

## Test Report

No. : CE/2018/40392

Date : 2018/04/13

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ELEKTRISOLA (MALAYSIA) SDN. BHD.

JALAN DAMAI SATU, JANDA BAIK, 28750 BENTONG, PAHANG, MALAYSIA.




The following samples was/were submitted and identified by/on behalf of the applicant as :

Sample Submitted By : ELEKTRISOLA (MALAYSIA) SDN. BHD.  
Sample Description : ELEKTRISOLA ALUMINUM BARE WIRE (AI)  
Sample Receiving Date : 2018/04/02  
Testing Period : 2018/04/02 TO 2018/04/13

=====  
**Test Requested** :

- (1) As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI) contents in the submitted sample(s).
- (2) Please refer to next pages for the other item(s).

**Test Result(s)** : Please refer to following pages.

  
Troy Chang, Manager - Tech  
Signed for and on behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory - Taipei



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## Test Result(s)

PART NAME No.1 : SILVER COLORED METAL WIRE

Test Item(s)	Unit	Method	MDL	Result
				No.1
Cadmium (Cd)	mg/kg	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	16.3
Mercury (Hg)	mg/kg	With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n.d.
Hexavalent Chromium Cr(VI)(#2)	µg/cm <sup>2</sup>	With reference to IEC 62321-7-1 (2015) and performed by UV-VIS.	0.10	n.d.
Beryllium (Be)	mg/kg	With reference to US EPA 3050B (1996). Analysis was performed by ICP-AES.	2	n.d.

### Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. MDL = Method Detection Limit
3. n.d. = Not Detected = less than MDL
4. (#2) =
  - a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than 0.13 µg/cm<sup>2</sup>.  
The sample coating is considered to contain Cr(VI)
  - b. The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than 0.10 µg/cm<sup>2</sup>).  
The coating is considered a non-Cr(VI) based coating
  - c. The result between 0.10 µg/cm<sup>2</sup> and 0.13 µg/cm<sup>2</sup> is considered to be inconclusive - unavoidable coating variations may influence the determination.

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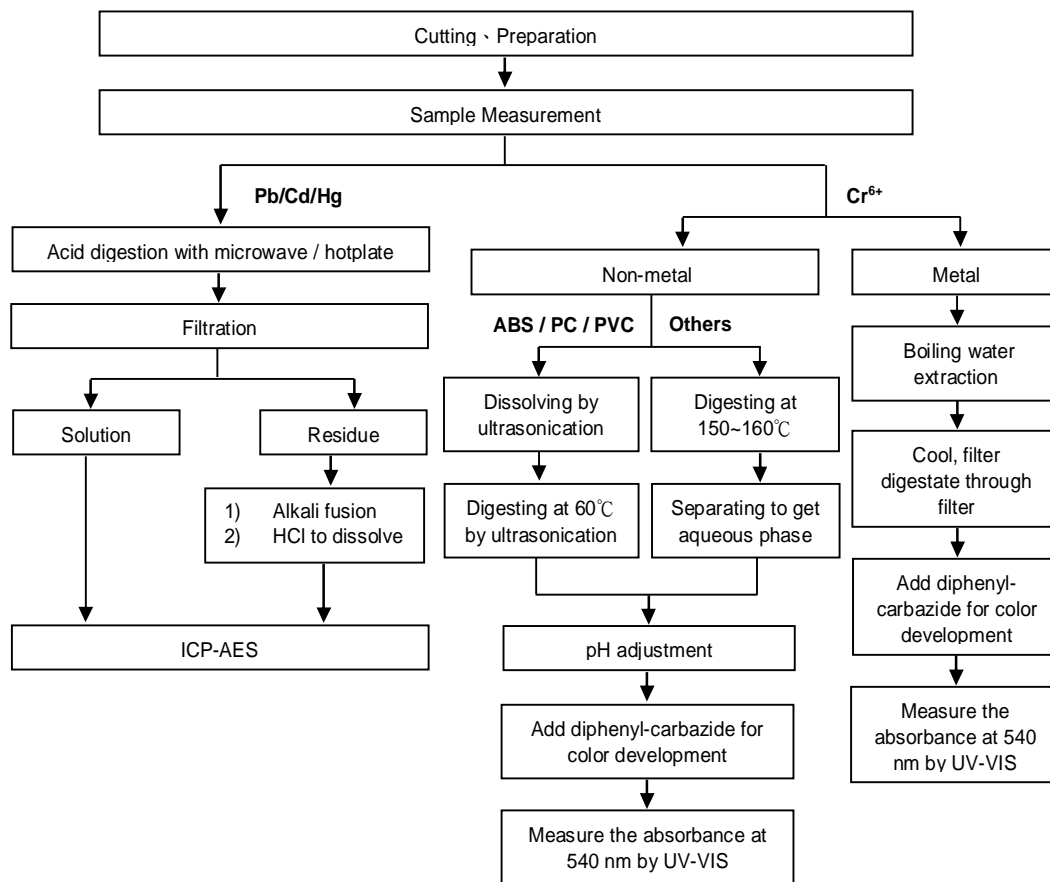
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### Analytical flow chart of Heavy Metal

These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)

- Technician : Rita Chen
- Supervisor: Troy Chang



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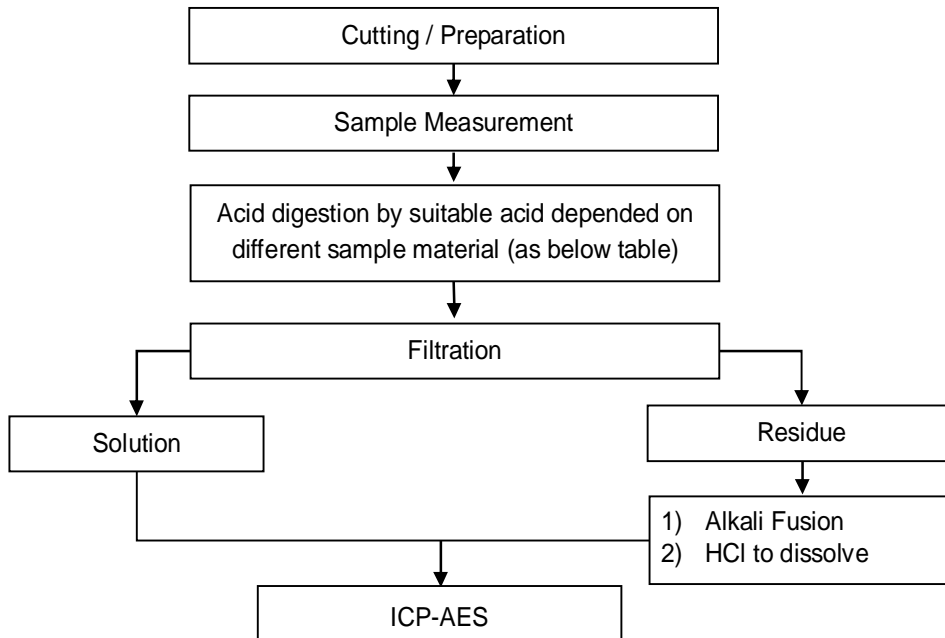
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These samples were dissolved totally by pre-conditioning method according to below flow chart.

- Technician: Rita Chen
- Supervisor: Troy Chang

### Flow Chart of digestion for the elements analysis performed by ICP-AES



Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Added appropriate reagent to total digestion

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\* The tested sample / part is marked by an arrow if it's shown on the photo. \*

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\*\* End of Report \*\*