

**Test Report** 

號碼(No.): ETR25101611 日期(Date): 14-Jan-2025 頁數(Page): 1 of 18

龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.)

台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, 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 the applicant as):

樣品名稱(Sample Name) : LCJ FREMIVM LABELS (三用電腦標籤)

\_\_\_\_\_\_

收件日(Sample Receiving Date) : 07-Jan-2025

測試期間(Testing Period) : 07-Jan-2025 to 14-Jan-2025

測試需求(Test Requested) : 依據客戶要求進行測試,測試項目請參閱測試結果表格。 (Testing item(s) is/are

specified by client. Please refer to result table for testing item(s).)

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





PIN CODE: DD0C61BC



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龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.) 台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

#### 測試部位敘述 (Test Part Description)

No.1 : 整體混測 (MIXED ALL PARTS)

#### 測試結果 (Test Results)

測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
鎘 (Cd) (Cadmium (Cd))	參考IEC 62321-5: 2013·以感應耦合電漿發	mg/kg	2	n.d.
	射光譜儀分析。(With reference to IEC			
	62321-5: 2013, analysis was performed by			
	ICP-OES.)			
鉛 (Pb) (Lead (Pb))	参考IEC 62321-5: 2013,以感應耦合電漿發	mg/kg	2	n.d.
	射光譜儀分析。(With reference to IEC			
	62321-5: 2013, analysis was performed by			
	ICP-OES.)			
汞 (Hg) (Mercury (Hg))	參考IEC 62321-4: 2013+ AMD1: 2017·以感	mg/kg	2	n.d.
	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.)			
六價鉻 Cr(VI) (Hexavalent Chromium	參考IEC 62321-7-2: 2017 · 以紫外光-可見光	mg/kg	8	n.d.
Cr(VI))	分光光度計分析。(With reference to IEC			
	62321-7-2: 2017, analysis was performed			
\\(\text{D}\) \\(\text{TW} \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	by UV-VIS.)	4		
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)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜	mg/kg	5	n.d.
六溴聯苯 (Hexabromobiphenyl)	儀分析。(With reference to IEC 62321-6:	mg/kg	5	n.d.
七溴聯苯 (Heptabromobiphenyl)	2015, analysis was performed by GC/MS.)	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	ı	n.d.

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測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
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)	參考IEC 62321-6: 2015 · 以氣相層析儀/質譜	mg/kg	5	n.d.
六溴聯苯醚 (Hexabromodiphenyl ether)	儀分析。(With reference to IEC 62321-6:	mg/kg	5	n.d.
七溴聯苯醚 (Heptabromodiphenyl ether)	2015, analysis was performed by GC/MS.)	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	1	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl		mg/kg	50	n.d.
phthalate (BBP))				
鄰苯二甲酸二丁酯 (DBP) (Dibutyl	]   參考IEC 62321-8: 2017·以氣相層析儀/質譜	mg/kg	50	n.d.
phthalate (DBP))	儀分析。(With reference to IEC 62321-8:			
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-	2017, analysis was performed by GC/MS.)	mg/kg	50	n.d.
(2-ethylhexyl) phthalate (DEHP))	2017, analysis was performed by Ge, Wis.,			
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl		mg/kg	50	n.d.
phthalate (DIBP))				
氟 (F) (Fluorine (F)) (CAS No.: 14762-94-		mg/kg	50	n.d.
8)				
氯 (Cl) (Chlorine (Cl)) (CAS No.: 22537-	參考BS EN 14582: 2016 · 以離子層析儀分	mg/kg	50	299
15-1)	析。(With reference to BS EN 14582: 2016,			
溴 (Br) (Bromine (Br)) (CAS No.: 10097-	analysis was performed by IC.)	mg/kg	50	n.d.
32-2)				
碘 (I) (Iodine (I)) (CAS No.: 14362-44-8)		mg/kg	50	n.d.
全氟辛烷磺酸及其鹽類 (PFOS and its	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
salts) (Perfluorooctane sulfonates and	2022.以液相層析串聯質譜儀分析。			
its salts (PFOS and its salts)) (CAS No.:	(Modified EN 17681-1: 2022 & EN 17681-			
1763-23-1 and its salts)	2: 2022, analysis was performed by			
	LC/MS/MS.)			



