



檢測報告 Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 1 頁 共 9 頁
Page 1 of 9

申請單位 加高電子股份有限公司(深圳)
Applicant HARMONY ELECTRONICS(SHEN ZHEN)
地 址 深圳市寶安區福永街道塘尾社區橋塘路聚源工業區
Address JU YUAN INDUSTRIAL PARK,QIAO TANG ROAD,TANG WEI
COMMUNITY,FUYONG,BAOAN DISTRICT,SHEN AHEN CITY,PEOPLE'S REPUBLIC OF
CHINA.

以下測試之樣品及樣品信息由申請者提供並確認

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

樣品名稱 Sample Name QUARTZ CRYSTAL RESONATORS
樣品型號 Part No. HSX111S&HSX/DSX211S(A)&221S(A)&321S&421S&531S&631S&751S(V&B)
樣品顏色 Color Silver
材料名稱 Material Iron+Cobalt+Nickel+Tungsten+Gold
供應商 Supplier HARMONY ELECTRONICS(SHEN ZHEN)
樣品接收日期 2020.02.24
Sample Received Date Feb. 24, 2020
樣品檢測日期 2020.02.24-2020.02.28
Testing Period Feb. 24, 2020 to Feb. 28, 2020

檢測要求 根據客戶要求,對所提交樣品中的鉛(Pb),鎘(Cd),汞(Hg),六價鉻(Cr(VI)),多
溴聯苯(PBBs),多溴二苯醚(PBDEs),鄰苯二甲酸酯進行測試。

Test Requested As specified by client, to test Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent
Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl
Ethers (PBDEs), Phthalates in the submitted sample(s).

檢測依據/檢測結果 請參見下頁。

Test Method/Test Result(s) Please refer to the following page(s).

主 檢 張孝瑜 審 核 徐忠娟
Tested by Reviewed by

批 准 陳凱敏 日 期 2020.03.07
Approved by Date

陳凱敏
實驗室經理 Lab Manager



上海華測品標檢測技術有限公司
Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No. T172794984
上海市閔行區萬芳路 1351 號
No.1351, Wanfang Road, Minhang District, Shanghai, China

檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 2 頁 共 9 頁
Page 2 of 9

檢測依據 Test Method

測試項目 Tested Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
鉛 Lead(Pb)	IEC 62321-5:2013	ICP-OES
鎘 Cadmium(Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury(Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六價鉻 Hexavalent Chromium(Cr(VI))	IEC 62321-7-2:2017	UV-Vis
多溴聯苯 Polybrominated Biphenyls(PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
鄰苯二甲酸酯 Phthalates	IEC 62321-8:2017	GC-MS

檢測結果 Test Result(s)

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鉛 Lead (Pb)	N.D.	2 mg/kg
鎘 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六價鉻 Hexavalent Chromium (Cr(VI))	N.D.	8 mg/kg

檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 3 頁 共 9 頁
Page 3 of 9

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
多溴聯苯 Polybrominated Biphenyls(PBBs)		
一溴聯苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴聯苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴聯苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴聯苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴聯苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴聯苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴聯苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴聯苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴聯苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴聯苯 Decabromobiphenyl	N.D.	5 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 4 頁 共 9 頁
Page 4 of 9

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)		
鄰苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
鄰苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
鄰苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鄰苯二甲酸酯 Phthalates		
鄰苯二甲酸二異壬酯 Di-isononyl phthalate (DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg

樣品/部位描述 電子元器件(整體測試)
Sample/Part Description Electronic components(Tested as a whole)

檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 5 頁 共 9 頁
Page 5 of 9

備註: 對於檢測鉛, 鎘, 汞之樣品已完全溶解。
按照目前手段, 樣品無法進一步拆分, 樣品整體測試, 測試結果不代表整體測試樣品中任何一種單一材質的含量。

-N.D. = 未檢出 (小於方法檢出限)

-mg/kg = ppm = 百萬分之一

根據客戶聲明, 本報告中的樣品和報告 A2200018449138001E 中的樣品為同材質, 本報告中樣品的結果引自報告 A2200018449138001E 中樣品的結果。

Remark: The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.
The sample(s) was tested as a whole, because it's impossible to disassemble or separate it by current equipment and technology. The result(s) shown on this report may be different from the content of any homogeneous material.

