

## 測試報告 Test Report

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南亞塑膠工業股份有限公司  
NAN YA PLASTICS CORPORATION  
嘉義縣新港鄉中洋工業區2號

NO. 2, CHUNGYANG INDUSTRIAL PARK, HSINKANG VILLAGE, CHIAYI COUNTY, TAIWAN



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) : LAMINATE  
樣品型號(Style/Item No.) : NP-170R/NP-170TL/NP-170B  
買主/訂單號碼(Buyer/Order No.) : 8111257U  
收件日期(Sample Receiving Date) : 2008/01/31  
測試期間(Testing Period) : 2008/01/31 TO 2008/02/13

=====  
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 : 黃色基板 (YELLOW LAMINATE)

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, Ed. 1 111/54/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, Ed.1 111/54/CDV. Determination of Cadmium by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321, Ed. 1 111/54/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, Ed.1 111/54/CDV. Determination of Lead by ICP-AES.	2	n.d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321, Ed. 1 111/54/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, Ed.1 111/54/CDV. Determination of Mercury by ICP-AES.	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, Ed. 1 111/54/CDV 方法檢測, 用UV-VIS檢測六價鉻含量. / With reference to IEC 62321, Ed.1 111/54/CDV. Determination of Hexavalent Chromium for non-metallic samples by UV/Vis Spectrometry.	2	n.d.
聚氯乙烯 / PVC	**	以紅外線光譜分析法搭配垂直式全反射配件及焰色法檢測. / Analysis was performed by FTIR/ATR and FLAME test.	-	Negative

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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
全氟辛磺酸 / PFOS	mg/kg	2005,39,3904-3910 環境科學技術期刊, 全氟辛酸類化合物於選定的消費性產品之曝露評估與風險描述分析儀器為 LC/MS. / With reference to Environ. Sci. Technol.2005,39,3904-3910 Exposure Assessment and Risk Characterization for Perfluorooctanoate in Selected Consumer Articles. Analysis was performed by LC/MS.	1	n.d.
鹵素 / Halogen	---	參考BS EN 14582, 以離子層析儀分析氟, 氯, 溴, 碘含量. / With reference to BS EN 14582. 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, 以離子層析儀分析氟含量. / With reference to BS EN 14582. Analysis was performed by IC method for Fluorine content.	50	265
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 007782-50-5)	mg/kg	參考BS EN 14582, 以離子層析儀分析氯含量. / With reference to BS EN 14582. Analysis was performed by IC method for Chlorine content.	50	469
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 007726-95-6)	mg/kg	參考BS EN 14582, 以離子層析儀分析溴含量. / With reference to BS EN 14582. Analysis was performed by IC method for Bromine content.	50	51500
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 007553-56-2)	mg/kg	參考BS EN 14582, 以離子層析儀分析碘含量. / With reference to BS EN 14582. Analysis was performed by IC method for Iodine content.	50	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
<b>多溴聯苯總和 / Sum of PBBs</b>	mg/kg	參考IEC 62321, Ed. 1 111/54/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, Ed.1 111/54/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.
<b>多溴聯苯醚總和 (一至九溴) / Sum of PBDEs (Mono to Nona) (Note 4)</b>			-	n.d.
一溴聯苯醚 / Monobromobiphenyl ether			5	n.d.
二溴聯苯醚 / Dibromobiphenyl ether			5	n.d.
三溴聯苯醚 / Tribromobiphenyl ether			5	n.d.
四溴聯苯醚 / Tetrabromobiphenyl ether			5	n.d.
五溴聯苯醚 / Pentabromobiphenyl ether			5	n.d.
六溴聯苯醚 / Hexabromobiphenyl ether			5	n.d.
七溴聯苯醚 / Heptabromobiphenyl ether			5	n.d.
八溴聯苯醚 / Octabromobiphenyl ether			5	n.d.
九溴聯苯醚 / Nonabromobiphenyl ether			5	n.d.
十溴聯苯醚 / Decabromobiphenyl ether	5	n.d.		
<b>多溴聯苯醚總和 (一至十溴) / Sum of PBDEs (Mono to Deca)</b>	-	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)
7. \*\* = Qualitative analysis (No Unit) 定性分析(無單位)
8. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)

