



Pony Testing International Group



扫二维码
关注谱尼测试

Test Report

NO.: MMC3LJAW90250704

Date: Jul 06, 2018

Page 1 of 12

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: QUARTZ CRYSTAL RESONATORS
 Sample Model: HSX111S&HSX/DSX211S(A)&221S(A)&321S&421S&531S&631S&751S(V&B)
 Sample Description: MIXED ALL PARTS: QUARTZ CRYSTAL RESONATORS
 Test Component: Overall test

Sample Received Date: Jul 02, 2018
 Testing Period: Jul 02, 2018 TO Jul 06, 2018

Test Items: (1) Pb, Cd, Hg, Cr⁶⁺, PBBs, PBDEs, Phthalates (2) HBCDD (3) F, Cl, Br, I
 (4) PFOS,PFOA (5) Sb, Be

Reference Method: Please refer to next page(s)

Testing Results: Please refer to next page(s)

Approved by:

Ean Li



微信扫一扫，使用小程序



小程序扫一扫，在线验证

Code: grqu53e10l



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Test List:

No.	Test Items	Reference Method	Equipment
(1)	Pb	IEC62321-5 Edition 1.0:2013	AAS
	Cd		AAS
	Hg	IEC 62321-4:2013+AMD1:2017	ICP-OES
	Cr ⁶⁺	IEC62321-7-2 Edition 1.0:2017	UV-Vis
	PBBs, PBDEs	IEC 62321-6 Edition 1.0:2015	GC-MS
	Phthalates	IEC 62321-8 Edition 1.0:2017	GC-MS
(2)	HBCDD	EPA8270D:2014&EPA3540C:1996	GC-MS
(3)	F, Cl, Br, I	EN14582:2016	IC
(4)	PFOS, PFOA	EPA3550C:2007&EPA8321B:2007	LC-MS
(5)	Sb, Be	EPA3050B:1996&EPA6010D:2014	ICP-OES





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(1)

Test Results (Unit: mg/kg)

Test Item	MDL	Test Result	RoHS Limit
Lead (Pb)	1	18.3	1000
Cadmium (Cd)	1	N.D.	100
Mercury (Hg)	1	N.D.	1000
Hexavalent Chromium (Cr ⁶⁺)	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.	—



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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

Note: (1) “—” = Does not stipulate

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

(2)

Test Results (Unit: mg/kg)

Test Item	MDL	Test Result
HBCDD	5	N.D.

(3)

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.

(4)

Test Results (Unit: mg/kg)

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



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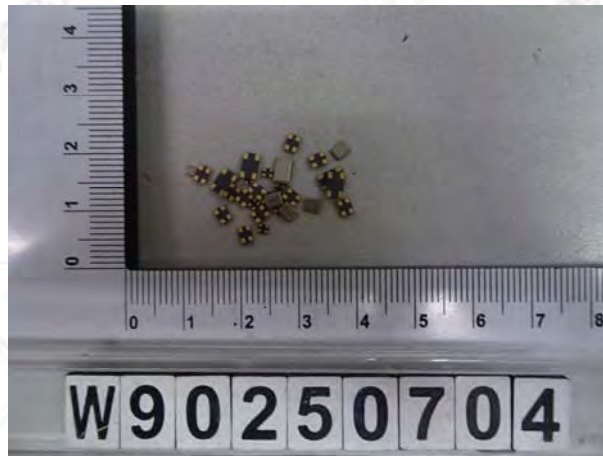
(5)

Test Results (Unit: mg/kg)

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

- Note:
- (1) mg/kg = ppm
 - (2) N.D. = Not Detected (<MDL)
 - (3) MDL = Method Detection Limit

Sample No. & Photo:



