

TEST REPORT

KOTITI No. | 8225-1401-101864

Applicant | DUKSAN Hi-Metal

Address | 66, Muryong 1-ro, Buk-gu, Ulsan, Korea

Date In | Feb 20, 2025

Date Out | Feb 28, 2025

Issue No	5855150106
Sample Description	Sn0.7Cu(ULA)
Sample Quantity	One (1) Sample(s)
Buyer	N/S
Item Number	N/S
Material	Metal
Testing Period	Feb 20, 2025 ~ Feb 28, 2025
Test Result	For further details, please refer to the following page(s).

Note:

- (1) N/S : Not Submitted
- (2) N.A. : Not Applicable
- (3) N.D. : Not Detected [< RL(Report Limit)]
- (4) Negative : Not Detected, Positive : Detected

Affirmation	Prepared by Name : A Reum Shin	Technical Manager Name : Gun Young Ryu
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KOTITI Testing & Research Institute



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- The test results contained in this report are limited to results on the sample(s) that is provided by client and are not necessarily indicative or representative of the qualities of the lot from which the sample(s) was taken or of all products.
- Further use of the results of this report is prohibited unless allowed under a separate agreement set forth in an official document that is established between the client identified on this letter and the KOTITI Testing & Research Institute.
- The test result in this report is not related to Accreditation of KOLAS.
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Tested Sample List			
Sample No.	Sample Description	Item No.	Material
1	Sn0.7Cu(ULA)	N/S	Metal

RoHS, Unit : mg/kg
(EU Directive 2011/65/EU, 2015/863/EU)

Test Conducted	Test Method	MDL	Test Results
1			
Cadmium (Cd)	IEC 62321-5:2013 (Acid digestion and determined by ICP-OES)	2	N.D.
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV (Acid digestion and determined by ICP-OES)	1	N.D.
Lead (Pb)	IEC 62321-5:2013 (Acid digestion and determined by ICP-OES)	2	N.D.

*** Polybrominated Biphenyls(PBBs)**

Bromobiphenyl	IEC 62321-6:2015 (Solvent extraction and determined by GC-MS)	5	N.D.
Dibromobiphenyl		5	N.D.
Tribromobiphenyl		5	N.D.
Tetrabromobiphenyl		5	N.D.
Pentabromobiphenyl		5	N.D.
Hexabromobiphenyl		5	N.D.
Heptabromobiphenyl		5	N.D.
Octabromobiphenyl		5	N.D.
Nonabromobiphenyl		5	N.D.
Decabromobiphenyl		5	N.D.
Sum of PBBs		—	N.D.

*** Polybrominated Diphenyl Ethers(PBDEs)**

Bromodiphenyl ether	IEC 62321-6:2015 (Solvent extraction and determined by GC-MS)	5	N.D.
Dibromodiphenyl ether		5	N.D.
Tribromodiphenyl ether		5	N.D.
Tetrabromodiphenyl ether		5	N.D.
Pentabromodiphenyl ether		5	N.D.
Hexabromodiphenyl ether		5	N.D.
Heptabromodiphenyl ether		5	N.D.
Octabromodiphenyl ether		5	N.D.
Nonabromodiphenyl ether		5	N.D.
Decabromodiphenyl ether		5	N.D.
Sum of PBDEs		—	N.D.

*** Tested by : A Reum Shin, Jae Hyun Um, Rae Jin Kwag**

RoHS, Unit : $\mu\text{g}/\text{cm}^2$
(EU Directive 2011/65/EU, 2015/863/EU)

Test Conducted	Test Method	MDL	Test Results
1			
Hexavalent Chromium (Cr^{6+})	IEC 62321-7-1:2015 (Boiling water extraction and determined by UV-VIS) (Unit : $\mu\text{g}/\text{cm}^2$)	—	Negative

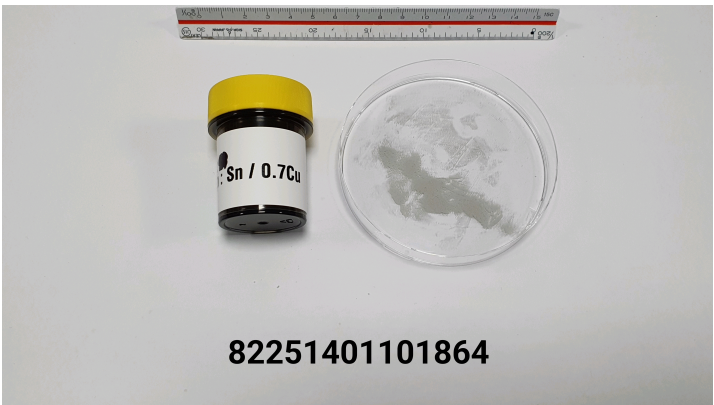
* Tested by : A Reum Shin, Jae Hyun Um, Rae Jin Kwag