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

According to the client's statement, the material of sample in this report is the same as the sample in report No. A2200018449138001E, so the test result(s) is presented in reference to that one.

檢測報告

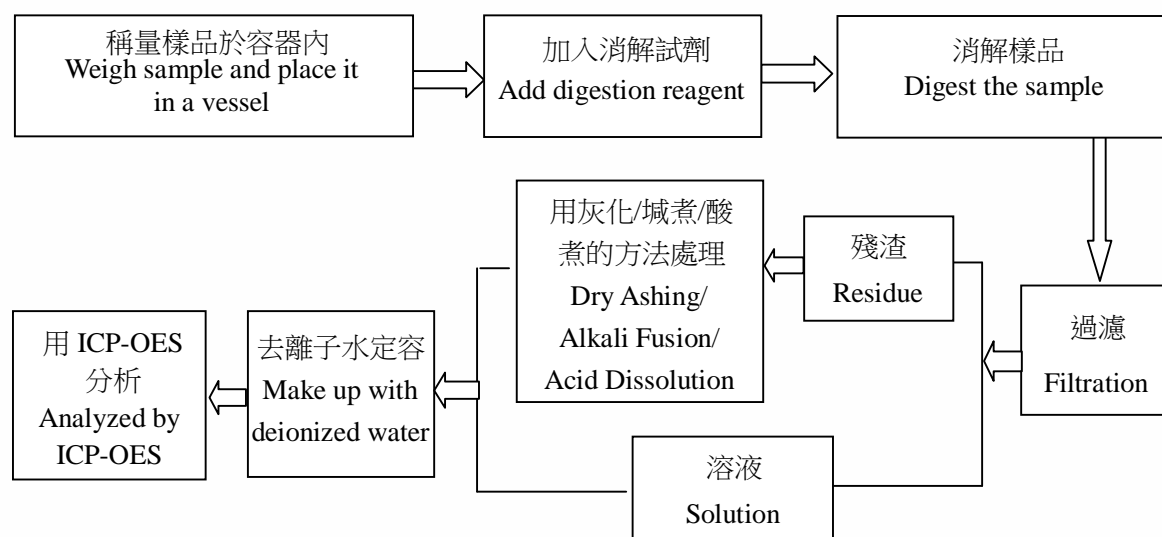
Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

