

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 4 of 16

Seq. No.	Tested Part(s)	Results				
		Pb	Cd	Hg	Cr	Br
41	Solder Point	BL	BL	BL	BL	N/A
42	Brown Plastic Sticker	BL	BL	BL	BL	BL
43	Silvery Metal Case	BL	BL	BL	BL	N/A
44	Silvery Metal Frame	BL	BL	BL	BL	N/A
45	Black Label Sticker	BL	BL	BL	BL	BL
46	Silvery Metal Case	BL	BL	BL	BL	N/A
47	Black Foam Adhesive	BL	BL	BL	BL	BL
48	Black Plastic Wire Outer Skin	BL	BL	BL	BL	BL
49	Wire Internal Metal Wire	BL	BL	BL	BL	N/A

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 5 of 16

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	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 70 - 3\sigma < X < 130 + 3\sigma \leq OL$	$BL \leq 50 - 3\sigma < X < 150 + 3\sigma \leq OL$
Pb	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Hg	mg/kg	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 700 - 3\sigma < X < 1300 + 3\sigma \leq OL$	$BL \leq 500 - 3\sigma < X < 1500 + 3\sigma \leq OL$
Cr	mg/kg	$BL \leq 700 - 3\sigma < X$	$BL \leq 700 - 3\sigma < X$	$BL \leq 500 - 3\sigma < X$
Br	mg/kg	$BL \leq 300 - 3\sigma < X$	--	$BL \leq 250 - 3\sigma < X$

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.

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 6 of 16

(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
Polybrominated diphenyl ethers (PBDEs)	≤1000
Bis(2-ethylhexyl) phthalate (DEHP)	≤1000
Benzyl butyl phthalate (BBP)	≤1000
Dibutyl phthalate (DBP)	≤1000
Diisobutyl phthalate (DIBP)	≤1000

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 7 of 16

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)

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 8 of 16

1) The test results of Pb

Item	Unit	MDL	Results				Limit
			3	6	7	22	
Lead(Pb)	mg/kg	2	19253^	10375^	10291^	10522*	≤1000
Conclusion	/	/	Pass	Pass	Pass	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.
- *=According to the declaration from the client, Lead (Pb) in the sample is exempted by EU RoHS Directive 2011/65/EU based on 7(c)-I:Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors.

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.

TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 9 of 16

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

Item	Unit	MDL	Results					Limit
			1	2	4	8	9	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	Pass	Pass	Pass	/

Item	Unit	MDL	Results					Limit
			10	11	13	15	17	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	Pass	Pass	Pass	/

Item	Unit	MDL	Results					Limit
			18	19	20	22	23	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	Pass	Pass	Pass	/

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.

TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 10 of 16

Item	Unit	MDL	Results					Limit
			26	28	29	30	32	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	Pass	Pass	Pass	/

Item	Unit	MDL	Results					Limit
			34	35	37	38	40	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	Pass	Pass	Pass	/

Item	Unit	MDL	Results				Limit
			42	45	47	48	
Bis(2-ethylhexyl) phthalate (DEHP)	mg/kg	30	ND	ND	ND	ND	≤1000
Benzyl butyl phthalate (BBP)	mg/kg	30	ND	ND	ND	ND	≤1000
Dibutyl phthalate (DBP)	mg/kg	30	ND	ND	ND	ND	≤1000
Diisobutyl phthalate (DIBP)	mg/kg	30	ND	ND	ND	ND	≤1000
Conclusion	/	/	Pass	Pass	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.

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.

TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

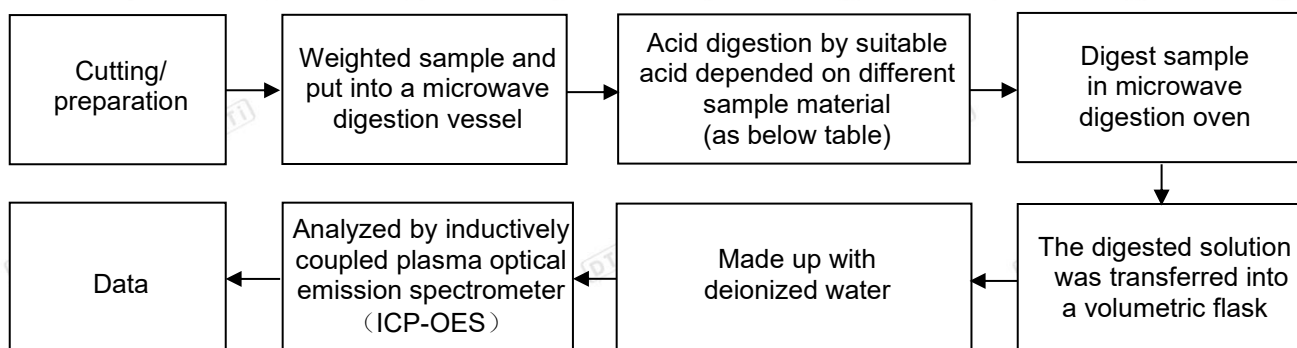
Page 11 of 16

Appendix I

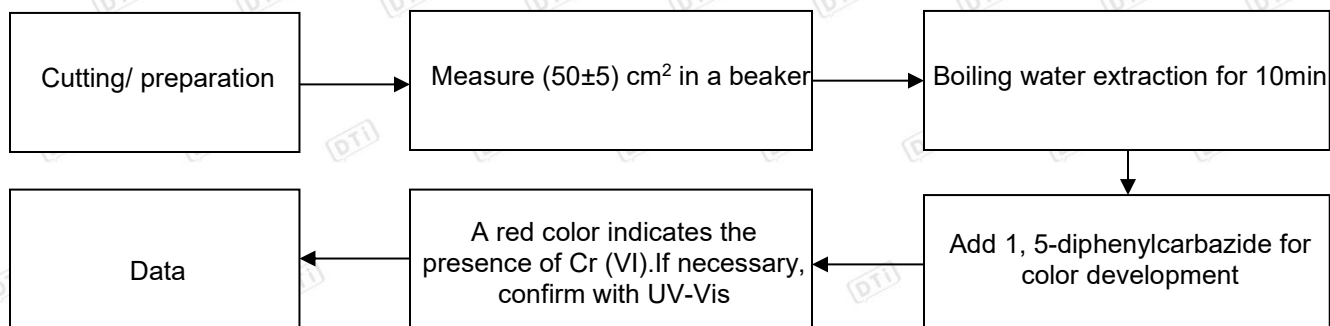
Test Flow chart

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

1. Test Flowchart for Cd / Pb /Hg content



2. Test Flowchart for Cr⁶⁺ content (Metal material)



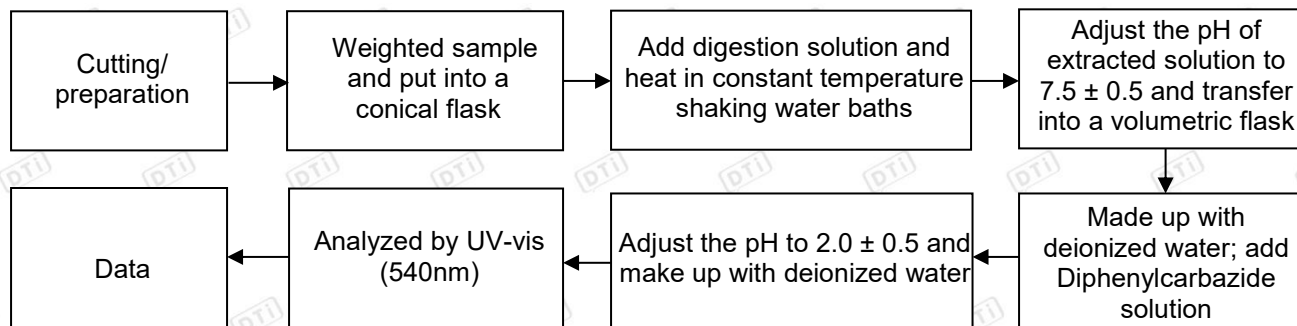
TEST REPORT

REPORT No.: DTI2026EE270529

