

# **Test Report**

號碼(No.): ETR24900322 日期(Date): 13-Sep-2024 頁數(Page): 1 of 22

億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, 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):

BASIC INFORMATION	
Type of Product	SMD DISPLAY
Supplier Company Name	EVERLIGHT
Address	NO.6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN
Tel / Fax / Email	TEL:886-2685-6688
	FAX:886-2685-6699
	E-MAIL: lindawang@everlight.com
Contact Person	LI LING WANG
EVERLIGHT REPORT NO	SMD DISPLAY SERIES
	Sampling Product: SS406SURWA/S530-A4/S290-SGS-13-Sep-2024
PRODUCT INFORMATION	
Product/component Sample	PANEL DISPLAY COMPONENT
description	
Quantity (numbers or weight)	0.7047 g
EVERLIGHT P/N	SMD DISPLAY SERIES
	Sampling Product : SS406SURWA/S530-A4/S290
Product Lot No	ZS24080510
Country of Origin	CHINA
TEST INFORMATION	<u> </u>
Sample preparation	CUTTING
Test Method	RoHS: IEC 62321, Halogen: BS EN 14582
MDL	Cd, Pb, Hg: 2 mg/kg, PBBs/PBDEs: 5 mg/kg, Halogen: 50 mg/kg

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送樣廠商(Sample Submitted By) : 億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.)

收件日(Sample Receiving Date) : 03-Sep-2024

測試期間(Testing Period) : 03-Sep-2024 to 13-Sep-2024

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

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



PIN CODE: 69B24C6C



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#### 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 編、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) 依據客戶指定‧測試 PAHs 及其他測項。 (As specified by client, to test PAHs and other item(s).)

#### 結 論(Conclusion)

- (1) 根據客戶所提供的樣品·其鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚, DBP, BBP, DEHP, DIBP的測試結果符合RoHS 2011/65/EU Annex II暨其修訂指令(EU) 2015/863 之限值要求。 (Based on the performed tests on submitted sample(s), the test results of Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.)
- (2) 根據客戶所提供的樣品,多環芳香烴測試結果符合德國產品安全委員會(AfPS) GS PAHs第 3 類「其它產品」之限值要求。(Based upon the performed tests on the submitted sample(s), the test results of PAHs (15 items) comply with the limits of PAHs requirement (Category 3)「Other consumer products」 as set by German Committee on Product Safety (AfPS) GS PAHs.)

#### 測試部位敘述 (Test Part Description)

No.1 : 白色塑膠及其上灰色印刷、膠 (WHITE PLASTIC WITH GRAY PRINTED AND GLUE)

No.2 : 黑色電路板及其上所有零件 (BLACK PCB AND ALL COMPONENTS ON IT)

#### 測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)			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.	100	
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	3.92	11.2	1000	

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新北市五股區新北產業園區五權七路 25 號 t+886(02)2299 3939 f+886(02)2299 3237 25, Wu Chyuan 7th Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	DL 結果 (Result)		限值 (Limeit)
(Test items)	(Method)	(Unit)		No.1	No.2	(Limit)
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.	1000
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.	n.d.	1000
一溴聯苯 (Monobromobiphenyl)		mg/kg	5	n.d.	n.d.	-
二溴聯苯 (Dibromobiphenyl)		mg/kg	5	n.d.	n.d.	-
三溴聯苯 (Tribromobiphenyl)		mg/kg	5	n.d.	n.d.	-
四溴聯苯 (Tetrabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
五溴聯苯 (Pentabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
七溴聯苯 (Heptabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
八溴聯苯 (Octabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
九溴聯苯 (Nonabromobiphenyl)		mg/kg	5	n.d.	n.d.	-
十溴聯苯 (Decabromobiphenyl)	參考IEC 62321-6: 2015 · 以氣相層	mg/kg	5	n.d.	n.d.	-
多溴聯苯總和 (Sum of PBBs)	析儀/質譜儀分析。(With reference	mg/kg	ı	n.d.	n.d.	1000
一溴聯苯醚 (Monobromodiphenyl ether)	to IEC 62321-6: 2015, analysis was	mg/kg	5	n.d.	n.d.	-
二溴聯苯醚 (Dibromodiphenyl ether)	performed by GC/MS.)	mg/kg	5	n.d.	n.d.	-
三溴聯苯醚 (Tribromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
四溴聯苯醚 (Tetrabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
五溴聯苯醚 (Pentabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
七溴聯苯醚 (Heptabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
八溴聯苯醚 (Octabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
九溴聯苯醚 (Nonabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
十溴聯苯醚 (Decabromodiphenyl ether)		mg/kg	5	n.d.	n.d.	-
多溴聯苯醚總和 (Sum of PBDEs)		mg/kg	-	n.d.	n.d.	1000