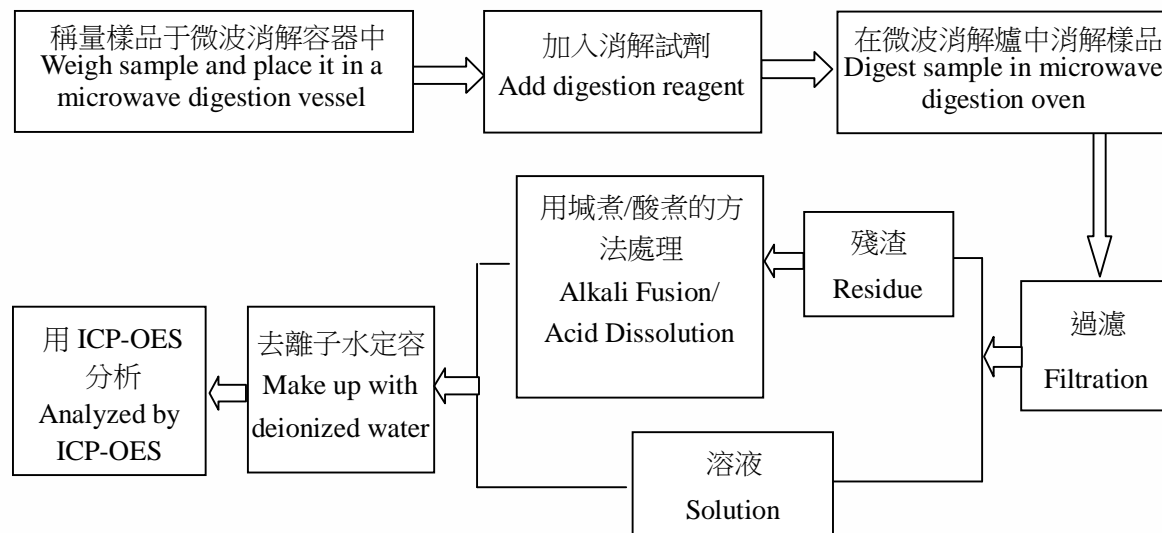
第 6 頁 共 9 頁
Page 6 of 9

檢測流程 Test Process

1. 鉛(Pb), 鎘(Cd) Lead(Pb), Cadmium(Cd)



2. 汞(Hg) Mercury(Hg)



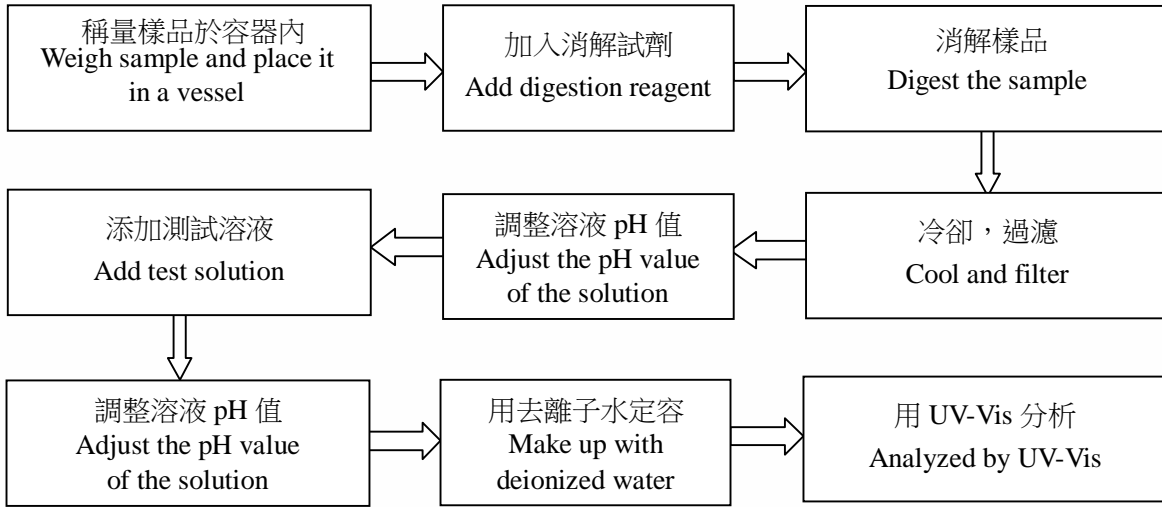
檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

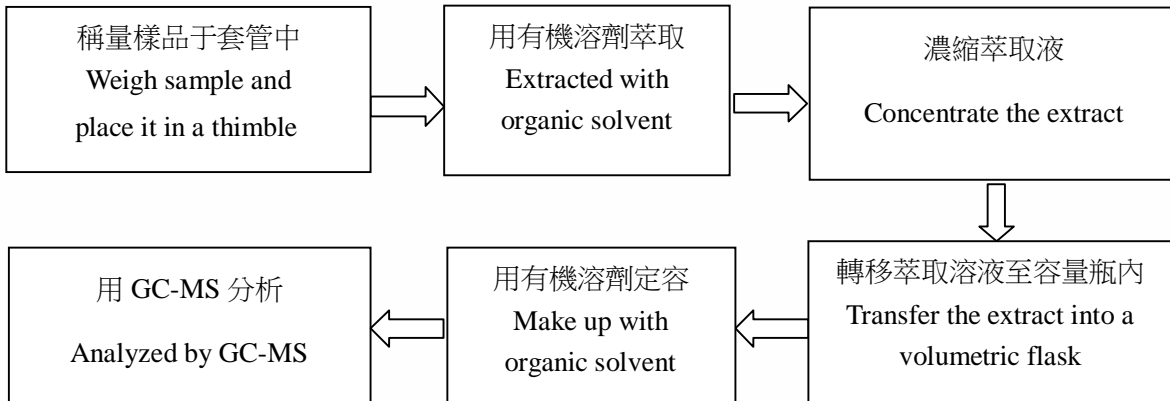
第 7 頁 共 9 頁
Page 7 of 9

3. 六價鉻(Cr(VI)) Hexavalent Chromium (Cr(VI))



