

## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

Page 1 of 10

Applicant: HARMONY ELECTRONICS  
Address: No.39, Huadong Rd., Daliao Dist., Dafa Industrial Park., Kaohsiung City 831, Taiwan

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

Sample Name: THERMISTOR  
Sample I Model: Seam Thermistor 221S&211S&1612Series  
Manufacturer: HARMONY ELECTRONICS CORP.  
Sample Description: MIXED ALL PARTS:QUARTZ CRYSTAL RESONATORS  
Test Component: Overall test

Sample Received Date: 2019-08-08  
Testing Period: 2019-08-08 TO 2019-08-15

Test Items:  
(1) Pb, Cd, Hg, Cr<sup>6+</sup>, PBBs, PBDEs, Phthalates  
(2) F, Cl, Br, I  
(3) Sb, Be  
(4) PFOS, PFOA  
(5) DINP

Reference Method:  
(1) RoHS Directive 2011/65/EU & (EU)2015/863 Annex II  
a. IEC 62321-5 Edition 1.0:2013 method, Lead Analysis is performed by AAS  
b. IEC 62321-5 Edition 1.0:2013 method, Cadmium Analysis is performed by AAS  
c. IEC 62321-4:2013+AMD1:2017 CSV method,  
Mercury Analysis is performed by ICP-OES  
d. IEC 62321-7-2 Edition 1.0:2017 method,  
Hexavalent Chromium Analysis is performed by UV-Vis  
e. IEC 62321-6 Edition 1.0:2015 method,  
PBBs and PBDEs Analysis is performed by GC-MS  
f. IEC 62321-8 Edition 1.0:2017 method,  
Phthalates Analysis is performed by GC-MS  
(2) EN 14582:2016 method, Analysis is performed by IC  
(3) EPA 6010D:2018&EPA 3052:1996 method,  
Analysis is performed by ICP-OES  
(4) EPA3550C:2007&EPA8321B:2007 method, Analysis is performed by LC-MS  
(5) IEC 62321-8 Edition 1.0:2017 method,  
DINP Analysis is performed by GC-MS

Testing Results: Please refer to next page(s)

Approved by:



微信扫一扫，使用小程序



小程序扫一扫，在线验证

Code: 8ud44d6

注：本电子版本用于客户校对确认。最终内容请以正式报告为准。

### Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

Page 2 of 10

Test Result (Unit: mg/kg)

Test Item	MDL	Test Result	RoHS Limit
Lead (Pb)	1	20.6	1000
Cadmium (Cd)	1	N.D.	100
Mercury (Hg)	1	N.D.	1000
Hexavalent Chromium (Cr <sup>6+</sup> )	8	N.D.	1000
Sum of PBBs	—	N.D.	1000
Bromobiphenyl	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 PBDEs	—	N.D.	1000
Bromodiphenyl ether	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.	—

注：本电子版用于客户校对确认。最终内容请以正式报告为准。



## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

Page 3 of 10

### Test Results (Unit: mg/kg)

Test Item	MDL	Test Result	RoHS Limit
DEHP	50	N.D.	1000
DBP	50	N.D.	1000
BBP	50	N.D.	1000
DIBP	50	N.D.	1000

### Test Results (Unit: mg/kg)

Test Item	MDL	Test Result
F	50	N.D.
Cl	50	N.D.
Br	50	N.D.
I	50	N.D.

### Test Results (Unit: mg/kg)

Test Item	MDL	Test Result
Sb	1	63.2
Be	1	N.D.

### Test Results (Unit: mg/kg)

Test Item	MDL	Test Result
PFOS	2	N.D.
PFOA	2	N.D.

### Test Results (Unit: mg/kg)

Test Item	CAS number	MDL	Test Result
Diisononyl phthalate (DINP)	28553-12-0	50	N.D.