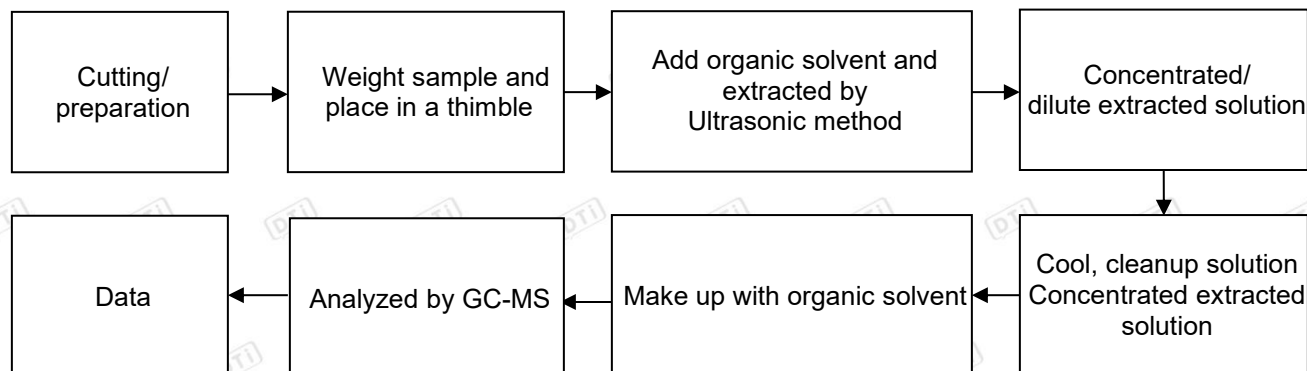
Date: 2026-06-03

Page 12 of 16

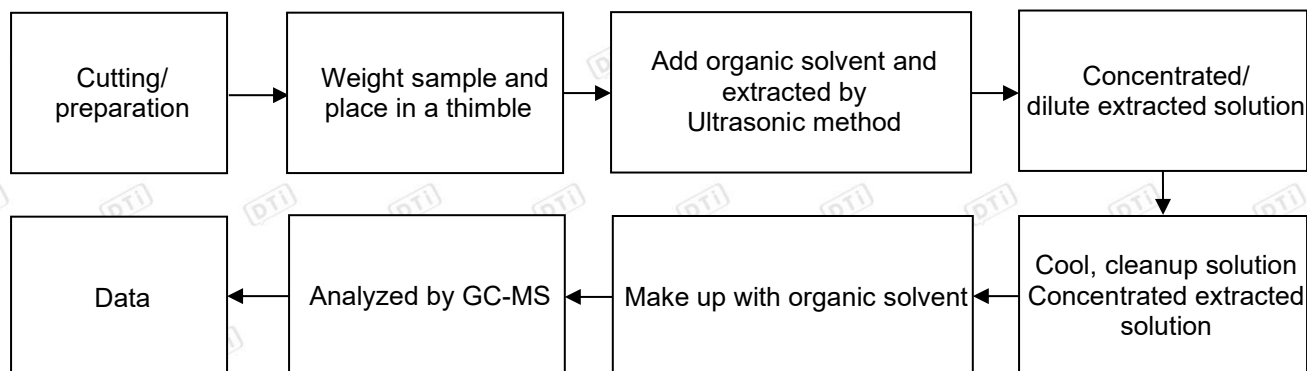
3. Test Flowchart for Cr⁶⁺ content (Non-metal material)



4. Test Flowchart for PBBs & PBDEs content



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



Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.



TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 13 of 16

Table:

