

## Test Report

No. SHAEC1708891701

Date: 08 May 2017

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SHANGHAI RICHENG ELECTRONICS CO.,LTD  
XINSHEN INDUSTRIAL AREA,ZHELIN,FENGXIAN,SHANGHAI

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

SGS Job No. : SP17-015589 - SH  
Date of Sample Received : 04 May 2017  
Testing Period : 04 May 2017 - 08 May 2017  
Test Requested : Selected test(s) as requested by client.  
Test Method : Please refer to next page(s).  
Test Results : Please refer to next page(s).  
Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of  
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Marry Ma  
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA17-088917.001	Copper metal

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected ( < MDL )
- (4) "-" = Not Regulated

**RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU**

- Test Method :
- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
  - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
  - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
  - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test / Colorimetric Method using UV-Vis.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Cadmium (Cd)	100	mg/kg	2	70
Lead (Pb)	1000	mg/kg	2	27934▲
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	-	-	◇	Negative

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863. IEC 62321 series is equivalent to EN 62321 series  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
- (2) ◇Spot-test:  
 Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating;  
 (The tested sample should be further verified by boiling-water-extraction method if the spot test result is Negative or cannot be confirmed.)  
 ◇Boiling-water-extraction:  
 Negative = Absence of Cr(VI) coating  
 Positive = Presence of Cr(VI) coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.  
 Information on storage conditions and production date of the tested sample is unavailable and thus



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Cr(VI) results represent status of the sample at the time of testing.

(3)▲According to the declaration from the client, Lead (Pb) in No.001 is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 6(c)]: Copper alloy containing up to 4 % lead by weight.



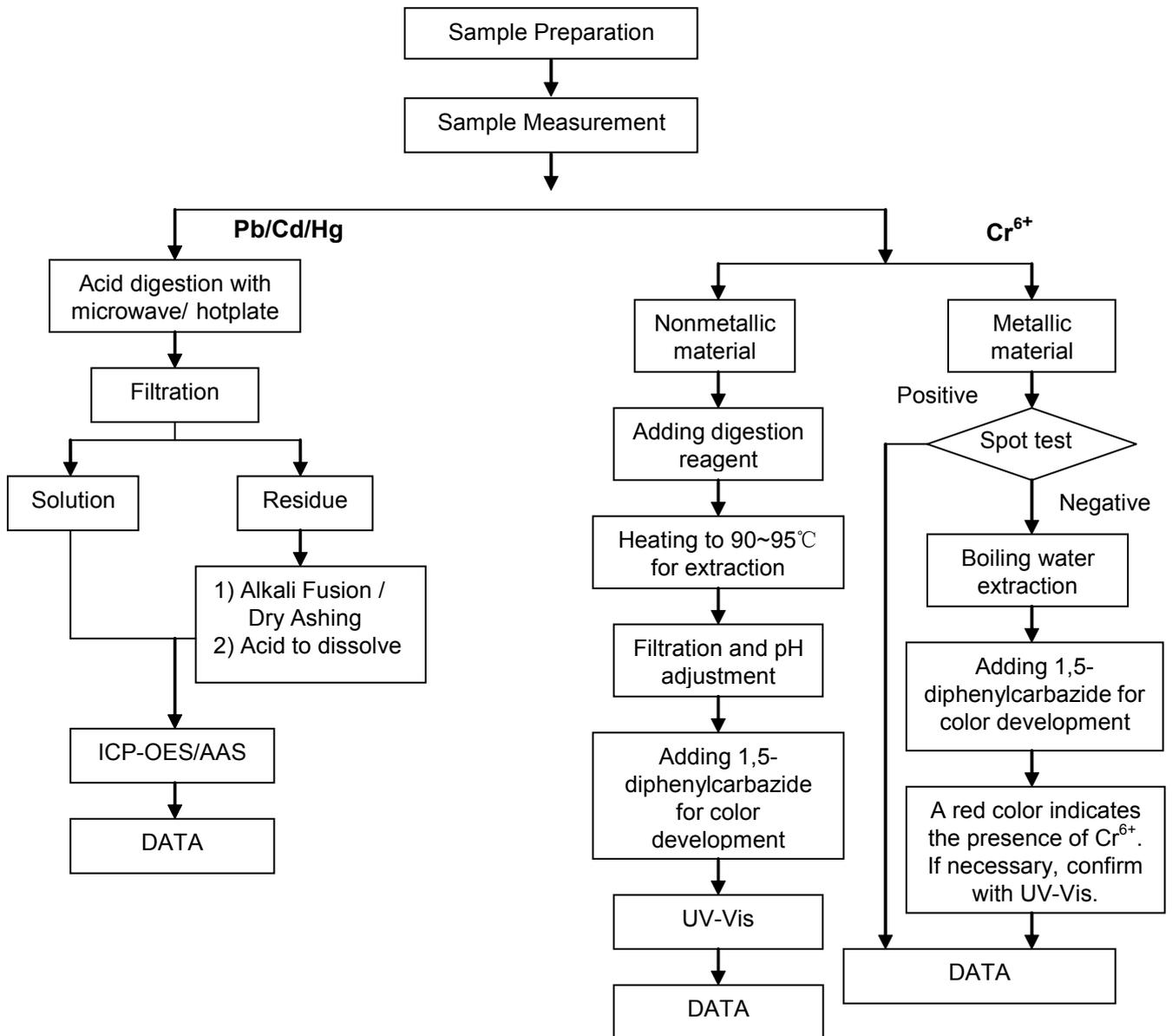
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Meria Jin/Sielina Song/Sean Li
- 2) Name of the person in charge of testing: Jan Shi/Luna Xu/Shara Wang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)



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