Note: (1) mg/kg = ppm

(2) "—" = Does not stipulate

(3) N.D. = Not Detected (&lt;MDL)

注4) 本电子版本用于客户校对确认。最终内容请以正式报告为准。

(5) The most allowable limit value reference to RoHS Directive 2011/65/EU &amp; (EU)2015/863 Annex II

## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

Page 4 of 10

Sample No. & Photo:



Pony authenticate the photo on original report only

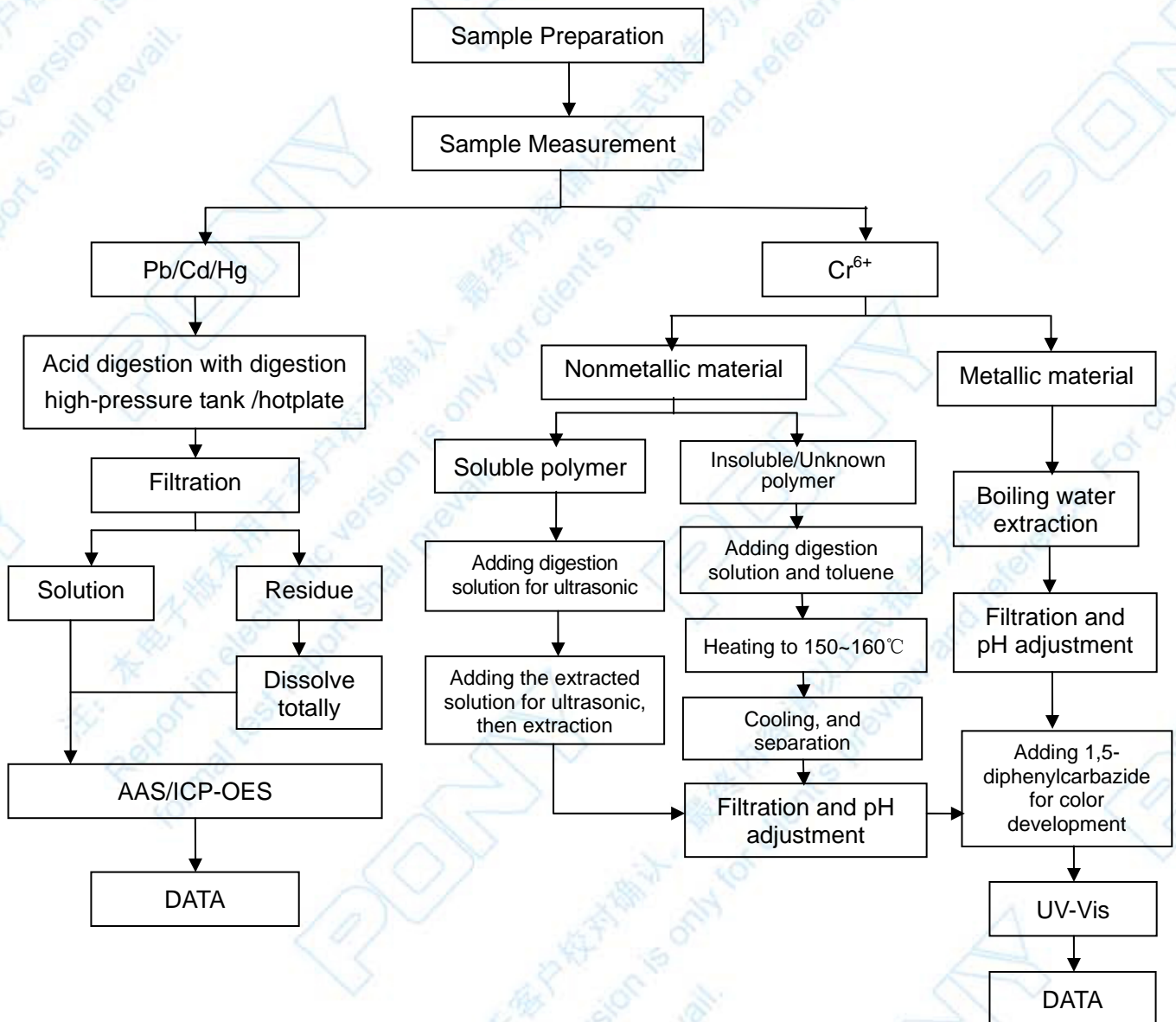
注：本电子版用于客户校对确认。最终内容请以正式报告为准。

Measurement Flow-chart

Tested by: Zhou Weiting      Checked by: Yang Xin      Person in charge of the lab: Mao Zuqing

These Samples Were Dissolved Totally By Pre-conditioning Method According To Below Flow Chart.