Pony authenticate the photo on original report only



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RoHS Measurement Flow-chart

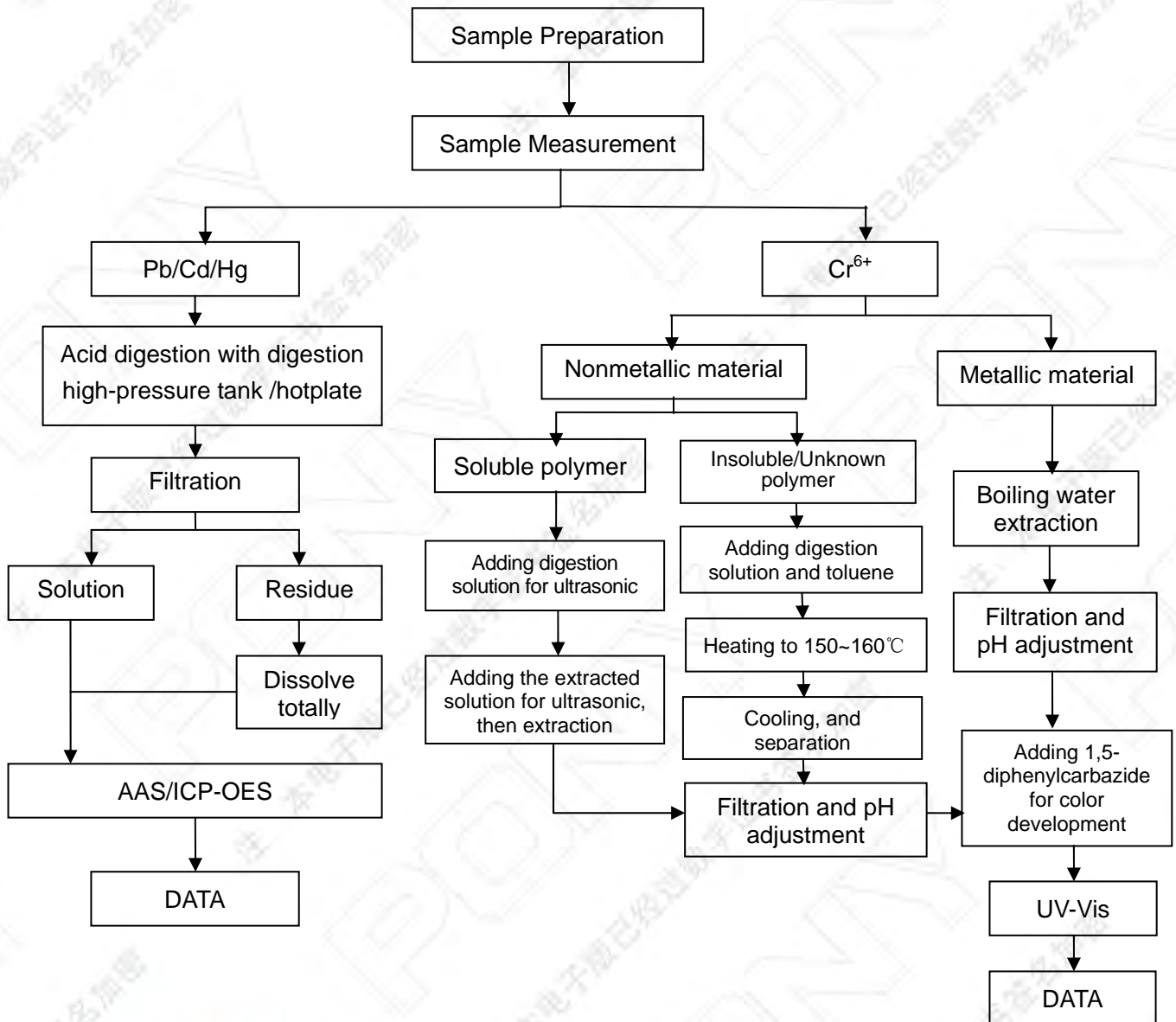
Tested by: Liang Shikang

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing

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

(Cr⁶⁺ Test Method Excluded)



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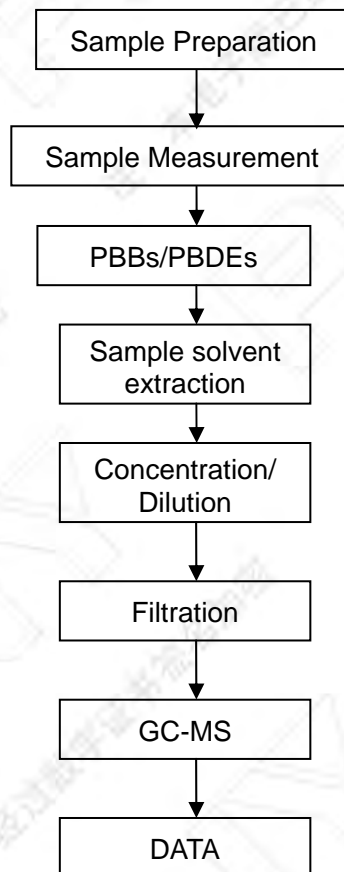
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Measurement Flow-chart

