

Test Report

No. CANEC1801315402

Date: 13 Jan 2018

Page 1 of 6

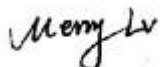
SHENZHEN YUNSHEN TIN CO.,LTD

LONGHUA DISTRICT OF SHENZHEN CITY LONGHUA OFFICE QINGHU COMMUNITY SHENLI INDUSTRIAL PARK A BUILDING

The following sample(s) was/were submitted and identified on behalf of the clients as : Lead-Free Solder Wire

SGS Job No. : CP18-0131515402 - SZ
Model No. : Lead-Free Solder Wire
Client Ref. Info. : Sn99.3Cu0.7 Sn42Bi58 SnAg0.3Cu0.7 SnAg3.0Cu0.5
Date of Sample Received : 09 Jan 2018
Testing Period : 09 Jan 2018 - 13 Jan 2018
Test Requested : Selected test(s) as requested by client.
Test Method : Please refer to next page(s).
Test Results : Please refer to nextpage(s).
Conclusion : Based on the performed tests on submitted sample(s), the results of Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP) , Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) , and Diisobutyl phthalate (DIBP) 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 Co., Ltd. Guangzhou Branch



Merry Lv
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	CAN18-006354.001	Silvery metal wire w/ white powder

Remarks :

- (1) 1 mg/kg = 1 ppm = 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 : With reference to IEC 62321-4:2013+A1:2017, IEC62321-5:2013, IEC62321-7-2:2017 , IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1,000	mg/kg	2	59
Mercury (Hg)	1,000	mg/kg	2	ND
Hexavalent Chromium (CrVI)	1,000	mg/kg	8	ND
Sum of PBBs	1,000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1,000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. CANEC1801315402

Date: 13 Jan 2018

Page 3 of 6

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Dibutyl phthalate (DBP)	1000	mg/kg	50	ND
Butyl benzyl phthalate (BBP)	1000	mg/kg	50	ND
Bis (2-ethylhexyl) phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

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:12586 37,25



SGS-CSTC Inspection & Testing Services Co., Ltd.
Guangzhou Branch Testing Center Chemical Laboratory

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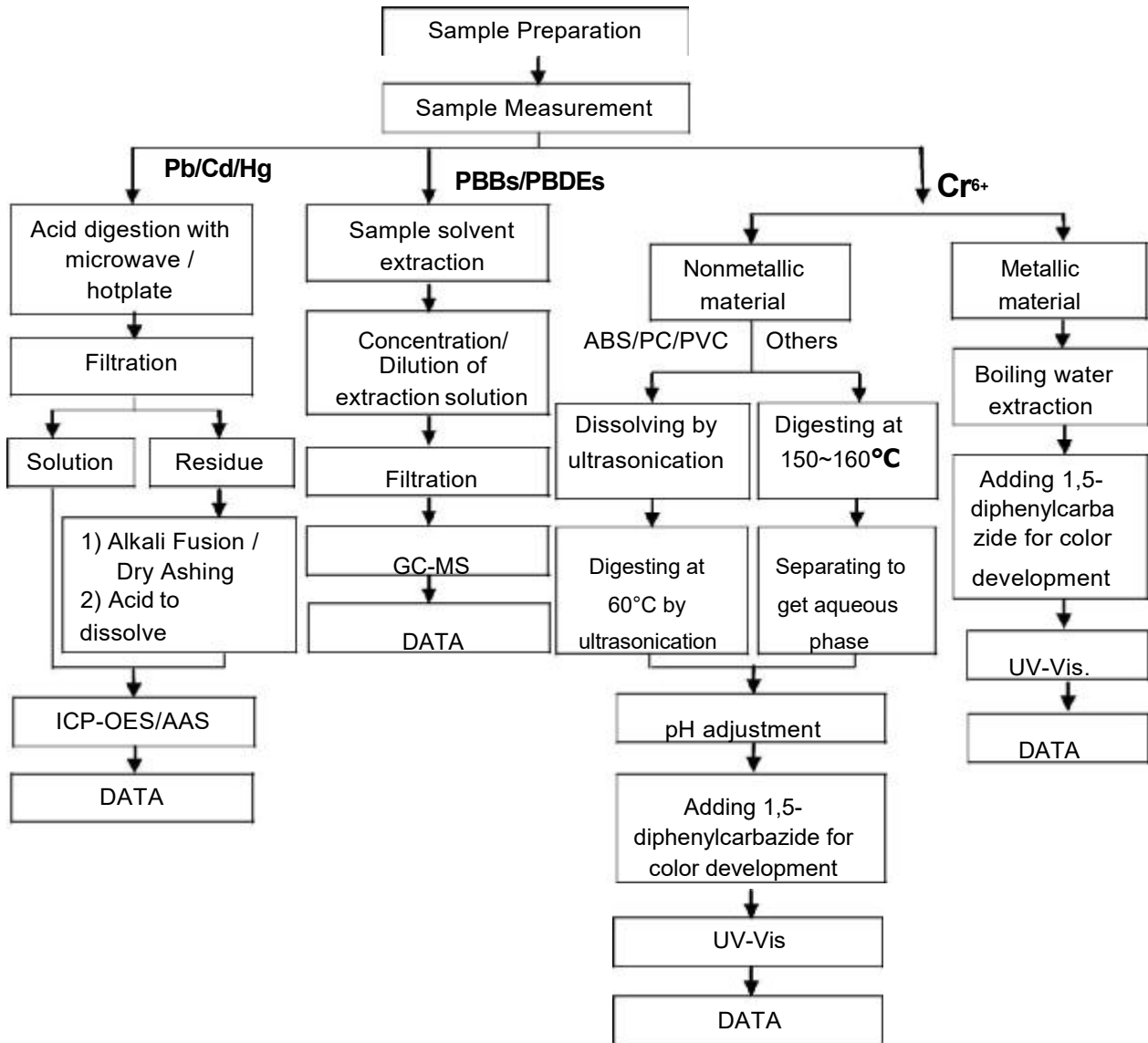
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ATTACHMENTS

