

測試報告 Test Report

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鴻山電子股份有限公司

HOSUNLINK ELECTRON CO., LTD.

台北縣三重市重陽路三段192之4號8樓

8F., NO. 192-4, SEC. 3, CHONGYANG RD., SANCHONG CITY, TAIPEI COUNTY 241, TAIWAN

(R. O. C.)



以下測試樣品係由客戶送樣，且由客戶聲稱並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description) : CRYSTAL / OSCILLATOR (SMD CERAMIC PACKAGE)
樣品型號(Style/Item No.) : H-22 / H-32 / H-42 / H-53 / H-63 / H-75 / H-84 (2.5*2.0 / 3.2*2.5 / 4.2*2.5 / 5.2*3.2 / 6.2*3.7 / 7.2*5.2 / 8.2*4.7)
收件日期(Sample Receiving Date) : 2008/04/30
測試期間(Testing Period) : 2008/04/30 TO 2008/05/08

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測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory – Taipei

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測試結果(Test Results)

測試部位(PART NAME) NO.1 : CRYSTAL / OSCILLATOR (SMD CERAMIC PACKAGE)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀 (ICP-AES) 檢測鎘含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Cadmium by ICP-	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀 (ICP-AES) 檢測鉛含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Lead by ICP-	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 用感應耦合電漿原子發射光譜儀 (ICP-AES) 檢測汞含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Mercury by ICP-	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	針對非金屬材質之樣品, 參考IEC 62321/2nd CDV (111/95/CDV) 方法檢測, 用UV-VIS檢測六價鉻含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of Hexavalent Chromium for non-metallic samples by UV-Vis Spectrometry.	2	n.d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321/2nd CDV (111/95/CDV)方法, 以氣相層析儀/質譜儀檢測多溴聯苯和多溴聯苯醚含量. / With reference to IEC 62321/2nd CDV (111/95/CDV). Determination of PBB and PBDE by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl			5	n.d.
二溴聯苯 / Dibromobiphenyl			5	n.d.
三溴聯苯 / Tribromobiphenyl			5	n.d.
四溴聯苯 / Tetrabromobiphenyl			5	n.d.
五溴聯苯 / Pentabromobiphenyl			5	n.d.
六溴聯苯 / Hexabromobiphenyl			5	n.d.
七溴聯苯 / Heptabromobiphenyl			5	n.d.
八溴聯苯 / Octabromobiphenyl			5	n.d.
九溴聯苯 / Nonabromobiphenyl			5	n.d.
十溴聯苯 / Decabromobiphenyl			5	n.d.
多溴聯苯醚總和 (一至九溴) / Sum of PBDEs (Mono to Nona) (Note 4)			-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	5	n.d.		
十溴聯苯醚 / Decabromodiphenyl ether	5	n.d.		
多溴聯苯醚總和 (一至十溴) / Sum of PBDEs (Mono to Deca)	-	n.d.		

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				NO.1
鹵素 / Halogen	---	參考BS EN 14582:2007, 以離子層析儀分析氟, 氯, 溴, 碘含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for F, Cl, Br, I content.	---	---
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 007782-41-4)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析氟含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Fluorine content.	50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析氯含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Chlorine content.	50	n.d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析溴含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Bromine content.	50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 007553-56-2)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析碘含量. / With reference to BS EN 14582:2007. Analysis was performed by IC method for Iodine content.	50	n.d.

備註(Note) :

1. mg/kg = ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. 根據2005年10月13日歐盟會議公佈2005/717/EC, 修訂2002/95/EC內容, 通過解除高分子材質中十溴聯苯醚之使用限制. (According to 2005/717/EC DecaBDE is exempt.)
5. "-" = Not Regulated (無規格值)
6. "---" = Not Conducted (未測項目)

