TEST REPORT

KOTITI No. | 8225-1401-100265

Applicant | DUKSAN Hi-Metal 66, Muryong 1-ro, Buk-gu, Ulsan, Korea **Address**

Jan 21, 2025 Jan 07, 2025 **Date In Date Out**

Issue No	0103716110
Sample Description	Sn3.0Ag0.5Cu
Sample Quantity	One (1) Sample(s)
Buyer	N/S
Item Number	N/S
Material	Metal
Testing Period	Jan 07, 2025 ~ Jan 21, 2025
Test Result	For further details, please refer to the following page(s).

*N/S: Not Submitted, N.A.: Not Applicable, N.D.: Not Detected [< RL(Report Limit)]

*Negative: Not Detected, Positive: Detected

Prepared by Affirmation Name: Hyo Jeong Ra

Technical Manager

Name: Gun Young Ryu



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- 1. 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.
- 2. 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.
- 3. The test result in this report is not related to Accreditation of KOLAS.
- 4. You can verify the authenticity by the QR code at the bottom right side of the issued report or access http://cs.kotiti-global.com and enter the test report number. QPF-16-06(rev.02)

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Tested Sample List			
Sample No.	Sample Description	Item No.	Material
1	Sn3.0Ag0.5Cu	N/S	Metal



Sulfur (S), Unit: mg/kg

Test Conducted	Test Method	MDL	Test Results
			1
Sulfur (S)	IEC 62321-3-2:2020 & KS M 0180:2009 determined by C-IC	10	N.D.

^{*} Tested by: Hyo Jeong Ra, Rae Jin Kwag

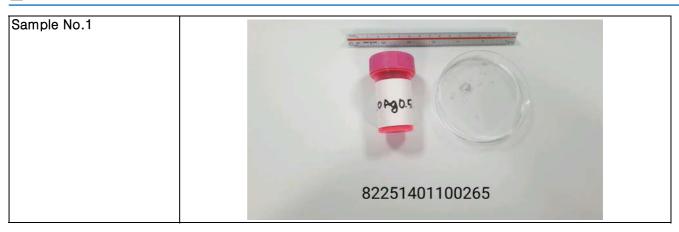


Heavy metal, Unit: mg/kg

Test Conducted	Test Method	MDL	Test Results
		1	1
Silver (Ag)		5	30 217.0
Copper (Cu)		5	4 901.9
Nickel (Ni)		5	37.6
Zinc (Zn)	Reference to EPA 3052:1996 determined by ICP-OES, AAS	5	N.D.
Iron (Fe)		5	29.4
Bismuth (Bi)		5	22.9
Aluminium (AI)		5	N.D.
Antimony (Sb)	Reference to EPA 3050B:1996 determined by ICP-OES, AAS	2	29.0
Indium (In)	Reference to EPA 3052:1996 determined by ICP-OES, AAS	5	21.5
Gold (Au)		5	N.D.
Beryllium (Be)	Reference to EPA 3050B:1996 determined by ICP-OES, AAS	2	N.D.
Arsenic (As)		5	39.8
Germanium(Ge)	Reference to EPA 3052:1996 determined by ICP-OES, AAS	5	81.6
Phosphorus (P)		5	N.D.
Palladium (Pd)		5	N.D.

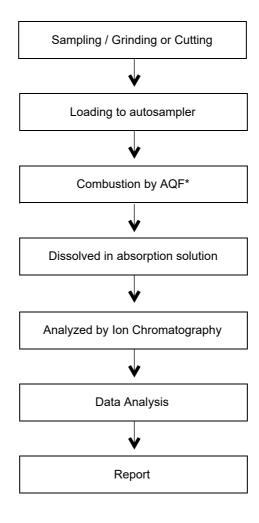
^{*} Tested by : Hyo Jeong Ra, Rae Jin Kwag

Photo of the submitted sample(s)



Flow Chart

Sulfur

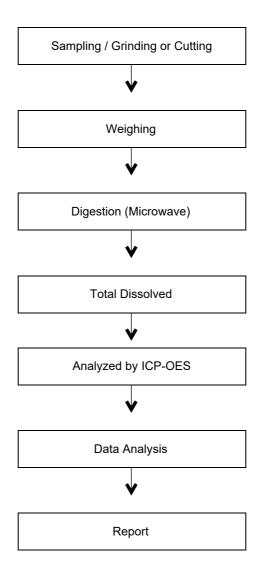


*AQF : Automated Quick Furnace

^{*} The sample is totally digested.

Flow Chart

Heavy metal



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

^{*} The sample is totally digested.