Pb/Cd/Hg/Cr₆₊/PBBs/PBDEs Testing Flow Chart

- 1) Name of the person who made testing: **Edith Zhang / Sunny Hu**
- 2) Name of the person in charge of testing: **Bella Wang / Qiong Liu**
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr₆₊ and PBBs/PBDEs test method excluded).



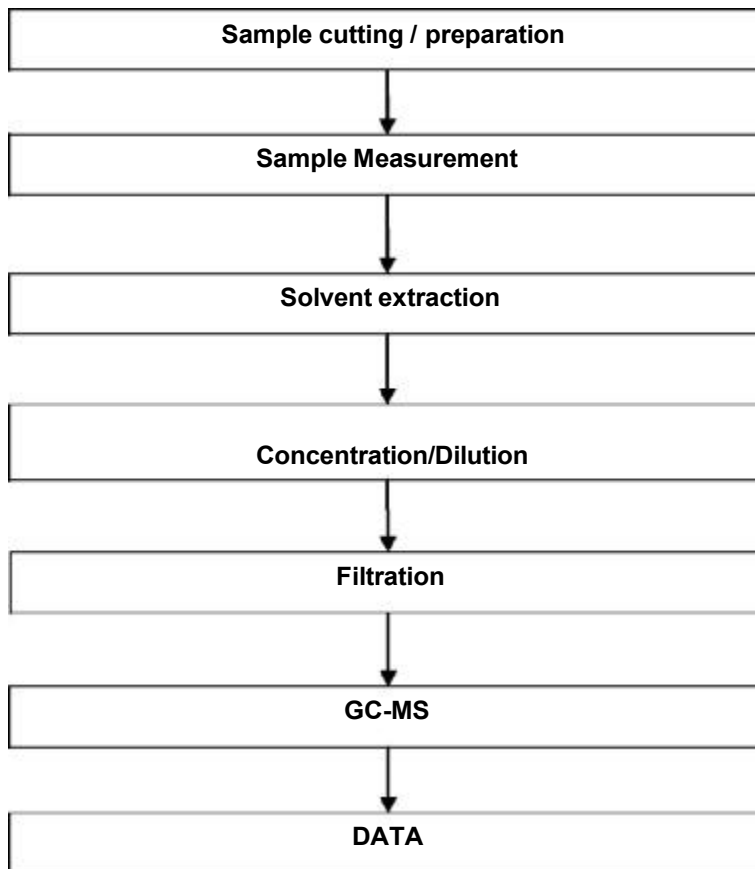
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ATTACHMENTS

Phthalates Testing Flow Chart

- 1) Name of the person who made testing: Sunny Hu
- 2) Name of the person in charge of testing: Qiong Liu



Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***

