

測試報告

Test Report

號碼(No.): ETR20A01397

日期(Date): 19-Oct-2020

頁數(Page): 1 of 9

立碁電子工業股份有限公司 (LIGITEK ELECTRONICS CO., LTD.)

新北市樹林區博愛街238號 (NO. 238, BO-AI ST., SHULIN DISTRICT, NEW TAIPEI CITY 238, 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) : 立碁電子工業股份有限公司 (LIGITEK ELECTRONICS CO., LTD.)
樣品名稱(Sample Name) : SMD LED
樣品型號(Style/Item No.) : SMD SERIES

=====
收件日(Sample Receiving Date) : 12-Oct-2020
測試期間(Testing Period) : 12-Oct-2020 to 19-Oct-2020

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 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
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: D764B8B9

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測試部位敘述 (Test Part Description)

No.1 : SMD LED

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)	參考IEC 62321-8: 2017 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-8: 2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) (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 (DEHP)) (CAS No.: 117-81-7)		mg/kg	50	n.d.
鄰苯二甲酸二異癸酯 (DIDP) (Diisodecyl phthalate (DIDP)) (CAS No.: 26761-40-0, 68515-49-1)		mg/kg	50	n.d.
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (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 (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)		mg/kg	50	n.d.
鄰苯二甲酸二正己酯 (Di-n-hexyl phthalate) (CAS No.: 84-75-3)		mg/kg	50	n.d.
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)		參考CEN/TS 15968: 2010 · 以液相層析串聯質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	mg/kg	0.01
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	mg/kg		0.01	n.d.
雙酚A (Bisphenol A) (CAS No.: 80-05-7)	參考RSTS-CHEM-239-1 · 以液相層析串聯質譜儀分析。(With reference to RSTS-CHEM-239-1, analysis was performed by LC/MS/MS.)	mg/kg	1	7.34

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
聚氯乙烯 (Polyvinyl chloride) (PVC)	參考ASTM E1252: 2013 · 以傅立葉轉換紅外線光譜儀及焰色法分析。(With reference to ASTM E1252: 2013, analysis was performed by FT-IR and Flame Test.)	**	-	Negative
石棉 (Asbestos)				
陽起石綿 (Actinolite) (CAS No.: 77536-66-4)	參考EPA 600/R-93/116: 1993 / 立體顯微鏡 (SM) · 分散染色式偏光顯微鏡 (DS-PLM)及X光繞射光譜分析法 (XRD)。(With reference to EPA 600/R-93/116: 1993, analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer (XRD).)	%	-	Negative
褐石綿/鐵石綿 (Amosite) (CAS No.: 12172-73-5)		%	-	Negative
斜方角閃石綿 (Anthophyllite) (CAS No.: 77536-67-5)		%	-	Negative
白石綿/溫石綿 (Chrysotile) (CAS No.: 12001-29-5)		%	-	Negative
青石綿 (Crocidolite) (CAS No.: 12001-28-4)		%	-	Negative
透閃石綿 (Tremolite) (CAS No.: 77536-68-6)		%	-	Negative

備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n.d. = Not Detected (未檢出) ; 小於MDL / Less than MDL
4. "-" = Not Regulated (無規格值)
5. **= Qualitative analysis (No Unit) 定性分析(無單位)
6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
7. 石棉定性分析試驗範圍: <0.1%~100% · 石棉鑑定的判定基準是以檢出含有石棉纖維為『Positive』, 未檢出石棉纖維為『Negative』。(Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".)
8. 全氟辛烷磺酸及其鹽類包含 (PFOS and its salts including) :
CAS No.: 29081-56-9, 2795-39-3, 29457-72-5, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7.
9. 全氟辛酸及其鹽類包含 (PFOA and its salts including) :
CAS No.: 3825-26-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0.