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL		果 sult)	限值 (Limit)
( 221121112,	(ca.,	(31,		No.1	No.2	(=,
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP))		mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP))		mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di- (2-ethylhexyl) phthalate (DEHP))		mg/kg	50	n.d.	n.d.	1000
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP))		mg/kg	50	n.d.	n.d.	1000
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.	n.d.	-
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)	Ф. Т. Г. С.	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)	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	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正戊酯 (DNPP) (Di-n-pentyl phthalate (DNPP)) (CAS No.: 131-18-0)	performed by GC/MS.)	mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二正己酯 (DNHP) (Di-n-hexyl phthalate (DNHP)) (CAS No.: 84-75-3)		mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸雙(2-甲氧基乙基)酯 (DMEP) (Bis(2-methoxyethyl) phthalate (DMEP)) (CAS No.: 117-82-8)		mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二甲酯 (DMP) (Dimethyl phthalate (DMP)) (CAS No.: 131-11-3)		mg/kg	50	n.d.	n.d.	-
鄰苯二甲酸二異辛酯 (DIOP) (Diisooctyl phthalate (DIOP)) (CAS No.: 27554- 26-3)		mg/kg	50	n.d.	n.d.	-



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測試方法	單位 MDL			-	限值
(Method)	(Unit)	(Unit)		•	(Limit)
	mg/kg	50	n.d.	n.d.	-
· ·					
	mg/kg	5	n.d.	n.d.	-
performed by GC/MS.)					
	mg/kg	50	643	1930	-
參考BS EN 14582: 2016,以離子層	mg/kg	50	57.5	154	-
析儀分析。(With reference to BS					
EN 14582: 2016, analysis was	mg/kg	50	n.d.	n.d.	-
performed by IC.)					
	mg/kg	50	n.d.	n.d.	-
參考CEN/TS 15968: 2010,以液相	mg/kg	0.01	n.d.	n.d.	-
層析串聯質譜儀分析。(With					
reference to CEN/TS 15968: 2010,					
analysis was performed by					
LC/MS/MS.)					
參考CEN/TS 15968: 2010,以液相	mg/kg	0.01	n.d.	n.d.	-
層析串聯質譜儀分析。(With					
reference to CEN/TS 15968: 2010,					
analysis was performed by					
LC/MS/MS.)					
	(Method)  参考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.) 参考IEC 62321: 2008・以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)  参考BS EN 14582: 2016・以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)  参考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.)  参考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.)	(Method) (Unit)  参考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.)  参考IEC 62321: 2008・以氣相層析 儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)  参考BS EN 14582: 2016・以離子層 析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)  mg/kg  参考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.)  参考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.)  参考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	(Method) (Unit) (Unit) 参考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.) 参考IEC 62321: 2008・以氣相層析 (機/質譜儀分析・(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)	(Method) (Unit) (Ree No.1 参考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.) 参考IEC 62321: 2008・以氣相層析儀/質譜儀分析。(With reference to IEC 62321: 2008, analysis was performed by GC/MS.)  参考BS EN 14582: 2016・以離子層析儀分析。(With reference to BS EN 14582: 2016, analysis was performed by IC.)  参考CEN/TS 15968: 2010・以液相層析理解質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)  参考CEN/TS 15968: 2010・以液相層析理解質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)  参考CEN/TS 15968: 2010・以液相層析串解質譜儀分析。(With reference to CEN/TS 15968: 2010, analysis was performed by LC/MS/MS.)	### (Method)