4. 多溴聯苯(PBBs)，多溴二苯醚(PBDEs)

Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



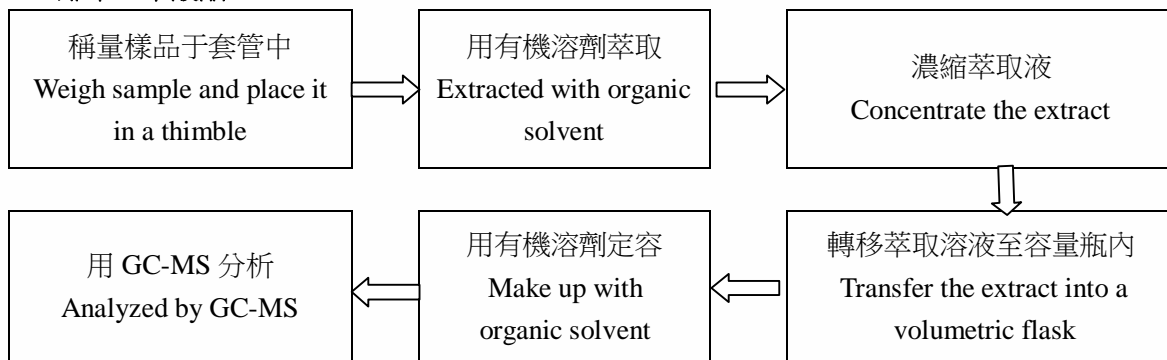
檢測報告

Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 8 頁 共 9 頁
Page 8 of 9

5. 鄰苯二甲酸酯 Phthalates



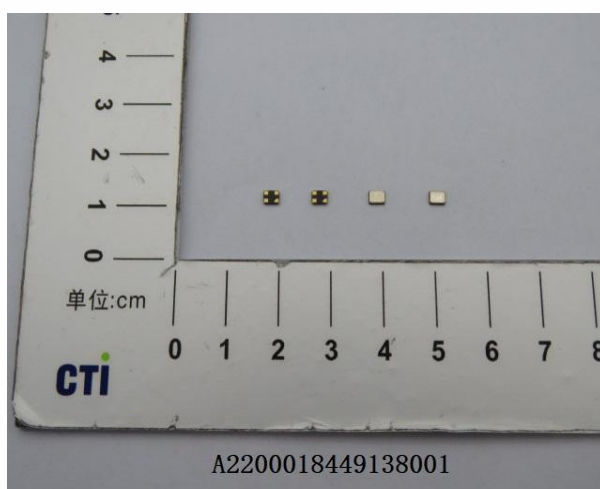
檢測報告 Test Report

報告編號 A220001844913800102E
Report No. A220001844913800102E

第 9 頁 共 9 頁
Page 9 of 9

樣品圖片

Photo(s) of the sample(s)



*** 報告結束 ***

*** End of Report ***

聲明 Statement :

1. 檢測報告無批准人簽字、“專用章”及報告騎縫章無效；

This report is considered invalid without approved signature, special seal and the seal on the perforation;

2. 樣品及樣品信息由申請者提供，申請者應對其真實性負責，CTI 未核實其真實性；

The sample(s) and sample information was/were provided by the client who should be responsible for the authenticity which CTI hasn't verified;

3. 本報告檢測結果僅對受測樣品負責；

The result(s) shown in this report refer(s) only to the sample(s) tested;

4. 未經 CTI 書面同意，不得部分複製本報告；

Without written approval of CTI, this report can't be reproduced except in full;

5. 如檢測報告中的英文內容與中文內容有差異，以中文為準。

In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.