(Cr<sup>6+</sup> Test Method Excluded)



注：本电子版用于客户校对确认。最终内容请以正式报告为准。



## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

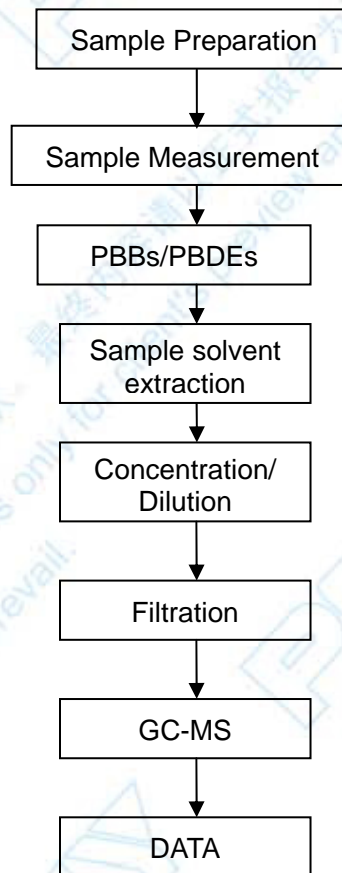
Page 6 of 10

### Measurement Flow-chart

Tested by: Wang Yaowei

Checked by: Yang Xin

Person in charge of the lab: Mao Zuqing



注：本电子版用于客户校对确认。最终内容请以正式报告为准。

## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

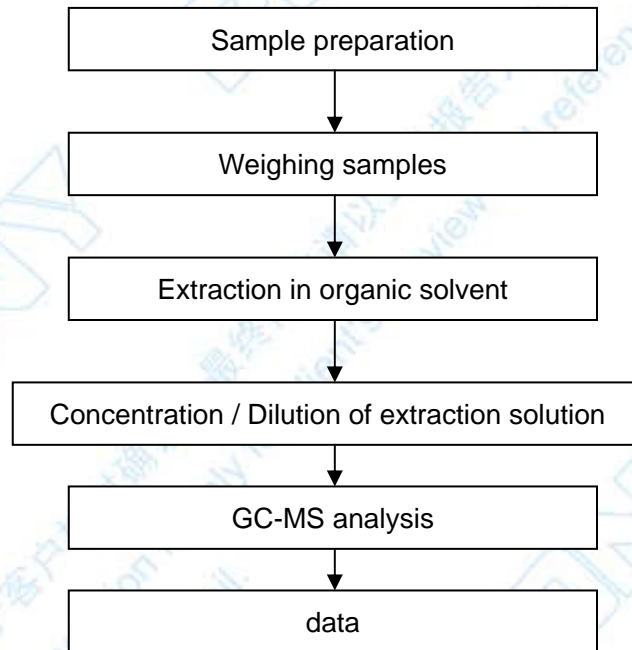
Page 7 of 10

### Phthalates Measurement Flow-chart

Tested by: Jiang Yuejiao

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing



注：本电子版用于客户校对确认。最终内容请以正式报告为准。

## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

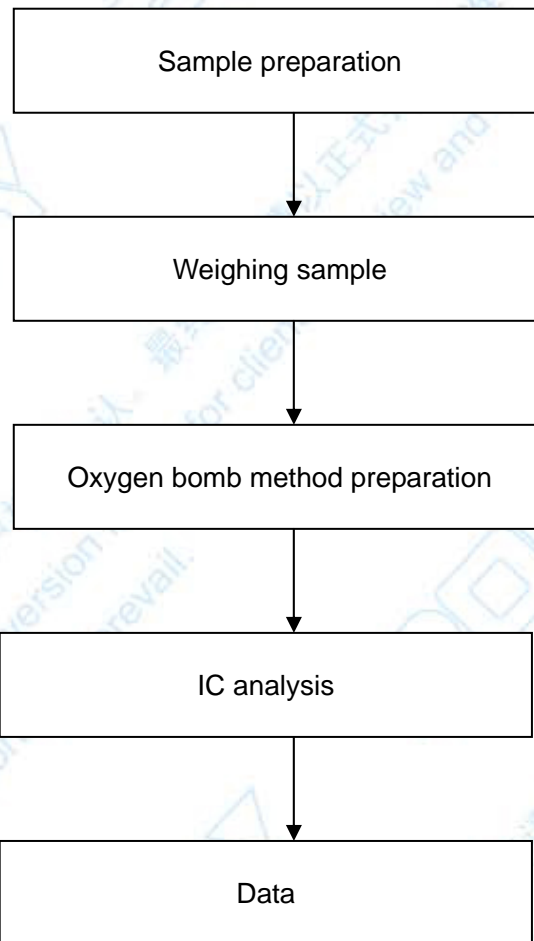
Page 8 of 10