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測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
N-乙基全氟正辛磺醯胺 (EtFOSA) (N-	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
ethylperfluoro-1-octanesulfonamide	2022,以液相層析串聯質譜儀分析。			
(EtFOSA)) (CAS No.: 4151-50-2)	(Modified EN 17681-1: 2022 & EN 17681-			
	2: 2022, analysis was performed by			
	LC/MS/MS.)			
N-甲基全氟正辛磺醯胺 (N-Me-FOSA)	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
(N-Methyl-Perfluoroctanesulfonamide	2022,以液相層析串聯質譜儀分析。			
(N-Me-FOSA)) (CAS No.: 31506-32-8)	(Modified EN 17681-1: 2022 & EN 17681-			
	2: 2022, analysis was performed by			
	LC/MS/MS.)			
N-乙基全氟辛基磺醯胺乙醇 (N-Et-FOSE	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
alcohol) (N-Ethyl-	2022,以液相層析串聯質譜儀分析。			
•	(Modified EN 17681-1: 2022 & EN 17681-			
Et-FOSE alcohol)) (CAS No.: 1691-99-2)				
	LC/MS/MS.)			
N-甲基全氟辛基磺醯胺乙醇 (N-Me-FOSE		mg/kg	0.01	n.d.
alcohol) (N-Methyl-	2022.以液相層析串聯質譜儀分析。			
Perfluoroctanesulfonamidoethanol (N-	(Modified EN 17681-1: 2022 & EN 17681-			
Me-FOSE alcohol)) (CAS No.: 24448-	2: 2022, analysis was performed by			
09-7)	LC/MS/MS.)			
	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
salts) (Perfluoroctanesulfonamide and	2022.以液相層析串聯質譜儀分析。			
its salts (PFOSA and its salts)) (CAS No.:	(Modified EN 17681-1: 2022 & EN 17681-			
754-91-6 and its salts)	2: 2022, analysis was performed by			
	LC/MS/MS.)			
全氟辛酸及其鹽類 (PFOA and its salts)	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
(Perfluorooctanoic acid and its salts	2022 · 以液相層析串聯質譜儀分析。			
1.	(Modified EN 17681-1: 2022 & EN 17681-			
and its salts)	2: 2022, analysis was performed by			
	LC/MS/MS.)			



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台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
全氟辛酸甲酯 (Me-PFOA) (Methyl	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
perfluorooctanoate (Me-PFOA)) (CAS	2022,以氣相層析質譜儀分析。(Modified			
No.: 376-27-2)	EN 17681-1: 2022 & EN 17681-2: 2022,			
	analysis was performed by GC/MS.)			
全氟辛酸乙酯 (Et-PFOA) (Ethyl	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
perfluorooctanoate (Et-PFOA)) (CAS	2022,以氣相層析質譜儀分析。(Modified			
No.: 3108-24-5)	EN 17681-1: 2022 & EN 17681-2: 2022,			
	analysis was performed by GC/MS.)			
全氟辛基碘烷 (PFOI) (Perfluoro-1-	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
iodooctane (PFOI)) (CAS No.: 507-63-1)	2022,以氣相層析質譜儀分析。(Modified			
	EN 17681-1: 2022 & EN 17681-2: 2022,			
	analysis was performed by GC/MS.)			
3-全氟庚基丙酸 (7:3 FTCA) (3-	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
Perfluoroheptyl propanoic acid (7:3	2022,以液相層析串聯質譜儀分析。			
FTCA)) (CAS No.: 812-70-4)	(Modified EN 17681-1: 2022 & EN 17681-			
	2: 2022, analysis was performed by			
	LC/MS/MS.)			
1H,1H,2H,2H-全氟癸磺酸及其鹽類 (8:2	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
FTS and its salts) (1H,1H,2H,2H-	2022,以液相層析串聯質譜儀分析。			
Perfluorodecanesulfonic acid and its	(Modified EN 17681-1: 2022 & EN 17681-			
salts (8:2 FTS and its salts)) (CAS No.:	2: 2022, analysis was performed by			
39108-34-4 and its salts)	LC/MS/MS.)			
1H,1H,2H,2H-全氟-1-癸醇 (8:2 FTOH)	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
(1H,1H,2H,2H-Perfluoro-1-decanol (8:2	2022,以氣相層析質譜儀及液相層析串聯質	3. 3		
FTOH)) (CAS No.: 678-39-7)	譜儀分析。(Modified EN 17681-1: 2022 &			
,,,,	EN 17681-2: 2022, analysis was performed			
	by GC/MS and LC/MS/MS.)			
	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
FTA) (1H,1H,2H,2H-Perfluorodecyl	2022,以氣相層析質譜儀分析。(Modified	פיייפיי	· · -	
acrylate (8:2 FTA)) (CAS No.: 27905-45-	EN 17681-1: 2022 & EN 17681-2: 2022,			
9)	analysis was performed by GC/MS.)			
<u> </u>	anarysis mas periorifica by Ge/1113.)			·