Tested by: Liu Jinjin

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing



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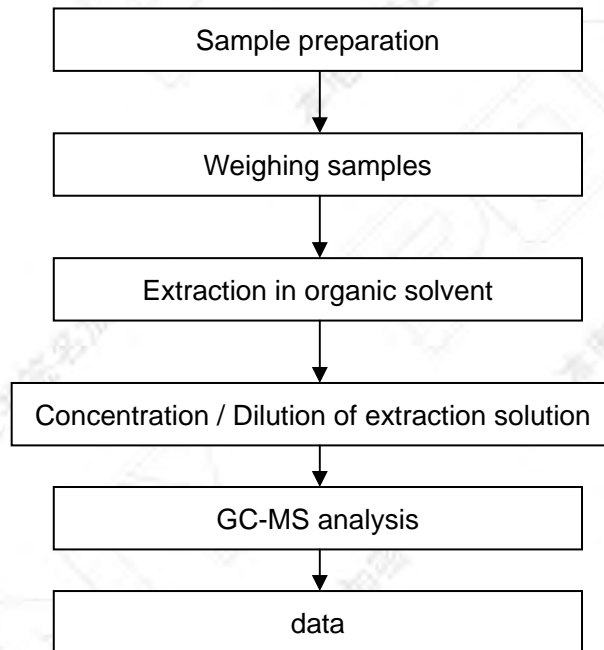
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Phthalates Measurement Flow-chart

Tested by: Jiang Yuejiao

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing





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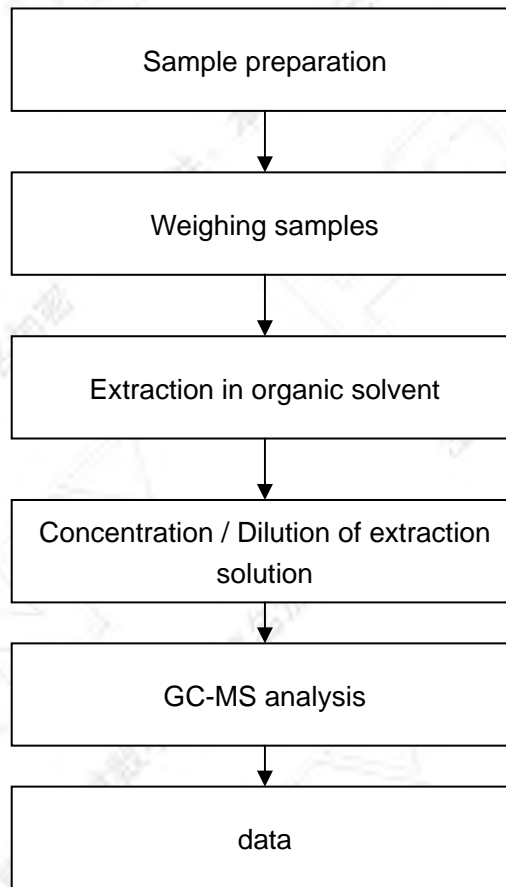
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HBCDD Measurement Flow-chart