Sample material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl

TEST REPORT

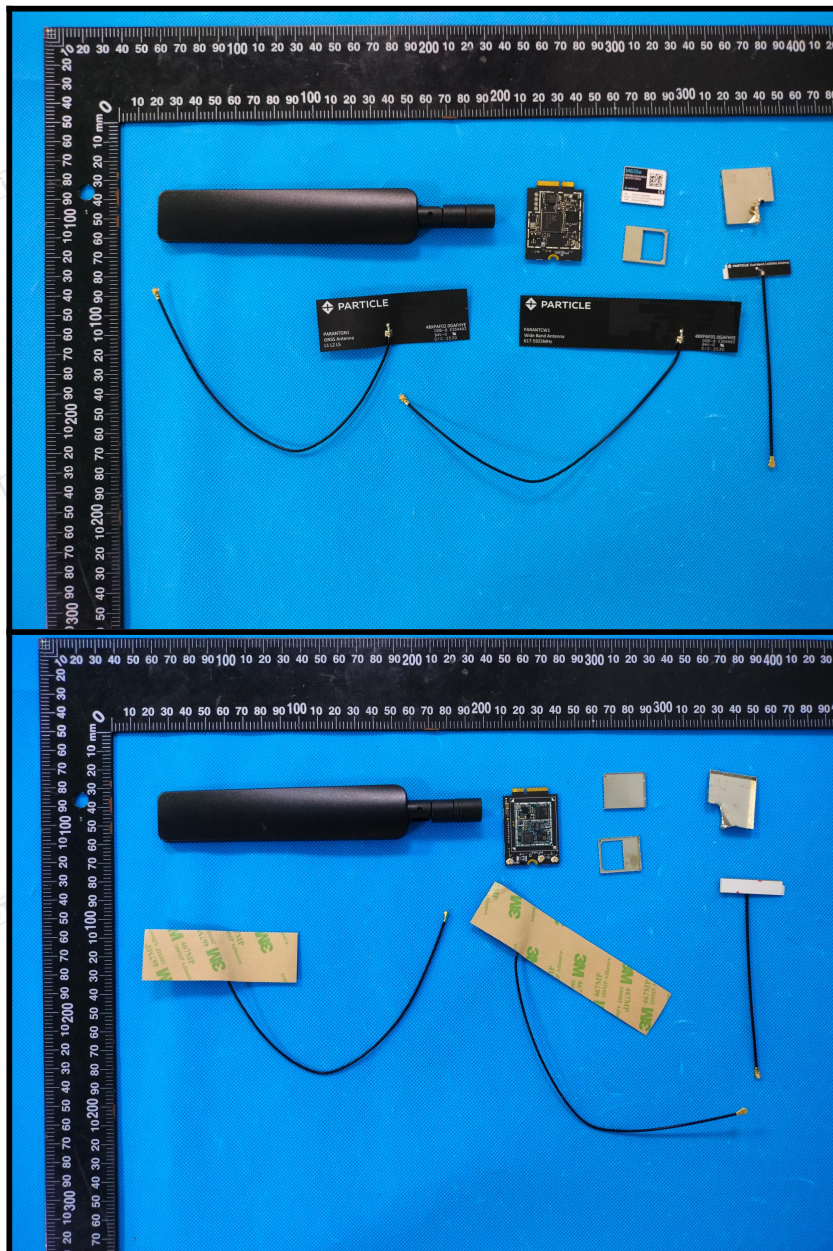
REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 14 of 16

