



測試報告

Test Report

號碼(No.): ETR23502280

日期(Date): 22-May-2023

頁數(Page): 1 of 8

笙泉科技股份有限公司 (MEGAWIN TECHNOLOGY CO., LTD.)

新竹縣竹北市台元一街8號7樓之1 (7F-1, NO. 8, TAIYUAN 1ST ST., JHUBEI CITY, HSINCHU COUNTY 30288, TAIWAN)

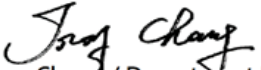
以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by the applicant as) :

樣品名稱(Sample Name) : LDO SERIES
樣品型號(Style/Item No.) : SOT233, SOT235, SOT893, ESOP8

收件日(Sample Receiving Date) : 15-May-2023
測試期間(Testing Period) : 15-May-2023 to 22-May-2023

測試需求(Test Requested) : 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).)

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


Troy Chang / Department Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei



PIN CODE: E4F5B8F1

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測試部位敘述 (Test Part Description)

- No.1 : 本體 (BODY)
- No.2 : 銀色金屬 (含鍍層) (SILVER COLORED METAL (INCLUDING THE PLATING LAYER))

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 | No.2 |
| 鎘 (Cd) (Cadmium (Cd)) | 參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.) | mg/kg | 2 | n.d. | n.d. |
| 鉛 (Pb) (Lead (Pb)) | 參考IEC 62321-5: 2013 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-5: 2013, analysis was performed by ICP-OES.) | mg/kg | 2 | n.d. | 12.8 |
| 汞 (Hg) (Mercury (Hg)) | 參考IEC 62321-4: 2013+ AMD1: 2017 · 以感應耦合電漿發射光譜儀分析。(With reference to IEC 62321-4: 2013+ AMD1: 2017, analysis was performed by ICP-OES.) | mg/kg | 2 | n.d. | n.d. |
| 六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI)) | 參考IEC 62321-7-2: 2017 · 以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-2: 2017, analysis was performed by UV-VIS.) | mg/kg | 8 | n.d. | --- |
| 六價鉻 (Hexavalent Chromium) Cr(VI) (#2) | 參考IEC 62321-7-1: 2015 · 以紫外光-可見光分光光度計分析。(With reference to IEC 62321-7-1: 2015, analysis was performed by UV-VIS.) | µg/cm² | 0.1 | --- | n.d. |

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| 測試項目 (Test Items) | 測試方法 (Method) | 單位 (Unit) | MDL | 結果 (Result) | |
|---|--|--------------|-----|----------------|------|
| | | | | No.1 | No.2 |
| 一溴聯苯 (Monobromobiphenyl) | 參考IEC 62321-6: 2015 · 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.) | 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. | --- |
| 多溴聯苯總和 (Sum of PBBs) | | 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. | --- |
| 多溴聯苯醚總和 (Sum of PBDEs) | | mg/kg | - | n.d. | --- |
| 鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) | 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. | --- |
| 鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) | | mg/kg | 50 | n.d. | --- |
| 鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) | | mg/kg | 50 | n.d. | --- |
| 鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) | | mg/kg | 50 | n.d. | --- |

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備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 0.1% = 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. "---" = Not Conducted (未測試項目)
6. (#2) =
 - a. 當六價鉻結果大於 $0.13 \mu\text{g}/\text{cm}^2$ ，表示樣品表層含有六價鉻。(The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than $0.13 \mu\text{g}/\text{cm}^2$. The sample coating is considered to contain Cr(VI).)
 - b. 當六價鉻結果為n.d. (濃度小於 $0.10 \mu\text{g}/\text{cm}^2$)，表示表層不含六價鉻。(The sample is negative for Cr(VI) if Cr(VI) is n.d. (concentration less than $0.10 \mu\text{g}/\text{cm}^2$). The coating is considered a non-Cr(VI) based coating)
 - c. 當六價鉻結果介於 0.10 及 $0.13 \mu\text{g}/\text{cm}^2$ 時，無法確定塗層是否含有六價鉻。(The result between $0.10 \mu\text{g}/\text{cm}^2$ and $0.13 \mu\text{g}/\text{cm}^2$ is considered to be inconclusive - unavoidable coating variations may influence the determination.)