Tested by: Jiang Yuejiao

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing



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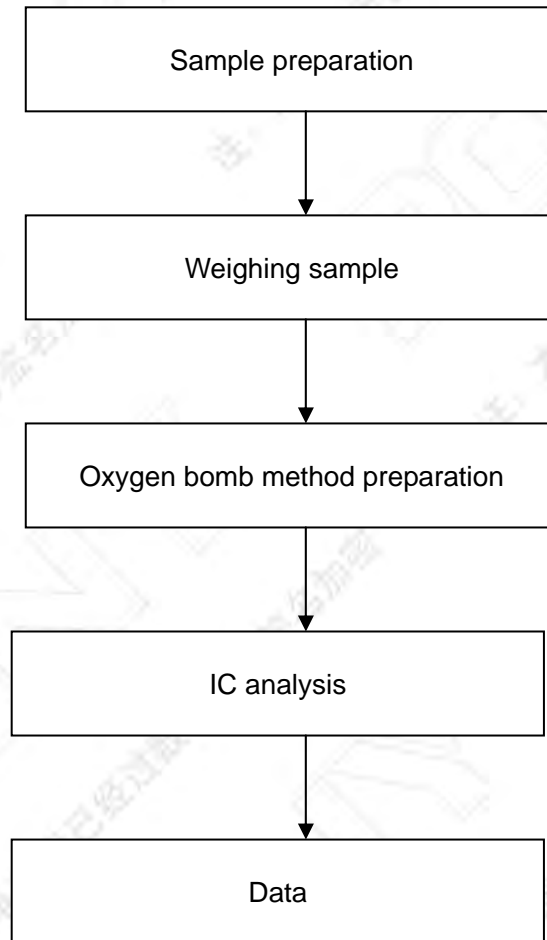
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Halogen measurement flow-chart

Tested by: Xie Xiaomei

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing



- | | | | |
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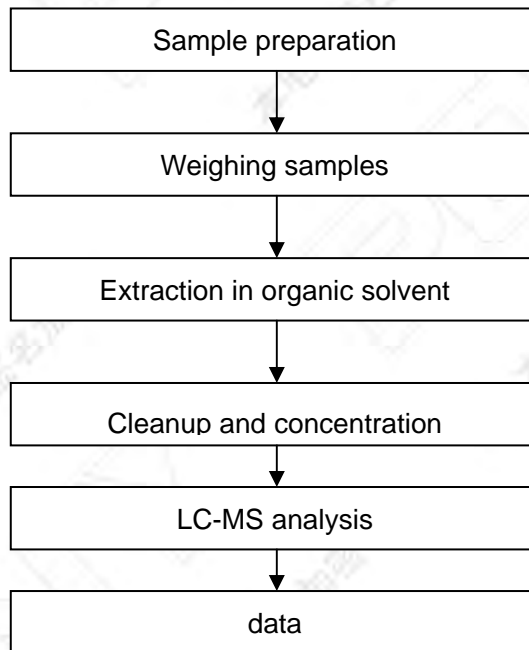
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PFOS ,PFOA Measurement Flow-chart

Tested by: Huang Zhenjin

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing



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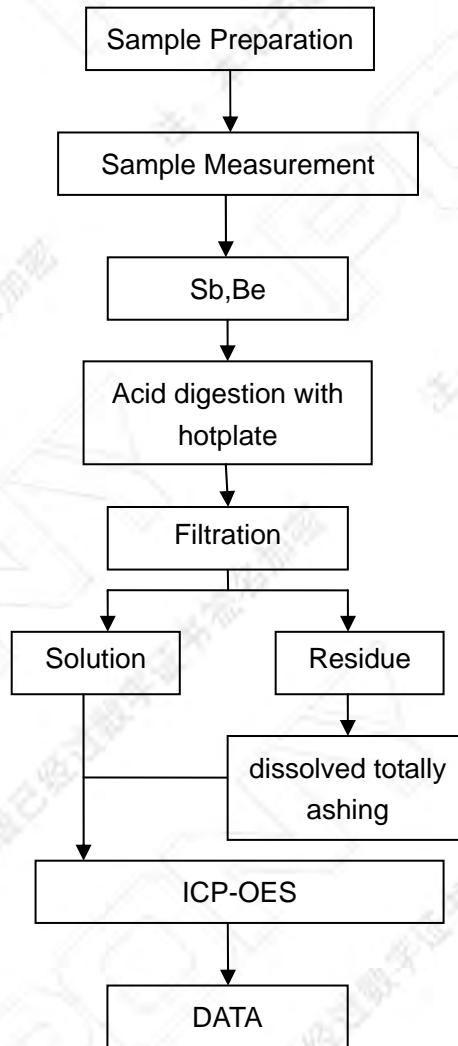
Sb,Be Measurement Flow-chart

Tested by: Xie Caixia

Checked by: Peng Pingping

Person in charge of the lab by: Mao Zuqing

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



End of Report



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