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測試項目	測試方法	單位	MDL	結	-	限值
(Test Items)	(Method)	(Unit)		(Res		(Limit)
				No.1	No.2	
多環芳香烴 (Polycyclic Aromatic						
Hydrocarbons) (PAHs)						
苯駢(a)芘 (Benzo[a]pyrene) (CAS No.:		mg/kg	0.2	n.d.	n.d.	Δ
50-32-8)						
苯駢(e)芘 (Benzo[e]pyrene) (CAS No.:		mg/kg	0.2	n.d.	n.d.	Δ
192-97-2)						
苯駢蒽 (Benzo[a]anthracene) (CAS		mg/kg	0.2	n.d.	n.d.	Δ
No.: 56-55-3)						
苯(b)苯駢芴 (Benzo[b]fluoranthene)		mg/kg	0.2	n.d.	n.d.	Δ
(CAS No.: 205-99-2)						
苯(j)苯駢芴 (Benzo[j]fluoranthene)		mg/kg	0.2	n.d.	n.d.	Δ
(CAS No.: 205-82-3)						
苯(k)苯駢芴 (Benzo[k]fluoranthene)		mg/kg	0.2	n.d.	n.d.	Δ
(CAS No.: 207-08-9)	参考AfPS GS 2019:01 PAK · 以氣相					
菌 (Chrysene) (CAS No.: 218-01-9)	層析儀/質譜儀分析。(With	mg/kg	0.2	n.d.	n.d.	Δ
二苯駢蒽 (Dibenzo[a,h]anthracene)	reference to AfPS GS 2019:01 PAK,	mg/kg	0.2	n.d.	n.d.	Δ
(CAS No.: 53-70-3)	analysis was performed by	J. J.				
苯駢菲 (Benzo[g,h,i]perylene) (CAS	GC/MS.)	mg/kg	0.2	n.d.	n.d.	Δ
No.: 191-24-2)		J. J.				
茚酮芘 (Indeno[1,2,3-c,d]pyrene) (CAS		mg/kg	0.2	n.d.	n.d.	Δ
No.: 193-39-5)		J. J.				
蒽 (Anthracene) (CAS No.: 120-12-7)		mg/kg	0.2	n.d.	n.d.	Δ
苯駢芴 (Fluoranthene) (CAS No.: 206-		mg/kg	0.2	n.d.	n.d.	Δ
44-0)		J. J.				
菲 (Phenanthrene) (CAS No.: 85-01-8)		mg/kg	0.2	n.d.	n.d.	Δ
芘 (Pyrene) (CAS No.: 129-00-0)		mg/kg	0.2	n.d.	n.d.	Δ
萘 (Naphthalene) (CAS No.: 91-20-3)		mg/kg	0.2	n.d.	n.d.	Δ
多環芳香烴15項總和 (Sum of 15		mg/kg	-	n.d.	n.d.	Δ
PAHs)						



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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)		限值 (Limit)
				No.1	No.2	
鈹 (Be) (Beryllium (Be)) (CAS No.: 7440-41-7)	參考US EPA 3052: 1996. 以感應耦合電漿發射光譜儀分析。(With reference to US EPA 3052: 1996, analysis was performed by ICP-OES.)	mg/kg	2	n.d.	n.d.	-

#### 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. 除非另有說明·參照ILAC-G8:09/2019決定規則·採用簡單允收規則之二分法(w=0)進行符合性判定;根據此規則·符合性結果之判定係以測試結果與限值做比較。(Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019. According to this rule, the judgement of conformity is based on the comparing test results with limits.)



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#### PAHs Remark:

△ 德國產品安全委員會(AfPS): GS PAHs 要求

AfPS (German commission for Product Safety): GS PAHs requirements

	第1類(Category 1)	第 2 類(Cat	egory 2)	第 3 類(Cat	egory 3)
項目 (Parameter)	歲以下兒童使用的產品(Materials intended to be placed in the mouth, or materials in toys (Directive 2009/48/EC) or articles for children up to 3	不屬於第 1 類的材料·並意圖或可預 見與皮膚接觸逾 30 秒(長期皮膚接觸) 或重複的短時間接觸(Materials that are not in Category 1, with intended or foreseeable long-term skin contact (> 30 seconds) or short-term repetitive contact with the skin)		(短期皮膚接觸)(Mat covered by Catego intended or foresed term skin contact ( <u>s</u>	觸不超過 30 秒 erials not ry 1 or 2, with eable short- ≦ 30 seconds))
	years of age with intended long-term skin contact (> 30 seconds))	a. 供 14 歲以下兒童使 用的產品(Use by children under 14)	consumer	a. 供 14 歲以下兒童使 用的產品(Use by children under 14)	consumer
Naphthalene	< 1	< 2	)	< 10	Ö
Phenanthrene					
Anthracene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Fluoranthene	\ 1 3uiii	< 5 Suili	< 10 3uiii	< 20 Julii	< 50 Suiii
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-c,d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
15 項 PAH 總濃度 (Sum of 15 PAH)	< 1	< 5	< 10	< 20	< 50