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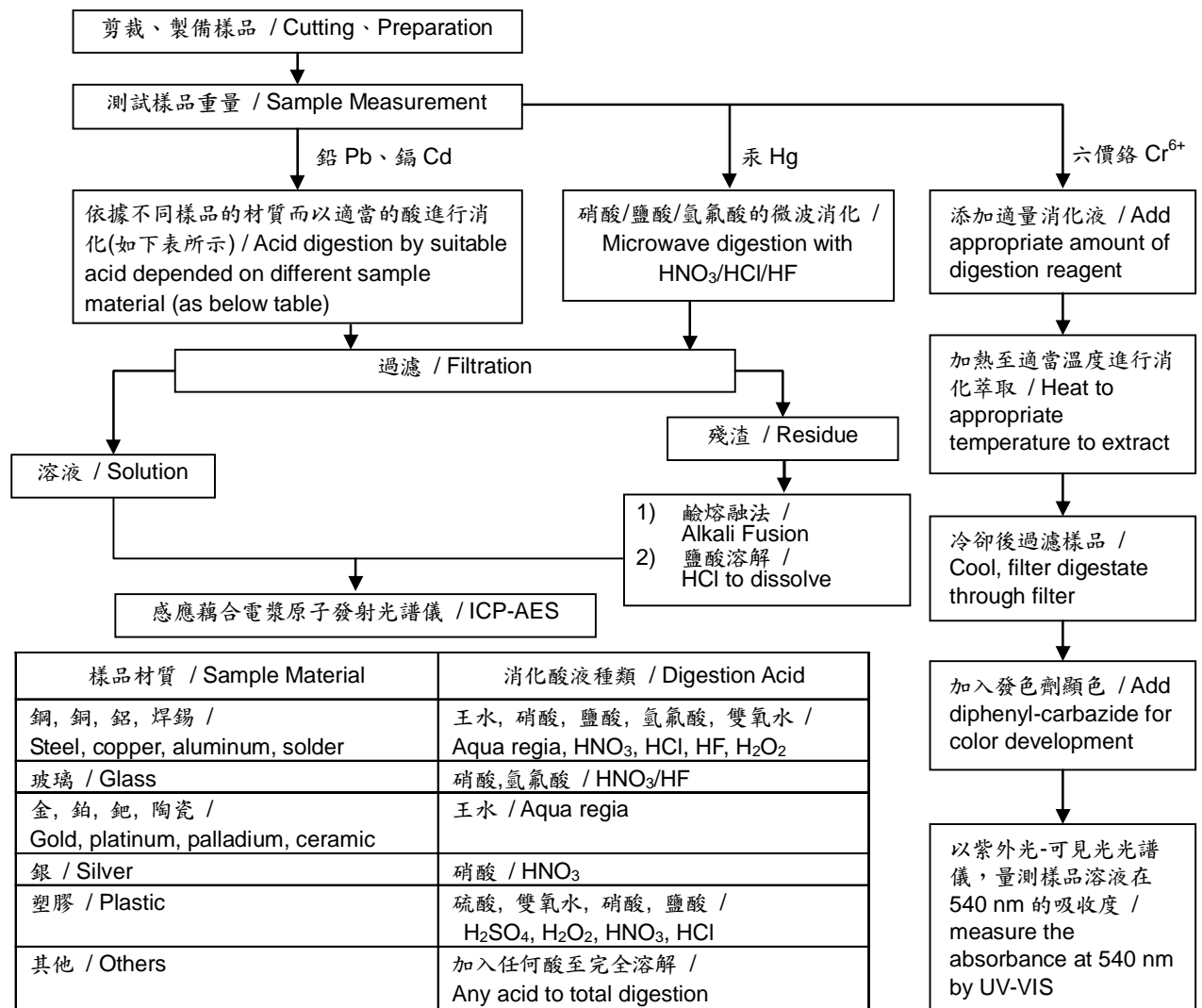
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) 測試人員：張啓興 / Name of the person who made measurement: Troy Chang
- 3) 測試負責人：龔振裕 / Name of the person in charge of measurement: Chenyu Kung