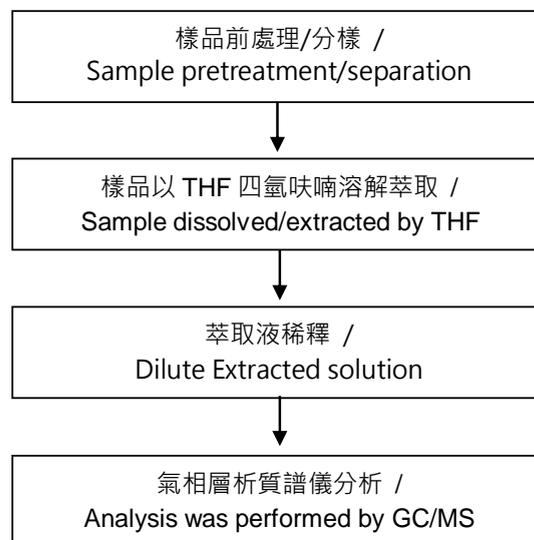
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新北市樹林區博愛街238號 (NO. 238, BO-AI ST., SHULIN DISTRICT, NEW TAIPEI CITY 238, TAIWAN R. O. C.)

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

【測試方法/Test method: IEC 62321-8】

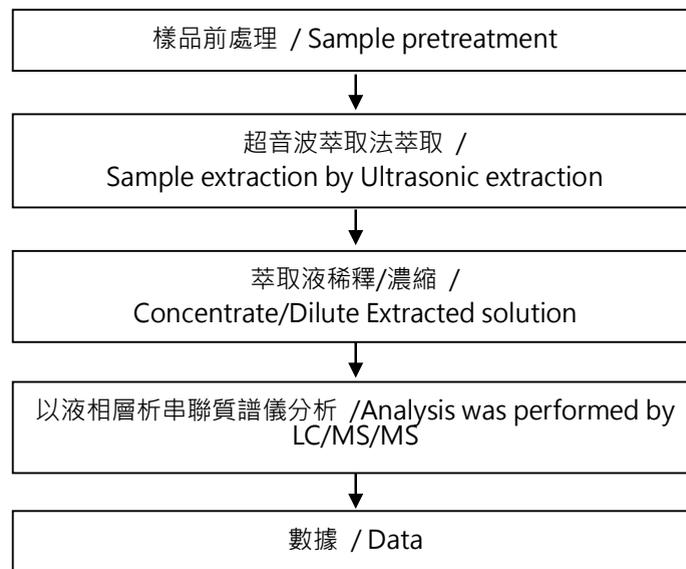


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全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOS

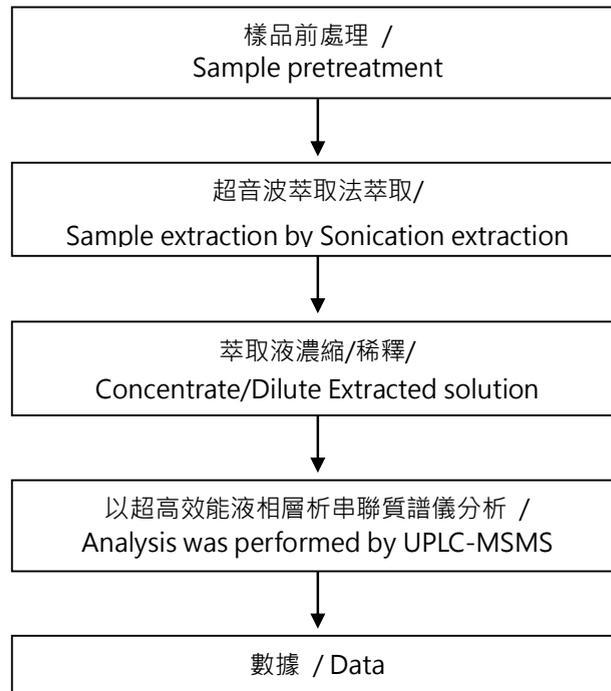


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雙酚A分析流程圖 / Analytical flow chart - Bisphenol A

