

試驗報告

Test Report

號碼(No.) : KA/2020/51200 日期(Date) : 2020/05/20

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奇美實業股份有限公司

CHI MEI CORPORATION

台南市新市區王甲路18號

NO. 18, WANGJIA RD., XINSHI DIST., TAINAN CITY 74148, TAIWAN (R. O. C.)

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) : 奇美實業股份有限公司 (CHI MEI CORPORATION)

樣品名稱(Sample Description) : 黑色光阻

收件日期(Sample Receiving Date) : 2020/05/13

測試期間(Testing Period) : 2020/05/13 to 2020/05/20

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).

報告簽署人/張伯蒼/博士/技術經理

Ray Chang, Ph.D./Manager -Tech

Signed for and on behalf of

SGS Taiwan Limited

化學實驗室-高雄/Chemical Laboratory-Kaohsiung



PIN CODE: C3F7CB2D

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測試結果(Test Results)

測試部位(PART NAME)No. 1 : 黑色液體 (BLACK LIQUID)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
鎘 / Cadmium (Cd)	mg/kg	參考 IEC 62321-5: 2013 方法, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-OES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	參考 IEC 62321-5: 2013 方法, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-OES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考 IEC 62321-4:2013+AMD1:2017, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-4:2013+AMD1:2017 and performed by ICP-OES.	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.
多溴聯苯總和 / Sum of PBBs	mg/kg	參考 IEC 62321-6: 2015 方法, 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			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.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考 IEC 62321-6: 2015 方法, 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.
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No. : 84-69-5)	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.
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No. : 85-68-7)	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.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No. : 14762-94-8)	mg/kg	參考BS EN 14582:2016, 以離子層析儀檢測. / 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.

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)

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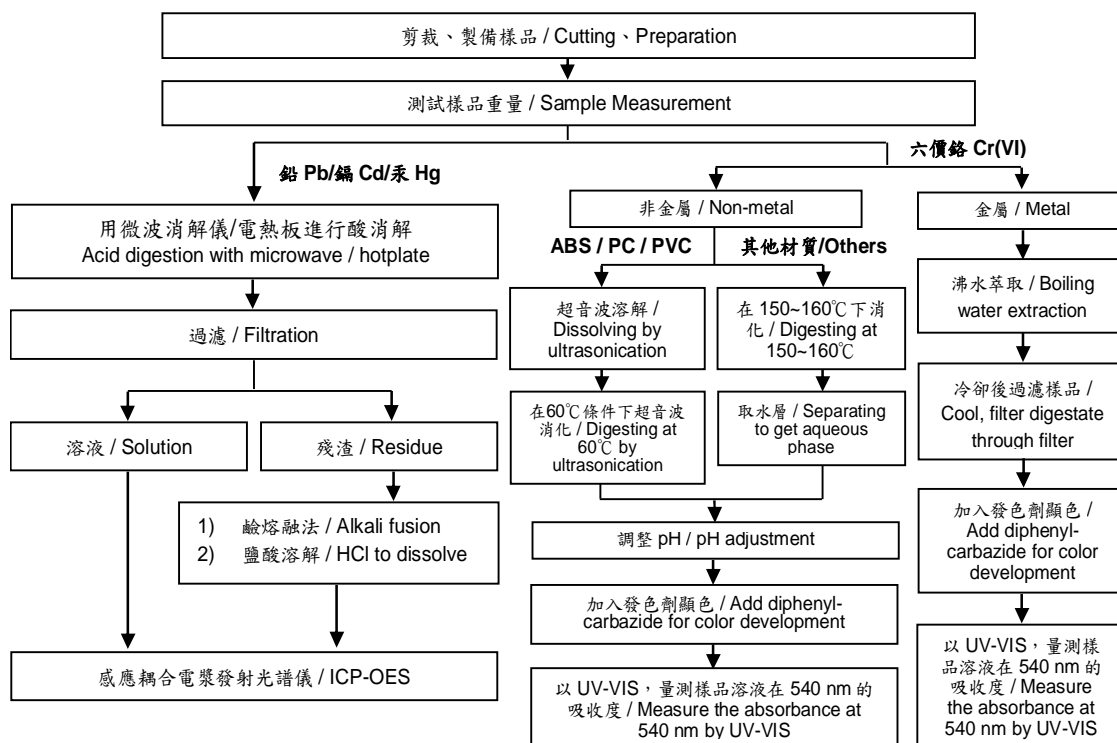
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重金屬流程圖 / Analytical flow chart of Heavy Metal

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)



