

測試報告

號碼(No.) : CE/2018/11333

日期(Date) : 2018/01/12

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Test Report

立捷立國際有限公司

PICCA INTERNATIONAL CO., LTD.

台中市南屯區永春南路430 巷111號

NO. 111, LANE 430, YONGCHUN SOUTH ROAD, TAICHUNG 40852 TAIWAN



以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as) :

送樣廠商(Sample Submitted By) : 立捷立國際有限公司 (PICCA INTERNATIONAL CO., LTD.)
樣品名稱(Sample Description) : MGM POF SHRINK FILM
樣品型號(Style/Item No.) : 50G60G75G100G
收件日期(Sample Receiving Date) : 2018/01/05
測試期間(Testing Period) : 2018/01/05 TO 2018/01/12

測試需求(Test Requested) :

- (1) 依據客戶指定，參考RoHS 2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚、DBP, BBP, DEHP, DIBP. (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample(s).)
- (2) 其他測試項目請見下一頁 . (Please refer to next pages for the other item(s).)

測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages).


Troy Chang, Manager - Tech
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 : 透明塑膠膜 (TRANSPARENT PLASTIC FILM)

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 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-AES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4 (2013), 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4 (2013) and performed by ICP-AES.	2	n. d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321-7-2 (2017), 以UV-VIS 檢測. / With reference to IEC 62321-7-2 (2017) and performed by UV-VIS.	8	n. d.
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No. : 14762-94-8)	mg/kg	參考BS EN 14582 (2016), 以離子層析儀分析. / With reference to BS EN 14582 (2016). Analysis was performed by IC.	50	n. d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No. : 22537-15-1)	mg/kg		50	n. d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No. : 10097-32-2)	mg/kg		50	n. d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No. : 14362-44-8)	mg/kg		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
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321-6 (2015), 以氣相層析 / 質譜儀檢測. / With reference to IEC 62321-6 (2015) 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.
多溴聯苯醚總和 / Sum of PBDEs	mg/kg		-	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.	

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				No. 1
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No. : 85-68-7)	mg/kg	參考IEC 62321-8 (2017), 以氣相層析儀/質譜儀檢測. / With reference to IEC 62321-8 (2017). Analysis was performed by GC/MS.	50	n. d.
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No. : 84-74-2)	mg/kg		50	n. d.
鄰苯二甲酸二(2-乙基己基)酯 / DEHP (Di-(2-ethylhexyl) phthalate) (CAS No. : 117-81-7)	mg/kg		50	n. d.
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No. : 84-69-5)	mg/kg		50	n. d.
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No. : 26761-40-0; 68515-49-1)	mg/kg		50	n. d.
鄰苯二甲酸二異壬酯 / DINP (Di-isononyl phthalate) (CAS No. : 28553-12-0; 68515-48-0)	mg/kg		50	n. d.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No. : 117-84-0)	mg/kg		50	n. d.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	參考US EPA 3550C (2007), 以液相層析/質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by LC/MS.	10	n. d.
全氟辛酸 / PFOA (CAS No. : 335-67-1)	mg/kg	參考US EPA 3550C (2007), 以液相層析/質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by LC/MS.	10	n. d.

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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)

PFOS參考資訊(Reference Information) : 持久性有機污染物 POPs - (EU) 757/2010

PFOS濃度在物質或製備中不得超過0.001%(10ppm)，在半成品、成品或零部件中不得超過0.1%(1000ppm)，在紡織品或塗層材料中不得超過 $1\mu\text{g}/\text{m}^2$ 。

(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above $1\mu\text{g}/\text{m}^2$.)