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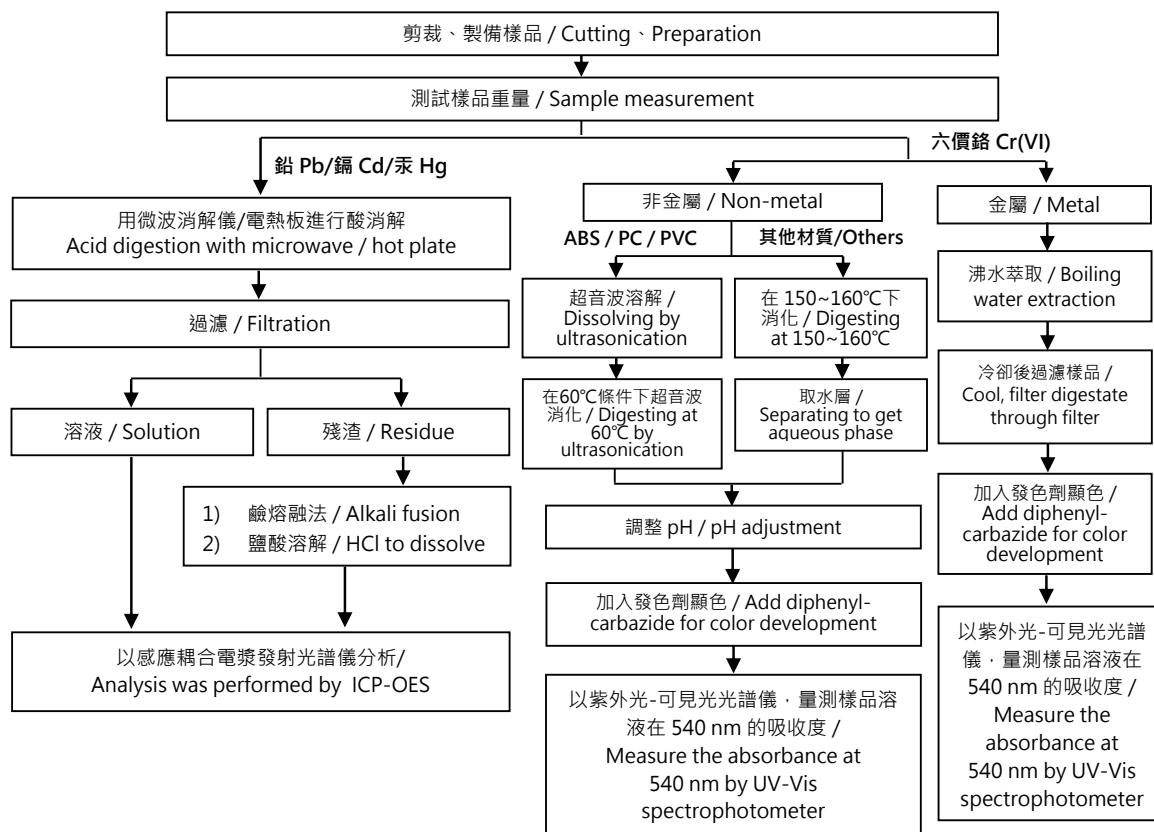
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重金屬流程圖 / Analytical flow chart of heavy metal

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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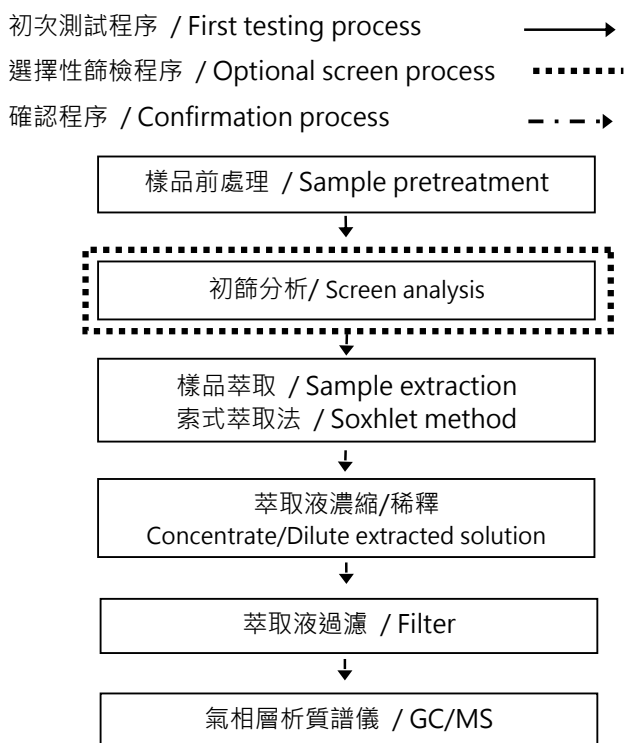
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多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs



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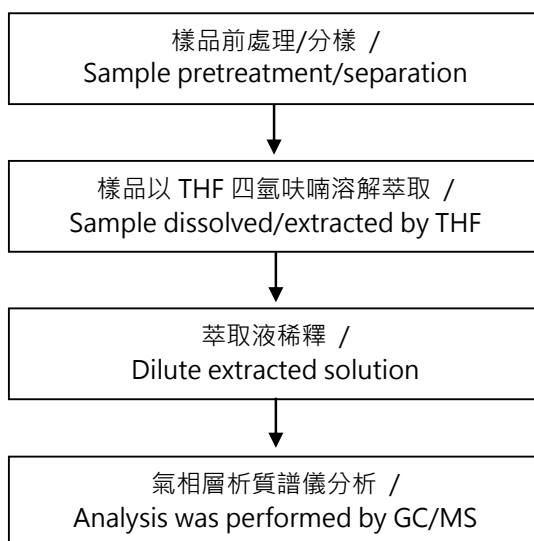
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



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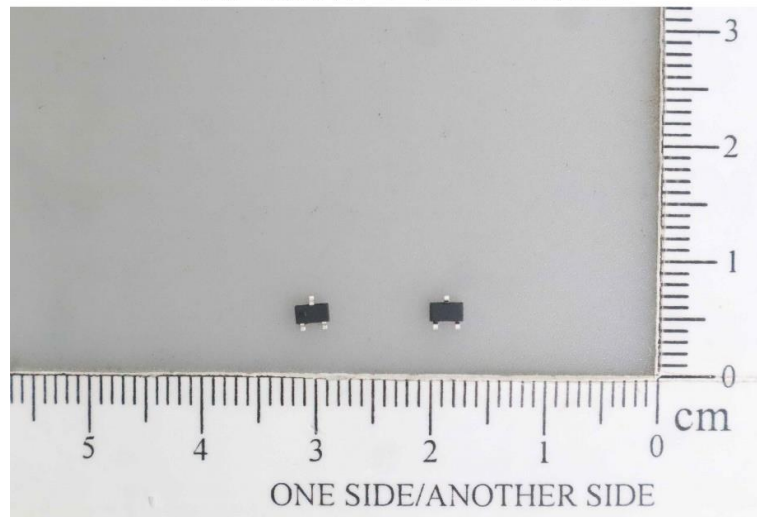
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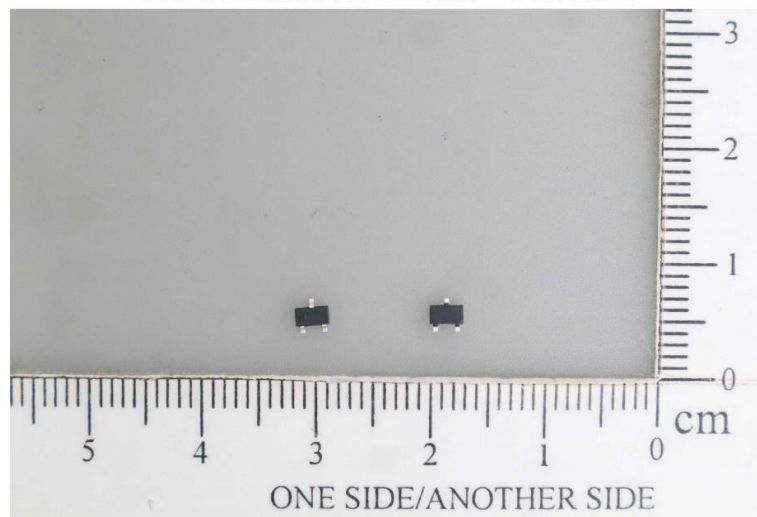
* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

ETR23502280 NO.1



ETR23502280 NO.2



** 報告結尾 (End of Report) **

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