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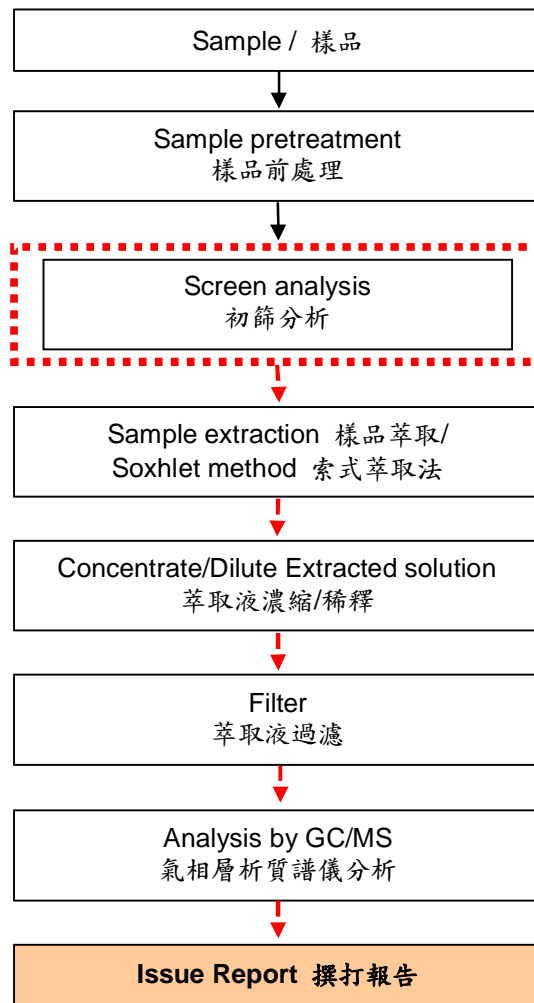


## 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

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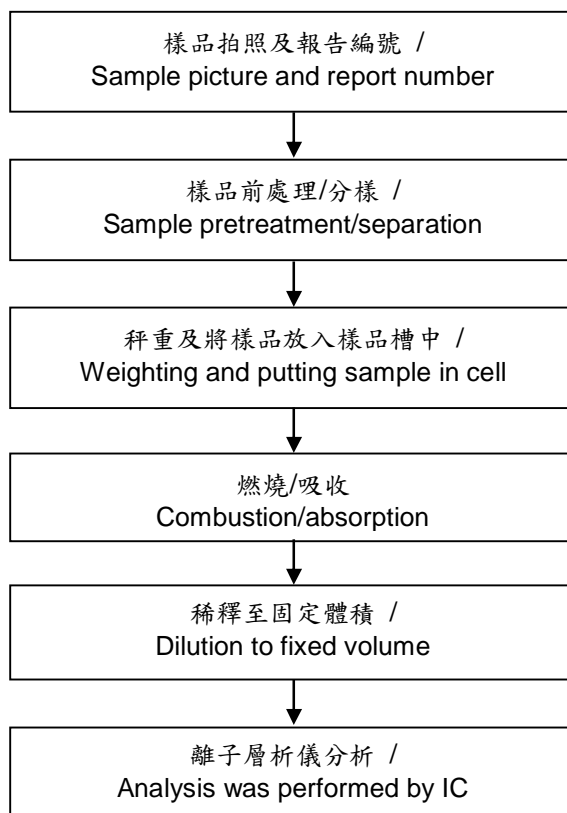
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## 鹵素分析流程圖 / Analytical flow chart of halogen content



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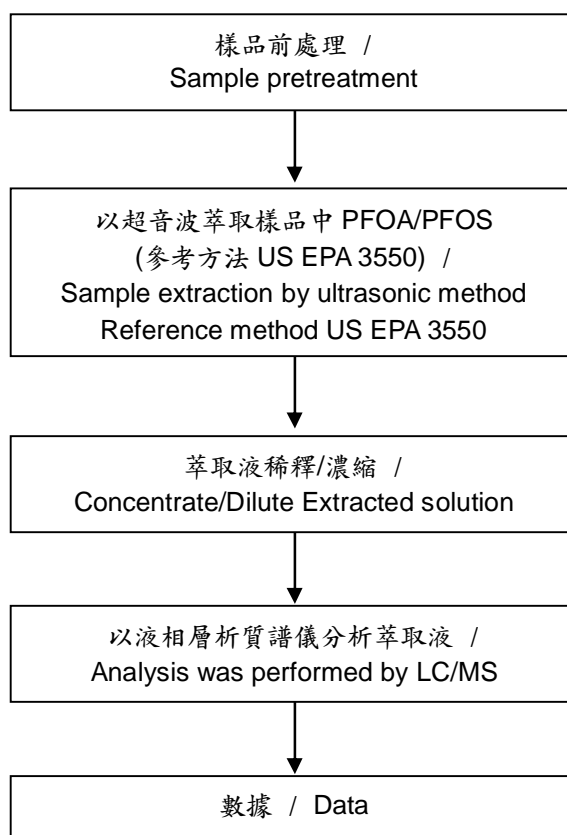
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### 全氟辛酸(銨)/全氟辛磺酸分析流程圖 / Analytical flow chart of PFOA/PFOS content



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\*\* 報告結尾 \*\*