單位(Unit):mg/kg



## **Test Report**

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#### PFAS Remark:

現有PFAS定量技術是分析PFAS物質的特定結構,但同碳數族群之PFAS酸及鹽類物質,其可被辨識的特定結構相同,因此無法區別所分析的特定結構是來自酸或者鹽類,故測試結果為同碳數族群之PFAS之酸及鹽類物質的濃度總合。下表PFAS物質濃度皆已包含在測試結果中,相關資訊請參見下表:(下表列舉PFAS物質僅為範例,並不包含所有同碳數族群之PFAS鹽類。)

(The quantitative technology of PFAS is to analyze the specific structure of PFAS substances. However, PFAS acid and its salts with the same carbon number group have the same specific structure that can be identified. The tested results of the analyzed specific structure cannot be distinguished to identify the contribution from PFAS acid or its salts. Therefore, the tested results display the sum of concentrations of PFAS acids and its salts with the same carbon number group. The concentration of PFAS substances in the below table have been included in the tested results, please refer to the table for relevant information: (The listed PFAS substances are examples only, it do not include all PFAS salts with the same carbon number group.))

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	全氟辛烷磺酸 (Perfluorooctane sulfonates) (PFOS)	1763-23-1
	全氟辛基磺酸鉀 (PFOS-K) Potassium perfluorooctanesulfonate (PFOS-K)	2795-39-3
	全氟辛基磺酸鋰 (PFOS-Li) Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	全氟辛基磺酸銨 (PFOS-NH <sub>4</sub> ) Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH <sub>4</sub> )	29081-56-9
	全氟辛基磺酸二乙醇銨 (PFOS-NH(OH) <sub>2</sub> ) Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH) <sub>2</sub> )	70225-14-8
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛基磺酸四乙基銨 (PFOS-N( $C_2H_5$ ) $_4$ ) Perfluorooctanesulfonic acid,tetraethylammonium salt (PFOS-N( $C_2H_5$ ) $_4$ )	56773-42-3
	全氟辛基磺酸二癸二甲基銨 (PFOS-DDA) N-decyl-N,N-dimethyldecan-1-aminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluorooctane- 1-sulfonate (PFOS-DDA)	251099-16-8
	全氟辛基磺酸四丁基銨 (PFOS-N( $C_4H_9$ ) $_4$ ) TetrabutylAmmonium perfluorooctanesulfonate (PFOS-N( $C_4H_9$ ) $_4$ )	111873-33-7
	全氟辛基磺醯氟 (POSF) Perfluorooctane sulfonyl fluoride (POSF)	307-35-7