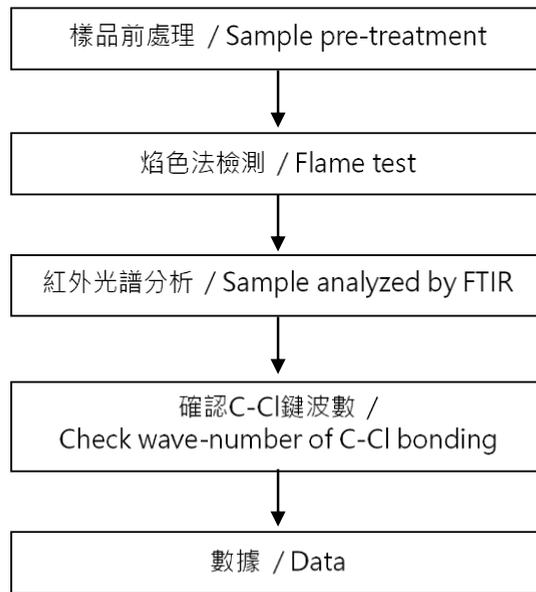


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聚氯乙烯物質判定分析流程圖 / Analysis flow chart - PVC



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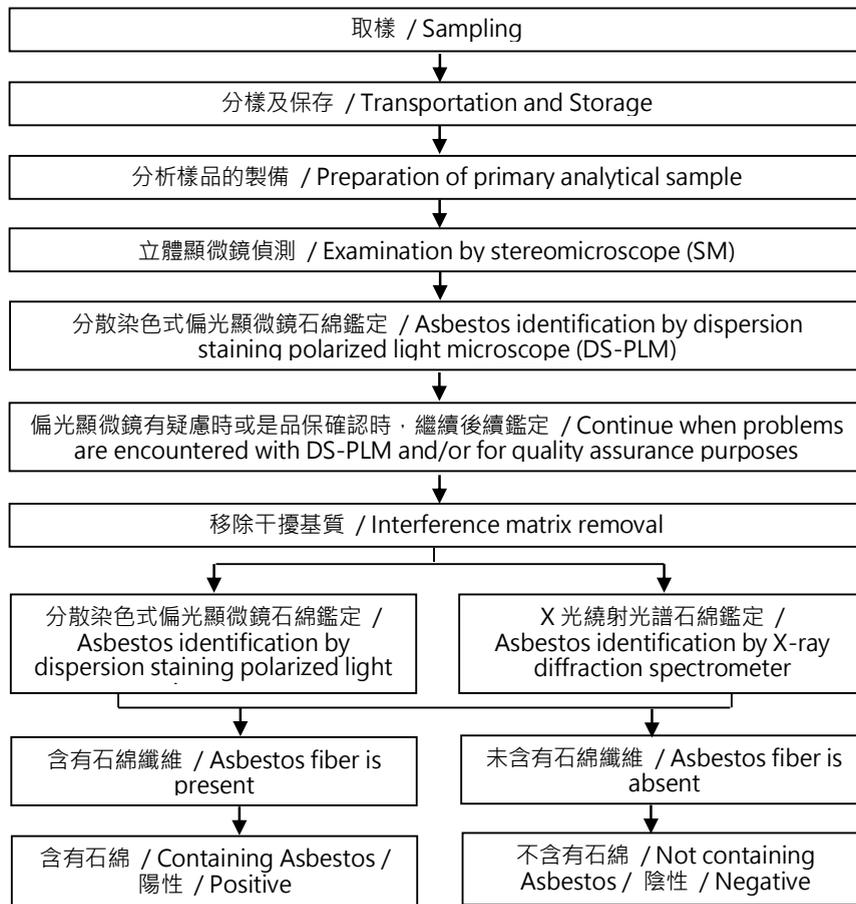
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石綿鑑定分析流程圖 / Analysis flow chart for determination of Asbestos

【參考方法(Reference method): EPA 600/R-93/116】



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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.)

ETR20A01397



** 報告結尾 (End of Report) **

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