### Halogen measurement flow-chart

Tested by: Guo Xiaoying

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing



注：本电子版用于客户校对确认。最终内容请以正式报告为准。



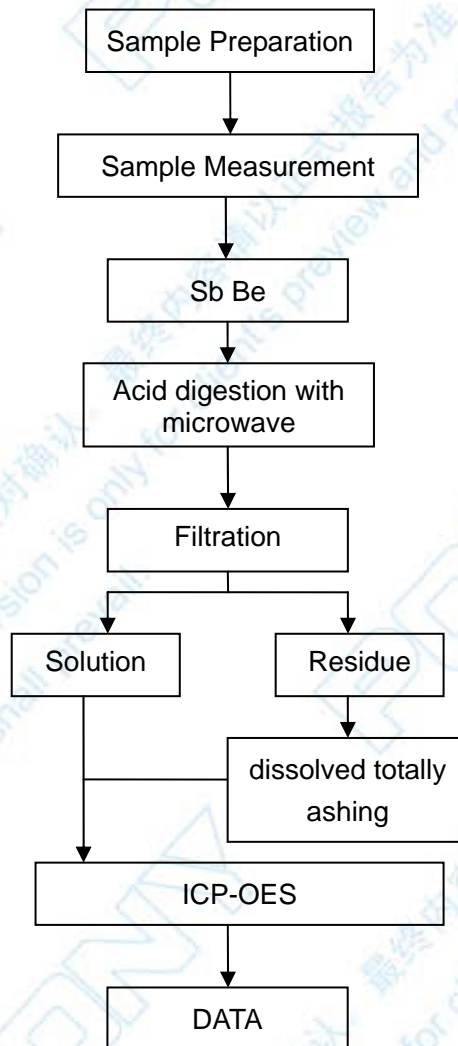
### Sb Be Measurement Flow-chart

Tested by: Mei Wenjun

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing

These Samples Were Dissolved Totally By Pre-conditioning Method According To Below Flow Chart.



注：本电子版用于客户校对确认。最终内容请以正式报告为准。

## Test Report

NO.: MNCABOUH29545704

Issued Date: 2019-08-15

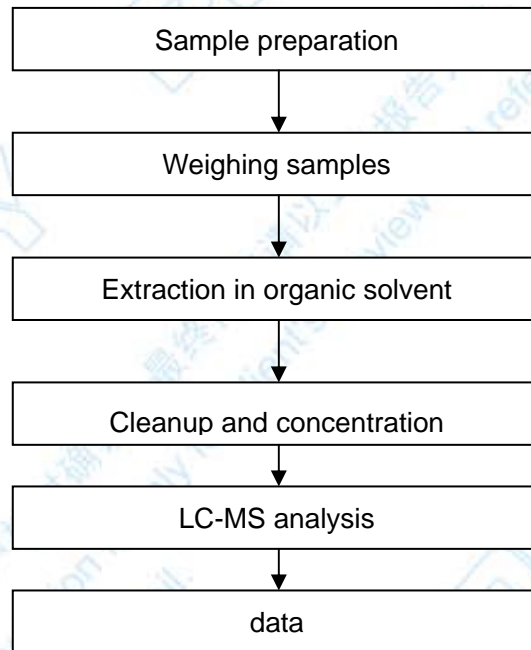
Page 10 of 10

### PFOS,PFOA Measurement Flow-chart

Tested by: Huang Zhenjin

Checked by: Yang Xin

Person in charge of the lab by: Mao Zuqing



\*\*\*End of Report\*\*\*

注：本电子版用于客户校对确认。最终内容请以正式报告为准。