※ Remark

1. $< 0.10 \mu\text{g}/\text{cm}^2$: Negative
2. $0.1 \mu\text{g}/\text{cm}^2 \sim 0.13 \mu\text{g}/\text{cm}^2$: Inconclusive
3. $> 0.13 \mu\text{g}/\text{cm}^2$: Positive

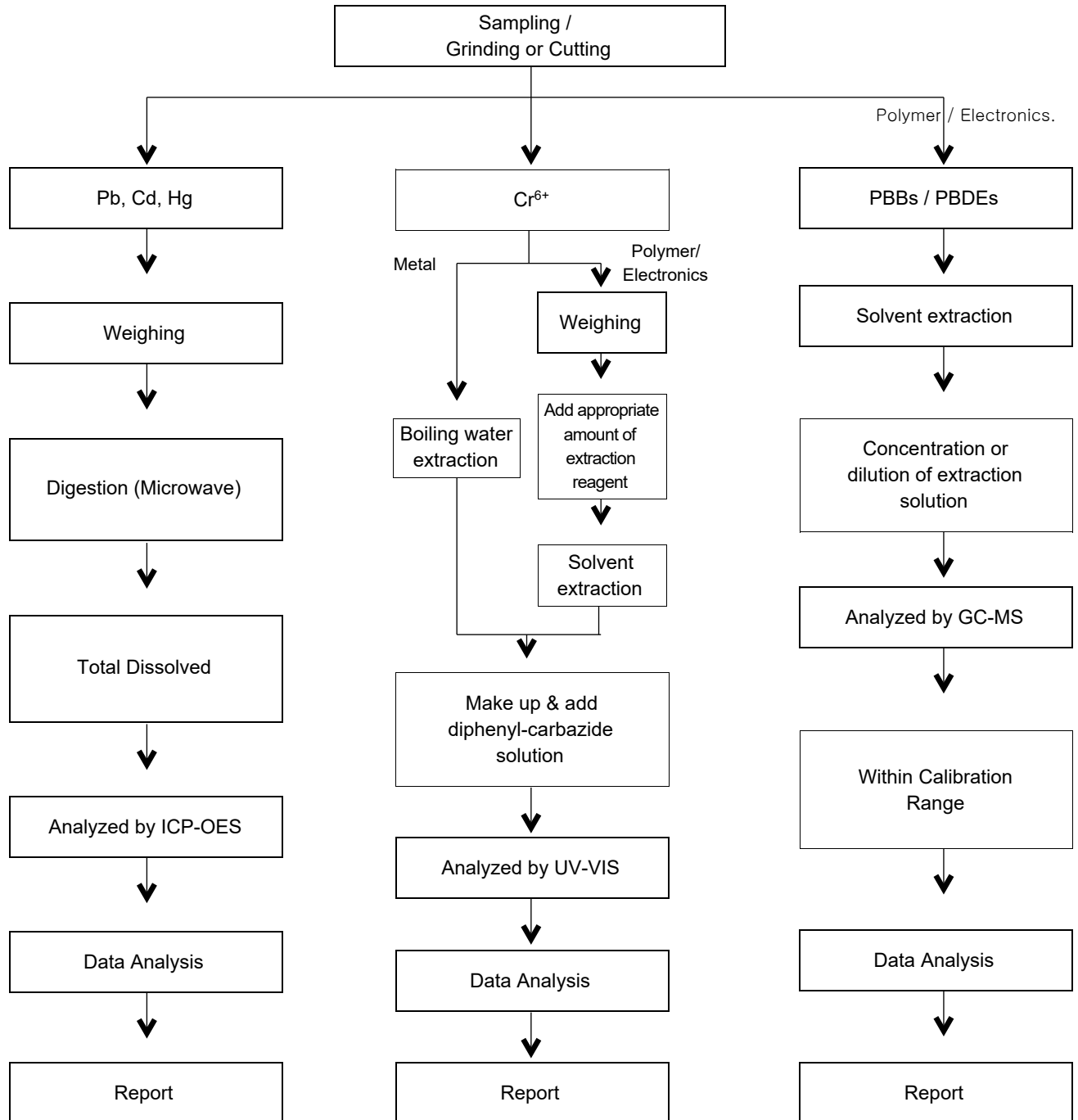
■ Photo of the submitted sample(s)

Sample No.1



Flow Chart

RoHS(Pb, Hg, Cd, Cr⁶⁺, PBBs/PBDEs)



Material	Digestion Acid
Polymers	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₂ SO ₄ , etc.
Metals	HNO ₃ , HCl
Electronics	HNO ₃ , HCl, HF, H ₂ O ₂ , H ₂ SO ₄ , etc.

* The sample is totally digested.