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群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
•	全氟辛基磺酸鎂 (PFOS-Mg) Perfluorooctanesulfonic acid, magnesium salt (PFOS-Mg)	91036-71-4
	全氟辛基磺酸鈉 (PFOS-Na) Perfluorooctanesulfonic acid, sodium salt (PFOS-Na)	4021-47-0
	全氟辛烷磺酸哌啶 Piperidine 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluorooctanesulfonate	71463-74-6
	全氟辛烷磺酸鹽 Perfluorooctanesulfonate (anion)	45298-90-6
	全氟辛烷磺酸與 N,N-二乙基乙胺 (1:1) (PFOS-N( $C_2H_5$ ) <sub>3</sub> ) 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with N,N-diethylethanamine (1:1) (PFOS-N( $C_2H_5$ ) <sub>3</sub> )	54439-46-2
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	N,N,N-三甲基-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1- 辛烷磺酸甲銨(1:1) (PFOS-N(CH <sub>3</sub> ) <sub>4</sub> ) Methanaminium, N,N,N-trimethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1) (PFOS-N(CH <sub>3</sub> ) <sub>4</sub> )	56773-44-5
	1-五胺·N,N,N-三丙基-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- 十七氟-1 -辛烷磺酸鹽(1:1) (PFOS-N(C <sub>3</sub> H <sub>7</sub> ) <sub>3</sub> (C <sub>5</sub> H <sub>11</sub> )) 1-Pentanaminium, N,N,N-tripropyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1) (PFOS-N(C <sub>3</sub> H <sub>7</sub> ) <sub>3</sub> (C <sub>5</sub> H <sub>11</sub> ))	56773-56-9
	1-丁銨·N,N-二丁基-N-甲基-· 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1-辛烷磺酸鹽 (1:1) (PFOS-N(C <sub>4</sub> H <sub>9</sub> ) <sub>3</sub> (CH <sub>3</sub> )) 1-Butanaminium, N,N-dibutyl-N-methyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1) (PFOS-N(C <sub>4</sub> H <sub>9</sub> ) <sub>3</sub> (CH <sub>3</sub> ))	124472-68-0
	碘鎓·雙[4-(1,1-二甲基乙基)苯基]-·1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1-辛烷磺酸鹽 (1:1) lodonium, bis[4-(1,1-dimethylethyl)phenyl]-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate (1:1)	213740-80-8



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群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	二苯基鍺(2,4,6-三甲基苯基)-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- 十七氟- 1-辛烷磺酸鹽 (1:1) Sulfonium, diphenyl(2,4,6-trimethylphenyl)-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1)	258341-99-0
	吡啶鎓 · 1-十六烷基- · 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-1 -辛烷磺酸鹽 (1:1) Pyridinium, 1-hexadecyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1)	334529-63-4
	1-癸胺·N,N,N-三乙基-·1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七 氟-1 -辛烷磺酸鹽(1:1) 1-Decanaminium, N,N,N-triethyl-, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1- octanesulfonate (1:1)	773895-92-4
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	全氟辛烷磺酸四丁基鏻 (PFOS-P( $C_4H_9$ ) $_4$ )) Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P( $C_4H_9$ ) $_4$ ))	2185049-59-4
	全氟辛烷磺酸二乙胺鹽 (PFOS-C <sub>4</sub> H <sub>11</sub> N) Perfluorooctanesulfonic acid diethylamine salt (PFOS-C <sub>4</sub> H <sub>11</sub> N)	2205029-08-7
	庚基二甲基 $\{2-[(2-甲基內-2-烯酰基)氧基]乙基}全氟辛烷磺酸氮素鹽 (PFOS-C_{15}H_{30}NO_2) Heptyldimethyl\{2-[(2-methylprop-2-enoyl)oxy]ethyl\}azanium perfluorooctanesulfonate (PFOS-C_{15}H_{30}NO_2)$	1203998-97-3
	1-辛烷磺酸·1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十七氟-,1,1'-酸酐 (PFOSAN) 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- heptadecafluoro-, 1,1'-anhydride (PFOSAN)	423-92-7



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群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
(Group Name)	全氟辛酸 (Perfluorooctanoic acid) (PFOA)	335-67-1
	全氟辛酸鈉 (PFOA-Na) Sodium perfluorooctanoate (PFOA-Na)	335-95-5
	全氟辛酸鉀 (PFOA-K) Potassium perfluorooctanoate (PFOA-K)	2395-00-8
	全氟辛酸銀 (PFOA-Ag) Silver perfluorooctanote (PFOA-Ag)	335-93-3
	全氟辛氟 (PFOA-F) Perfluorooctanoyl fluoride (PFOA-F)	335-66-0
	全氟辛酸銨 (APFO) Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	全氟辛酸鋰 (PFOA-Li) Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
	全氟辛酸鈷 (PFOA-Co) Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
PFOA, 及其鹽&衍生物	全氟辛酸銫 (PFOA-Cs) Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
(PFOA, its salts & derivatives)	全氟辛酸鉻 (PFOA-Cr(3*)) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- pentadecafluoro-, chromium(3+) (PFOA-Cr(3*))	68141-02-6
	全氟辛酸-哌嗪(2:1) PFOA-NH( $C_4H_{10}N$ ) Pentadecafluorooctanoic acidpiperazine (2/1)PFOA-NH( $C_4H_{10}N$ )	423-52-9
	全氟辛酸鹽 Pentadecafluorooctanoate (anion)	45285-51-6
	全氟辛酸酐 Perfluorooctanoic Anhydride	33496-48-9
	乙銨·N,N,N-三乙基-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟 辛酸 (1:1) Ethanaminium, N,N,N-triethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	98241-25-9
	全氟辛酸四甲銨鹽 Tetramethylammoniumperfluoroctanoat	32609-65-7