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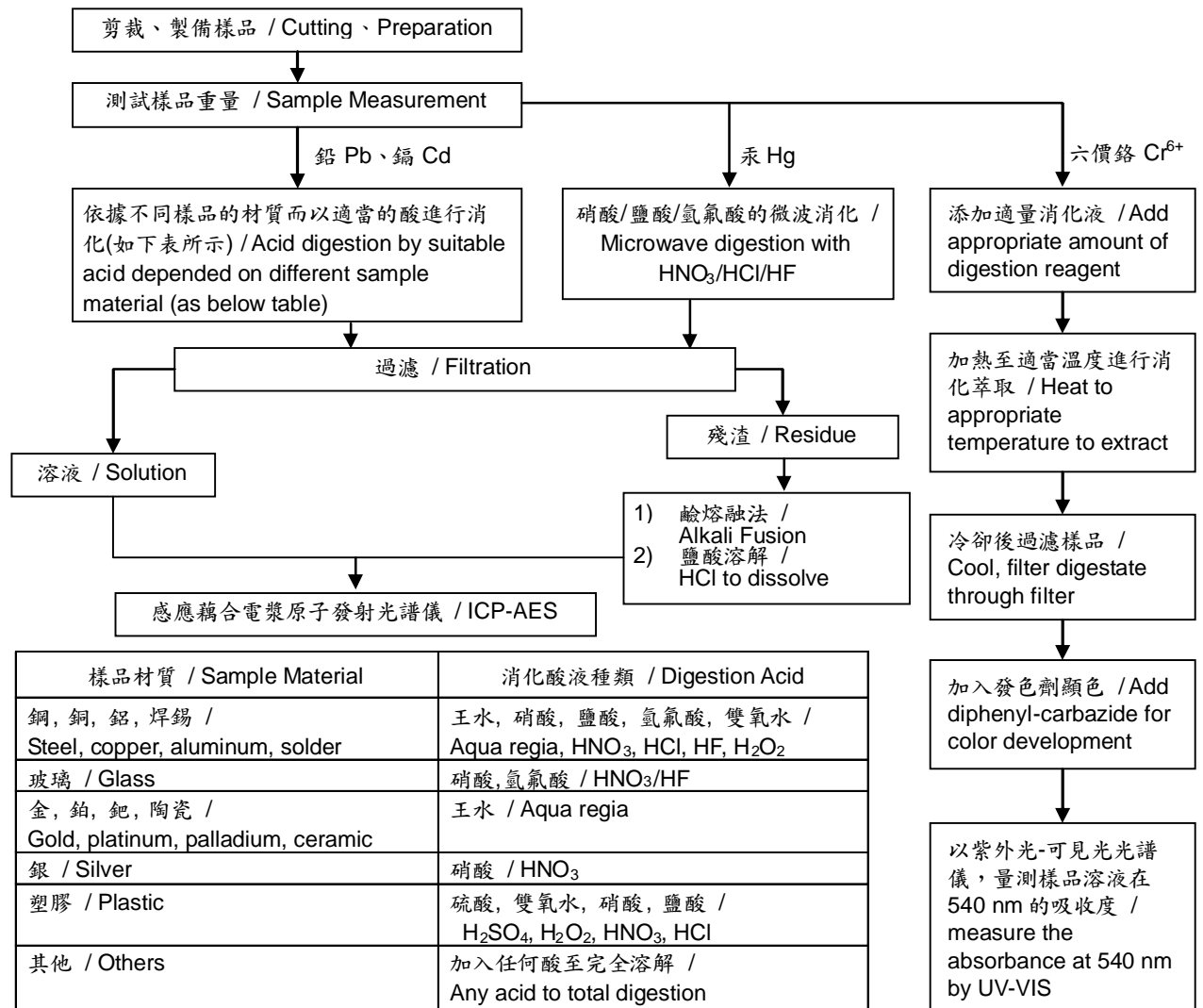
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded)
- 2) 測試人員：楊登偉 / Name of the person who made measurement: Climbgreat Yang
- 3) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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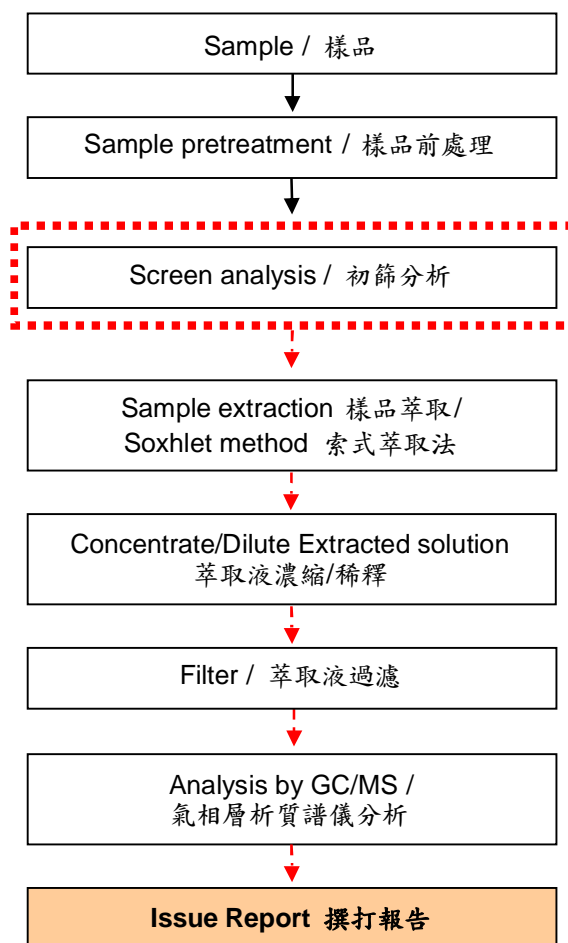
多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 1) 測試人員：翁賜彬 / Name of the person who made measurement: Roman Wong
- 2) 測試負責人：陳新智 / Name of the person in charge of measurement: Shinjyh Chen

初次測試程序 / First testing process ———▶

選擇性篩檢程序 / Optional screen process▶

確認程序 / Confirmation process - - - ▶



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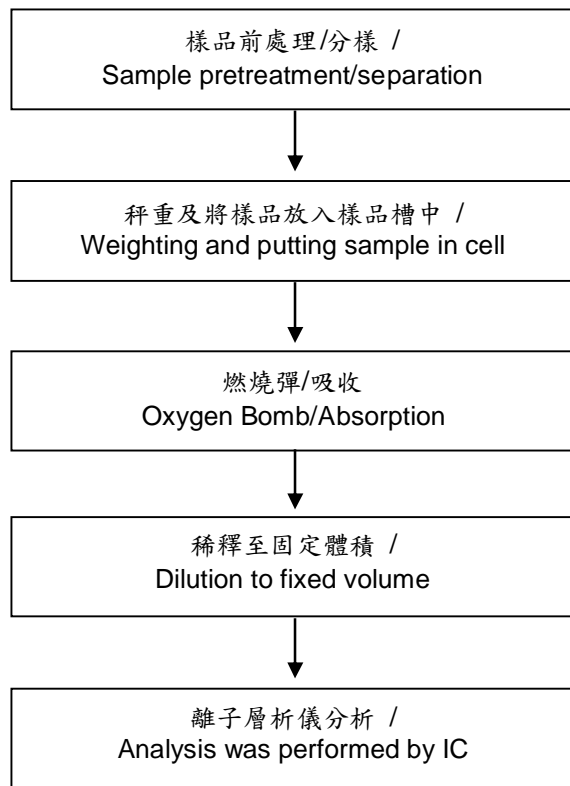
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鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員：藍雅婷 / Name of the person who made measurement: Tin Lan
- 2) 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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** 報告結尾 **