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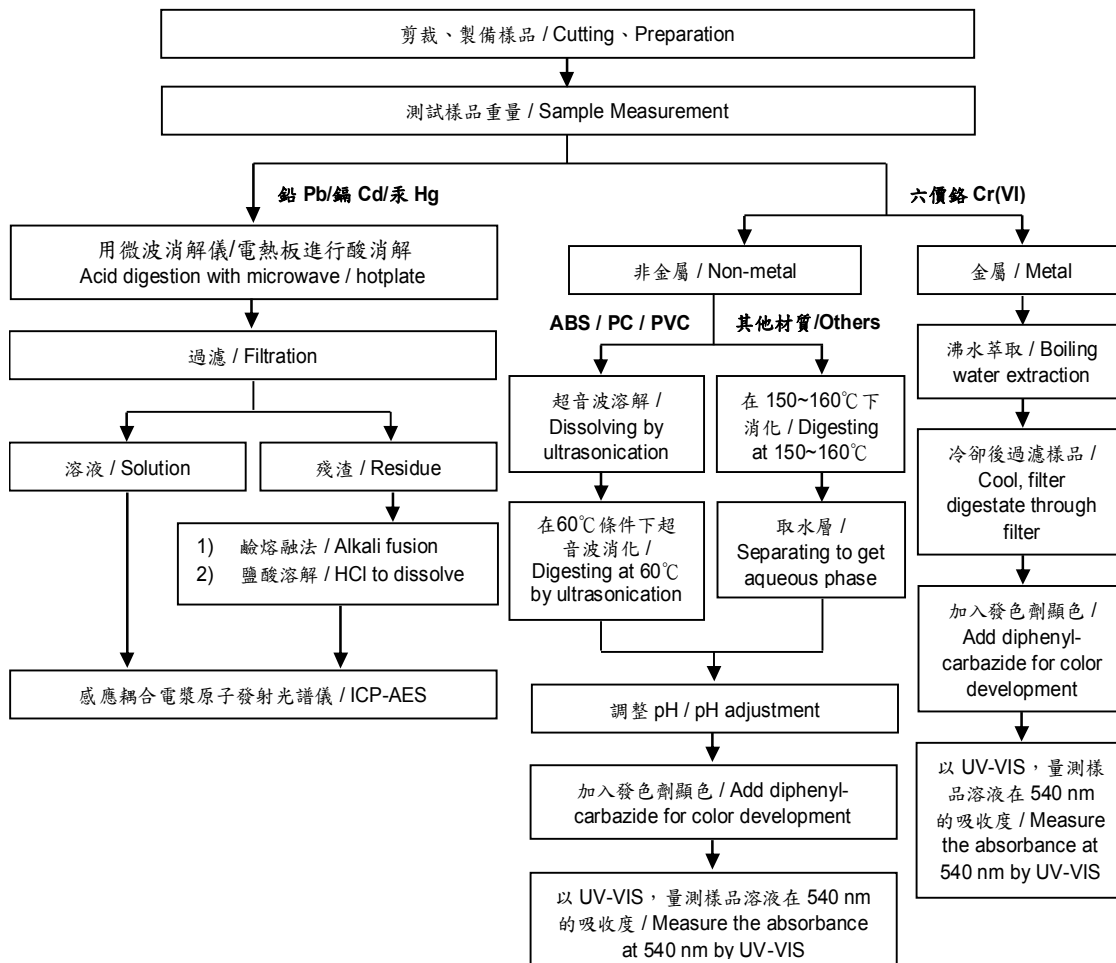


重金屬流程圖 / Analytical flow chart of Heavy Metal

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)

- 測試人員：王志瑋 / Technician : JR Wang
- 測試負責人：張啟興 / Supervisor: Troy Chang



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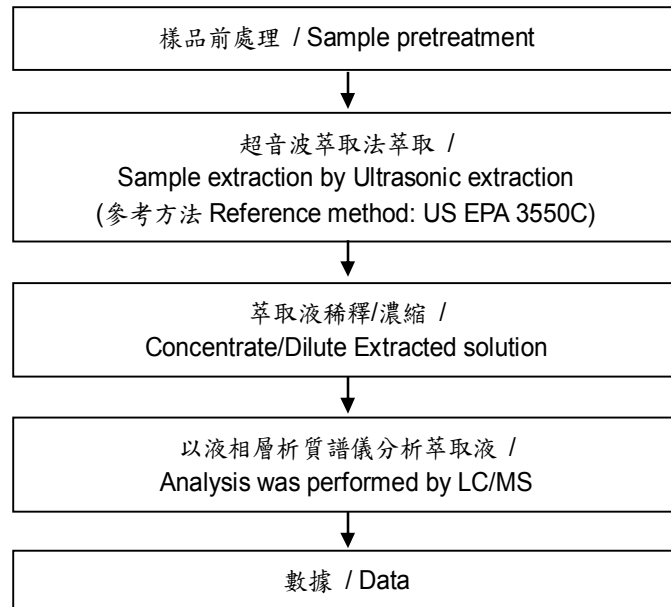
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全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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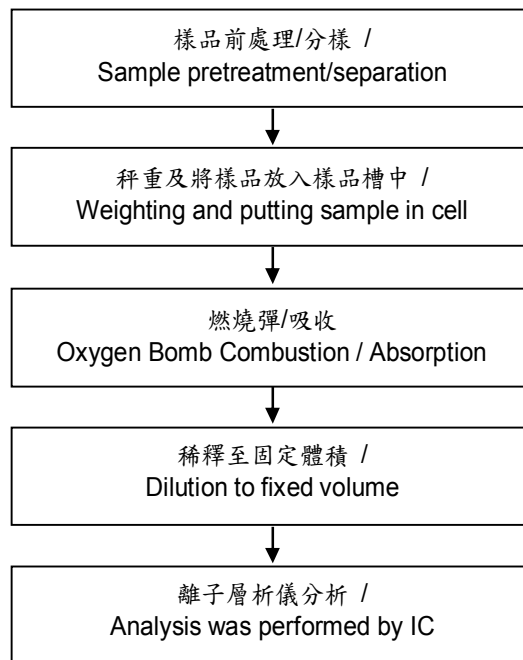
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鹵素分析流程圖 / Analytical flow chart - Halogen