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群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	1-丙銨·N,N,N-三丙基-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五 氟辛酸(1:1) 1-Propanaminium, N,N,N-tripropyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1)	277749-00-5
	辛酸 $\cdot$ 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟-鉀鹽 $\cdot$ 水合物 (1:1:2) (PFOA-K( $H_2O$ ) $_2$ ) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, potassium salt, hydrate (1:1:2) (PFOA-K( $H_2O$ ) $_2$ )	98065-31-7
	辛酸·2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟-·化合物。與乙胺 (1:1) (PFOA-C <sub>2</sub> H <sub>7</sub> N) Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8- pentadecafluoro-, compd. with ethanamine (1:1) (PFOA-C <sub>2</sub> H <sub>7</sub> N)	1376936-03-6
	十五氟辛酸化合物與吡啶 (1:1) (9CI) (PFOA- $C_5H_5N$ ) Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9CI) (PFOA- $C_5H_5N$ )	95658-47-2
	十五氟辛酸-1-苯基哌嗪(1:1) (PFOA- $C_{10}H_{14}N_2$ ) Pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1) (PFOA- $C_{10}H_{14}N_2$ )	1514-68-7
	$1$ -辛胺·N,N,N-三甲基-·2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟辛酸(1:1) (PFOA- $C_{11}H_{26}N$ ) 1-Octanaminium, N,N,N-trimethyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctanoate (1:1) (PFOA- $C_{11}H_{26}N$ )	927835-01-6



## **Test Report**

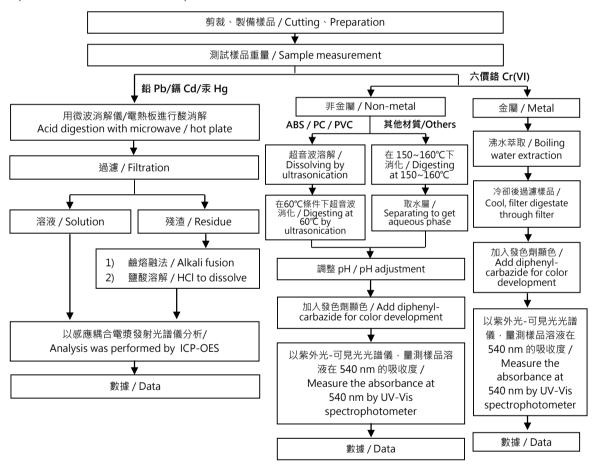
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#### 重金屬流程圖 / Analytical flow chart of heavy metal

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. ( $Cr^{6+}$  test method excluded)



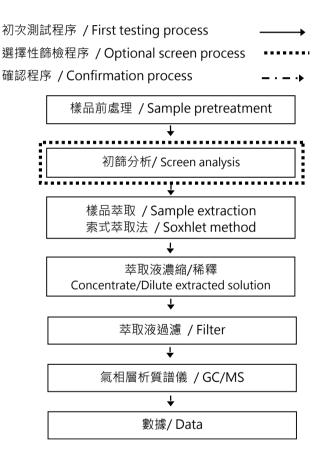


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#### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





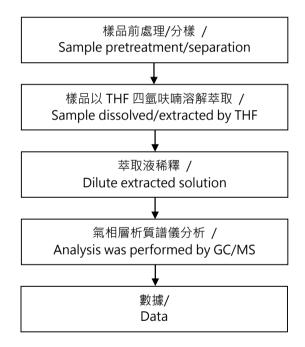
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



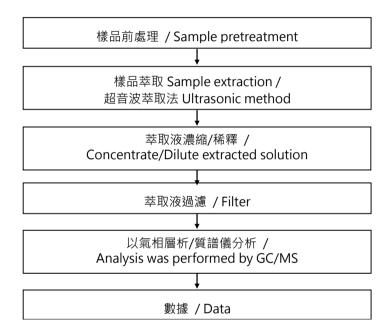


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#### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD



