

# 測試報告 Test Report

號碼(No.) : KA/2022/51538

日期(Date) : 2022/12/31

頁數(Page): 1 of 6

高福化學工業股份有限公司

KAOFU CHEMICAL CORPORATION

高雄市仁武區鳳仁路385號

NO. 385 FONG-JEN ROAD, REN WU DIST., KAOHSIUNG CITY, 814, 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) : 耐衝擊級聚苯乙烯 (HIGH IMPACT POLYSTYRENE)  
樣品型號(Style/Item No.) : HPS-850, HPS-850R, HPS-800R, HPS-851, HPS-850S, HPS-800, HPS-800J, HPS-800F  
收件日期(Sample Receiving Date) : 2022/12/24  
測試期間(Testing Period) : 2022/12/24 TO 2022/12/31  
送樣廠商(Sample Submitted By) : 高福化學工業股份有限公司 (KAOFU CHEMICAL CORPORATION)

測試需求(Test Requested) : 依據客戶要求，參考RoHS 2011/65/EU Annex II 指令進行鎘，鉛，汞，六價鉻，多溴聯苯，多溴聯苯醚測試。(As specified by client, with reference to RoHS Directive 2011/65/EU Annex II to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs contents in the submitted sample.)

測試方法(Test Method) : 參考IEC 62321: 2008方法 / With reference to IEC 62321: 2008.

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

  
Ray Chang / Asst. Manager  
Signed for and on behalf of  
SGS Taiwan Limited



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# 測試報告

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號碼(No.) : KA/2022/51538

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頁數(Page): 2 of 6

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### 測試結果(Test Results)

測試部位(PART NAME)No.1 : 白色 耐衝擊級聚苯乙烯 (WHITE HIGH IMPACT POLYSTYRENE)

| 測試項目<br>(Test Items)                | 單位<br>(Unit) | 測試方法<br>(Method)   | 方法偵測<br>極限值<br>(MDL) | 結果<br>(Result) |
|-------------------------------------|--------------|--|----------------------|----------------|
|                                     |              |  |                      | No.1           |
| 鎘 / Cadmium (Cd)                    | mg/kg        | 參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES. | 2                    | n.d.           |
| 鉛 / Lead (Pb)                       | mg/kg        | 參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES. | 2                    | n.d.           |
| 汞 / Mercury (Hg)                    | mg/kg        | 參考IEC 62321: 2008方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321: 2008 and performed by ICP-AES. | 2                    | n.d.           |
| 六價鉻 / Hexavalent Chromium<br>Cr(VI) | mg/kg        | 參考IEC 62321: 2008方法, 以UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.         | 2                    | n.d.           |
| 多溴聯苯總和 / Sum of PBBs                | mg/kg        | 參考IEC 62321: 2008方法, 以氣相層析/質譜儀檢測. / With reference to IEC 62321: 2008 and performed by GC/MS.        | -                    | n.d.           |
| 一溴聯苯 / Monobromobiphenyl            | mg/kg        |  | 5                    | n.d.           |
| 二溴聯苯 / Dibromobiphenyl              | mg/kg        |  | 5                    | n.d.           |
| 三溴聯苯 / Tribromobiphenyl             | mg/kg        |  | 5                    | n.d.           |
| 四溴聯苯 / Tetrabromobiphenyl           | mg/kg        |  | 5                    | n.d.           |
| 五溴聯苯 / Pentabromobiphenyl           | mg/kg        |  | 5                    | n.d.           |
| 六溴聯苯 / Hexabromobiphenyl            | mg/kg        |  | 5                    | n.d.           |
| 七溴聯苯 / Heptabromobiphenyl           | mg/kg        |  | 5                    | n.d.           |
| 八溴聯苯 / Octabromobiphenyl            | mg/kg        |  | 5                    | n.d.           |
| 九溴聯苯 / Nonabromobiphenyl            | mg/kg        |  | 5                    | n.d.           |
| 十溴聯苯 / Decabromobiphenyl            | mg/kg        |  | 5                    | n.d.           |