- 測試人員：陳恩臻 / Technician: Rita Chen
- 測試負責人：張啟興 / Supervisor: Troy Chang



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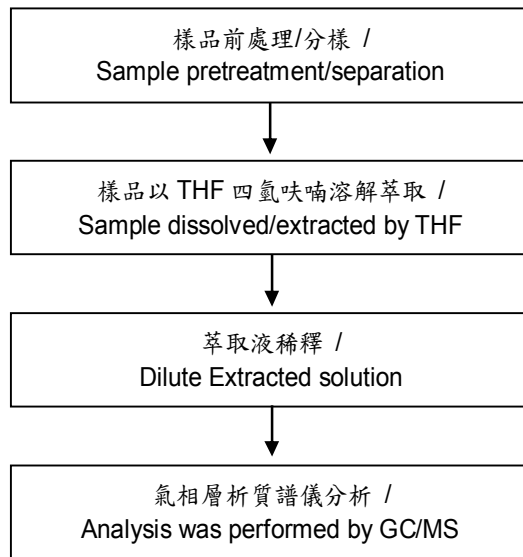
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

- 測試人員：徐毓明 / Technician: Andy Hsu
- 測試負責人：張啟興 / Supervisor : Troy Chang

【測試方法/Test method: IEC 62321-8】



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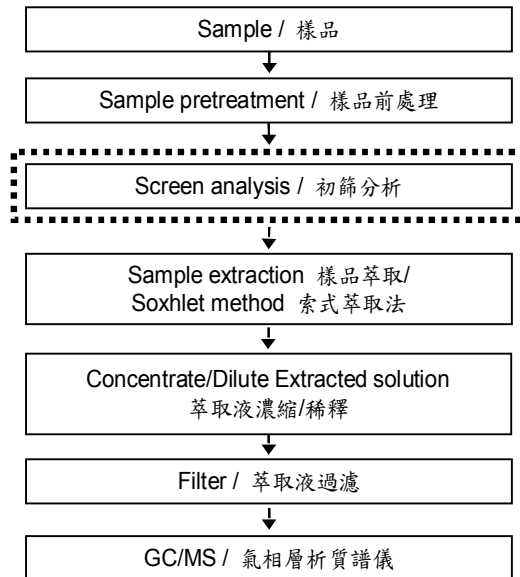
多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

- 測試人員：涂雅琴 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy 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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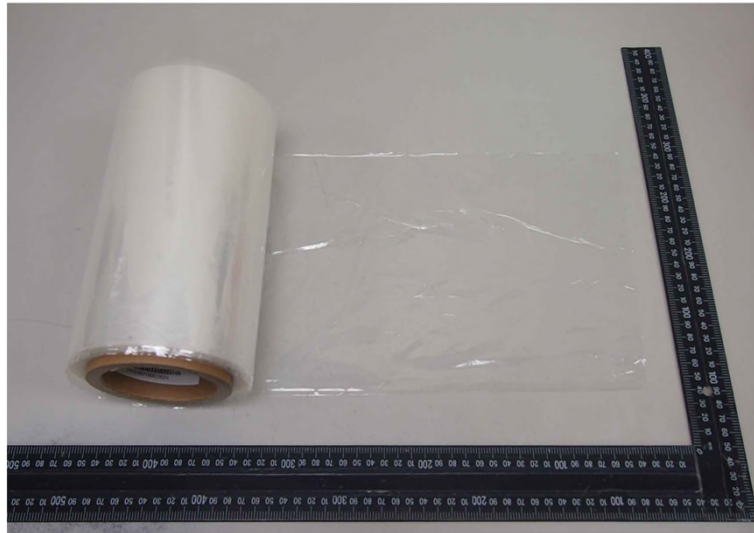
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* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。*
(The tested sample / part is marked by an arrow if it's shown on the photo.)

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** 報告結尾 (End of Report) **