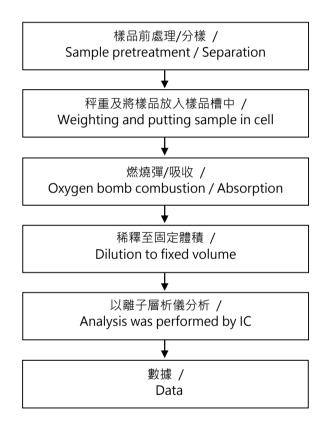


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#### 鹵素分析流程圖 / Analytical flow chart - Halogen



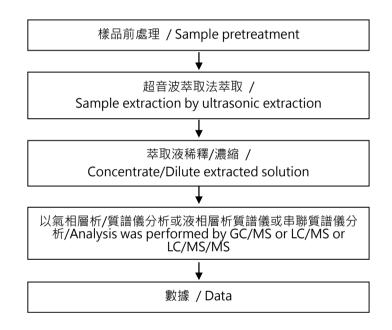


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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)



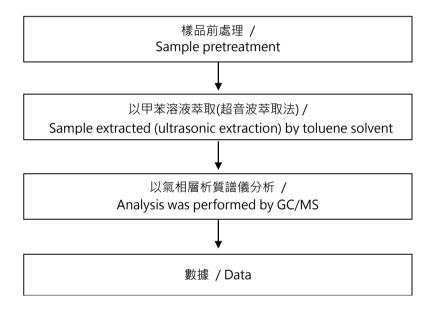


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#### 多環芳香烴分析流程圖 / Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)





## **Test Report**

號碼(No.): ETR24900322 日期(Date): 13-Sep-2024 頁數(Page): 21 of 22

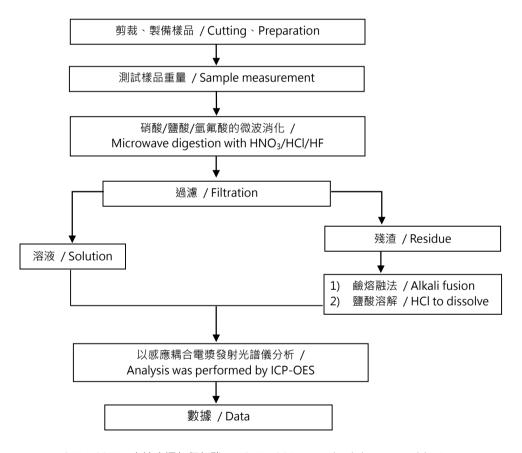
億光電子工業股份有限公司 (EVERLIGHT ELECTRONICS CO., LTD.) 新北市樹林區中華路6-8號 (NO. 6-8, ZHONGHUA RD., SHULIN DIST., NEW TAIPEI CITY 23860, TAIWAN)

#### 元素(含重金屬)分析流程圖 / Analytical flow chart of elements (Heavy metal included)

根據以下的流程圖之條件,樣品已完全溶解。

These samples were dissolved totally by pre-conditioning method according to below flow chart.

【參考方法/Reference method: US EPA 3051A、US EPA 3052】



\* US EPA 3051A 方法未添加氫氟酸 / US EPA 3051A method does not add HF.



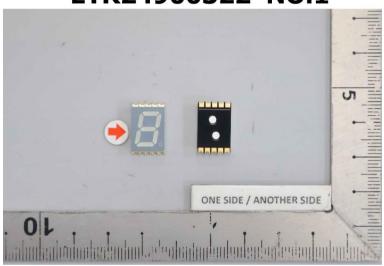
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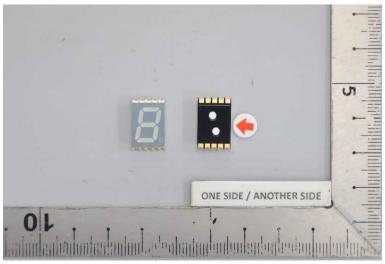
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\* 照片中如有箭頭標示 · 則表示為實際檢測之樣品/部位. \* (The tested sample / part is marked by an arrow if it's shown on the photo.)

#### ETR24900322 NO.1



#### ETR24900322 NO.2



\*\* 報告結尾 (End of Report) \*\*