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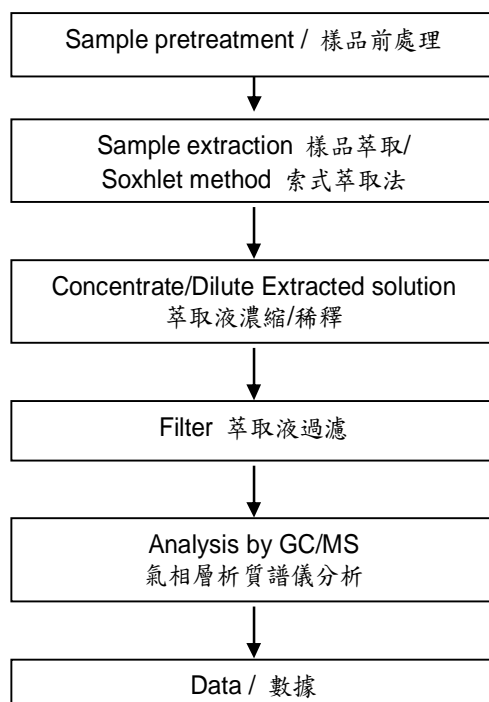
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多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART



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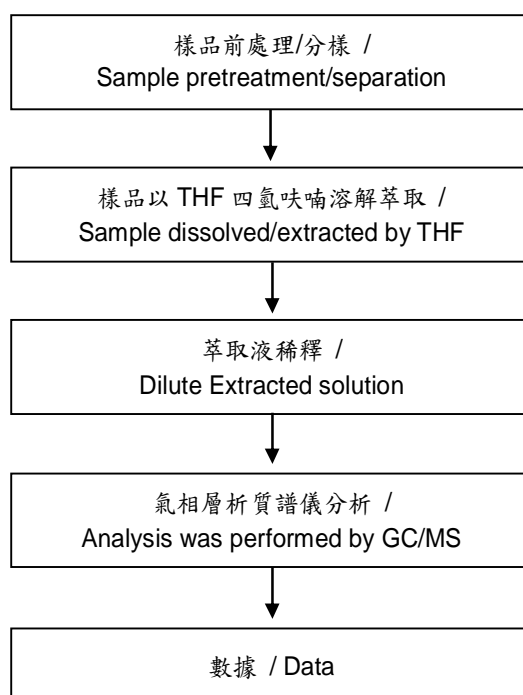
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可塑劑分析流程圖 / Analytical flow chart of phthalate content

【測試方法/Test method: IEC 62321-8】



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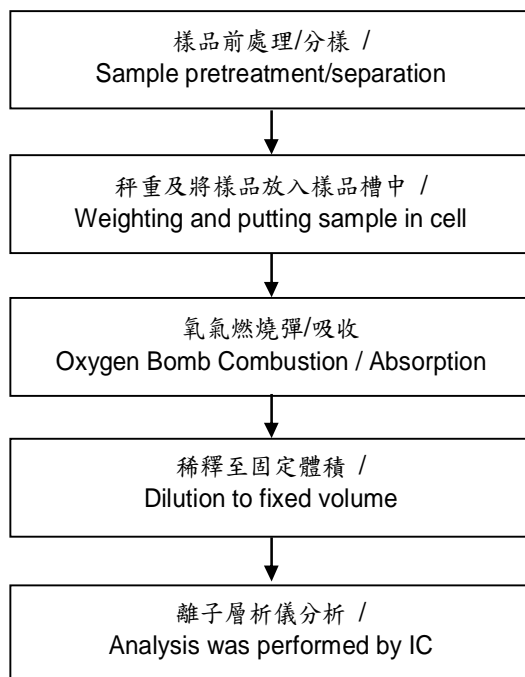
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鹵素分析流程圖 / Analytical flow chart of Halogen



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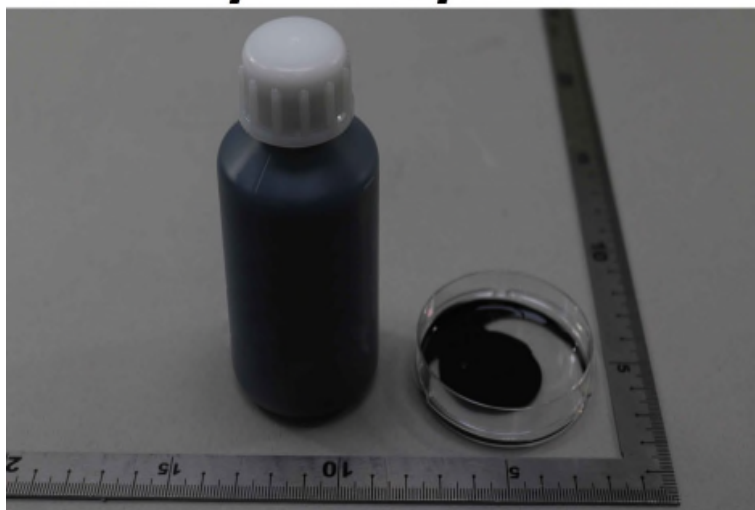
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* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。*
(The tested sample / part is marked by an arrow if it's shown on the photo.)

KA/2020/51200



** 報告結尾 (End of Report) **

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