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號碼(No.) : KA/2022/51538

日期(Date) : 2022/12/31

頁數(Page): 3 of 6

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| 測試項目<br>(Test Items)             | 單位<br>(Unit) | 測試方法<br>(Method)   | 方法偵測<br>極限值<br>(MDL) | 結果<br>(Result) |
|----------------------------------|--------------|--|----------------------|----------------|
|                                  |              |  |                      | No.1           |
| 多溴聯苯醚總和 / Sum of PBDEs           | mg/kg        | 參考IEC 62321: 2008方法, 以氣相層析/質譜儀<br>檢測. / With reference to IEC 62321: 2008<br>and performed by GC/MS. | -                    | n.d.           |
| 一溴聯苯醚 / Monobromodiphenyl ether  | mg/kg        |  | 5                    | n.d.           |
| 二溴聯苯醚 / Dibromodiphenyl ether    | mg/kg        |  | 5                    | n.d.           |
| 三溴聯苯醚 / Tribromodiphenyl ether   | mg/kg        |  | 5                    | n.d.           |
| 四溴聯苯醚 / Tetrabromodiphenyl ether | mg/kg        |  | 5                    | n.d.           |
| 五溴聯苯醚 / Pentabromodiphenyl ether | mg/kg        |  | 5                    | n.d.           |
| 六溴聯苯醚 / Hexabromodiphenyl ether  | mg/kg        |  | 5                    | n.d.           |
| 七溴聯苯醚 / Heptabromodiphenyl ether | mg/kg        |  | 5                    | n.d.           |
| 八溴聯苯醚 / Octabromodiphenyl ether  | mg/kg        |  | 5                    | n.d.           |
| 九溴聯苯醚 / Nonabromodiphenyl ether  | mg/kg        |  | 5                    | n.d.           |
| 十溴聯苯醚 / Decabromodiphenyl ether  | mg/kg        |  | 5                    | n.d.           |