Appendix II

Photograph of Sample



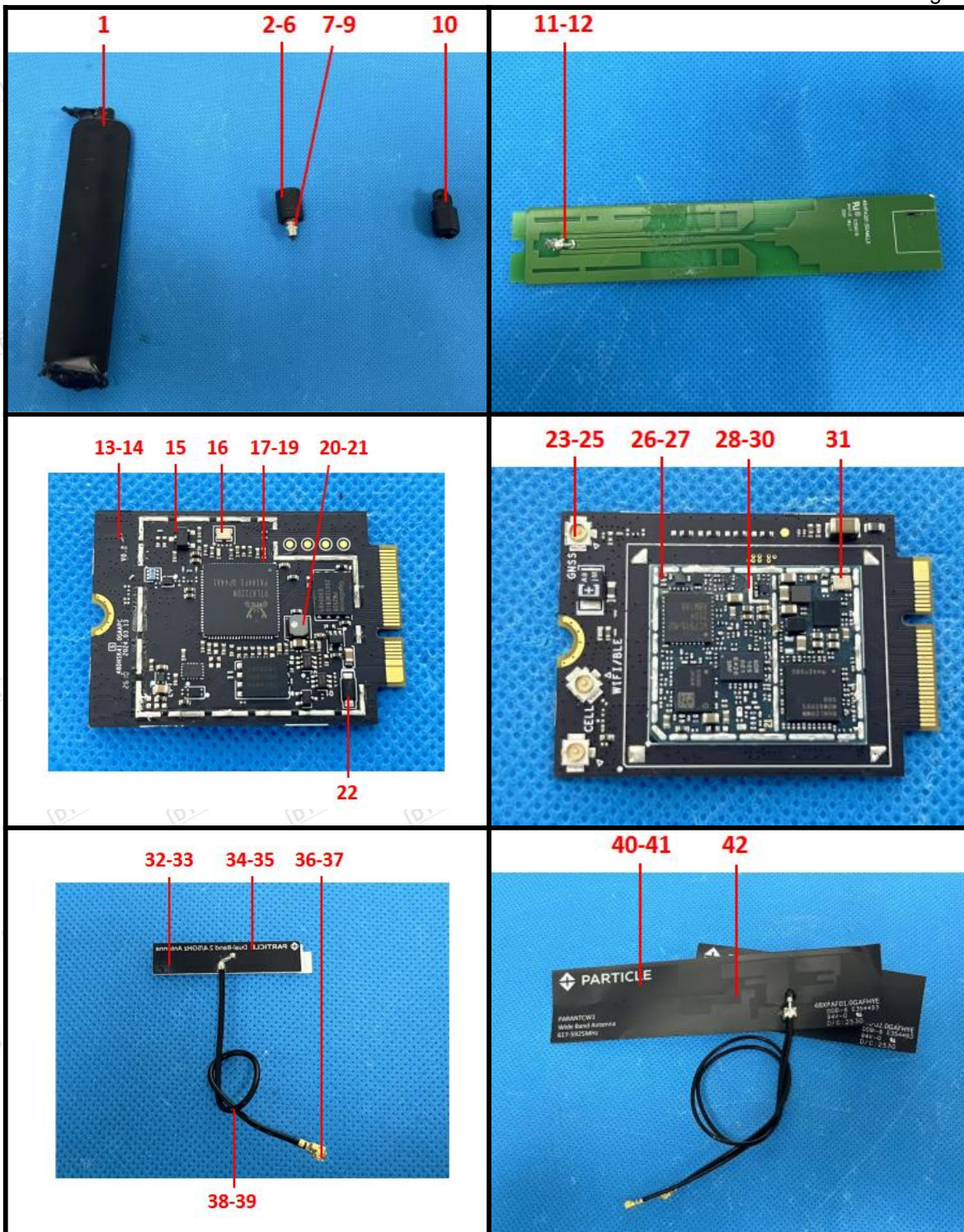
Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.

TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 15 of 16



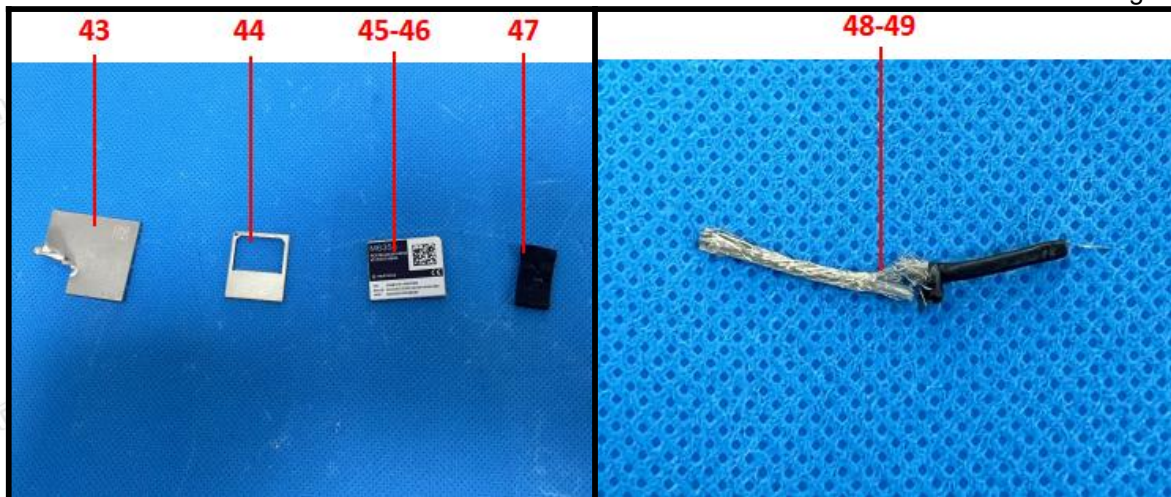
Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.

TEST REPORT

REPORT No.: DTI2026EE270529

Date: 2026-06-03

Page 16 of 16



*** End of Report ***

Any holder of this document is advised that information contained hereon reflects the company's findings at the time of its intervention only and within the limits of client's instructions, if any. The company's sole responsibility is to its client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. The data in this report are used by the applicant for scientific research, teaching, internal quality control and other activities only.