### 備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)

# 測試報告

## Test Report

號碼(No.) : KA/2022/51538

日期(Date) : 2022/12/31

頁數(Page): 4 of 6

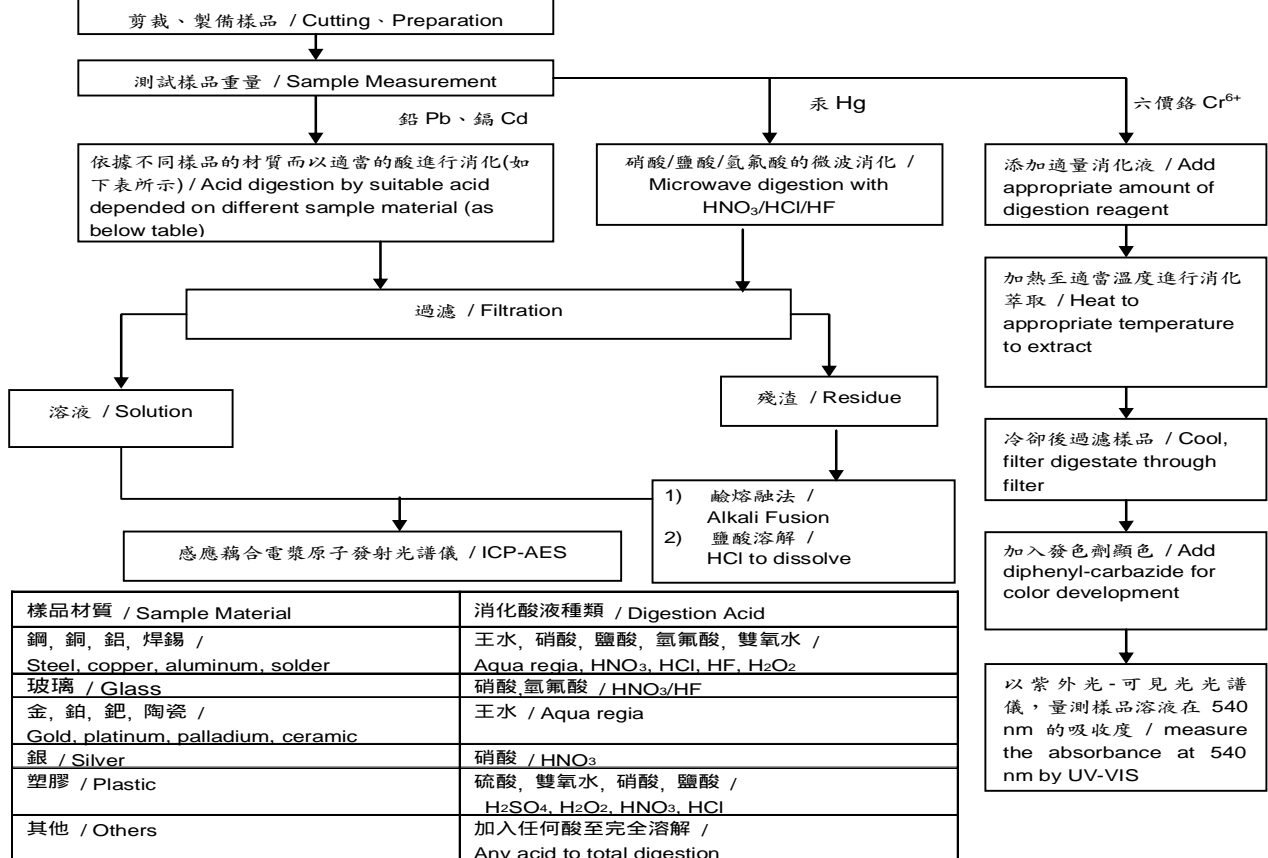
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- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) 測試人員：張俊雄 / Name of the person who made measurement: Alex Chang
- 3) 測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



**Note\*\* :** (1) 針對非金屬材料加入鹼性消化液，加熱至 90~95℃ 萃取。 / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.

(2) 針對金屬材料加入純水，加熱至沸騰萃取。 / For metallic material, add pure water and heat to boiling.

# 測試報告 Test Report

號碼(No.) : KA/2022/51538

日期(Date) : 2022/12/31

頁數(Page): 5 of 6

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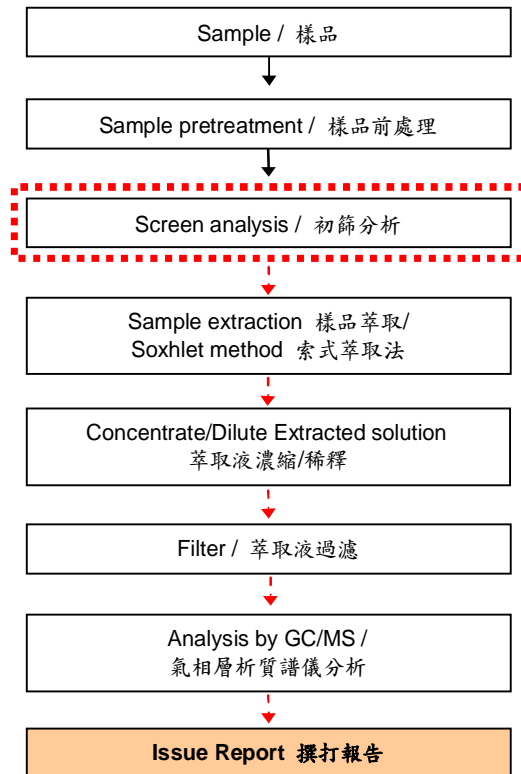
## 多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 測試人員：曹嘉琪 / Name of the person who made measurement: Anson Tsao
- 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang

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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日期(Date) : 2022/12/31

頁數(Page): 6 of 6

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\* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。\*  
(The tested sample / part is marked by an arrow if it's shown on the photo.)

## KA/2022/51538



\*\* 報告結尾 (End of Report) \*\*

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