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測試項目	測試方法	單位	MDL	結果
(Test Items)	(Method)	(Unit)		(Result)
				No.1
1H,1H,2H,2H-全氟癸基甲基丙烯酸酯 (8:2	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
FTMA) (1H,1H,2H,2H-Perfluorodecyl	2022,以氣相層析質譜儀分析。(Modified			
methacrylate (8:2 FTMA)) (CAS No.:	EN 17681-1: 2022 & EN 17681-2: 2022,			
1996-88-9)	analysis was performed by GC/MS.)			
2H,2H-全氟癸酸及其鹽類 (H2PFDA and	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
its salts) (2H,2H-Perfluorodecane acid	2022,以液相層析串聯質譜儀分析。			
and its salts (H2PFDA and its salts))	(Modified EN 17681-1: 2022 & EN 17681-			
(CAS No.: 27854-31-5 and its salts)	2: 2022, analysis was performed by			
	LC/MS/MS.)			
1H,1H,2H,2H-全氟癸基碘 (8_2 FTI)	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
(1H,1H,2H,2H-Perfluorodecyl iodide	2022,以氣相層析質譜儀分析。(Modified			
(8_2 FTI)) (CAS No.: 2043-53-0)	EN 17681-1: 2022 & EN 17681-2: 2022,			
	analysis was performed by GC/MS.)			
1H,1H,2H,2H-全氟十七烷三甲基氧矽烷(8:2	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
FTSi(OC2H5)3) (1H,1H,2H,2H-	2022,以氣相層析質譜儀分析。(Modified			
Perfluorodecyltriethoxysilane (8:2	EN 17681-1: 2022 & EN 17681-2: 2022,			
FTSi(OC2H5)3)) (CAS No.: 101947-16-4)	analysis was performed by GC/MS.)			
2H,2H,3H,3H-全氟癸酸及其鹽類	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
(4HPFUnA and its salts) (2H,2H,3H,3H-	2022,以液相層析串聯質譜儀分析。			
Perfluoroundecanoic Acid and its salts	(Modified EN 17681-1: 2022 & EN 17681-			
(4HPFUnA and its salts)) (CAS No.:	2: 2022, analysis was performed by			
34598-33-9 and its salts)	LC/MS/MS.)			
1H,1H,2H-全氟-1-癸烯 (PFDE)	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.1	n.d.
(1H,1H,2H-Heptadecafluoro-1-decene	2022·以氣相層析質譜儀分析。(Modified			
(PFDE)) (CAS No.: 21652-58-4)	EN 17681-1: 2022 & EN 17681-2: 2022,			
	analysis was performed by GC/MS.)			
雙(1H,1H,2H,2H-全氟癸基)磷酸酯及其鹽類	修改EN 17681-1: 2022 & EN 17681-2:	mg/kg	0.01	n.d.
(8_2diPAP and its salts) (Bis(1H,1H,2H,2H-	2022,以液相層析串聯質譜儀分析。			
Perfluorodecyl)phosphate and its salts	(Modified EN 17681-1: 2022 & EN 17681-			
(8_2diPAP and its salts)) (CAS No.: 678-	2: 2022, analysis was performed by			
41-1 and its salts)	LC/MS/MS.)			
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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. 樣品的測試是基於申請人要求混合測試,報告中的混合測試結果不代表其中個別單一材質的含量。 The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.



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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
	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



# **Test Report**

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龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.)

台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

群組名稱	物質名稱	CAS No.
(Group Name)	(Substance Name)	
	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 全氟辛烷磺酸鹽	71463-74-6 45298-90-6
	Perfluorooctanesulfonate (anion)	13230 30 0
	全氟辛烷磺酸與 N,N-二乙基乙胺 $(1:1)$ (PFOS-N(C <sub>2</sub> H <sub>5</sub> ) <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 <sub>2</sub> H <sub>5</sub> ) <sub>3</sub> )	54439-46-2
	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 $_3$ H $_7$ ) $_3$ (C $_5$ H $_{11}$ )) 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 $_3$ H $_7$ ) $_3$ (C $_5$ H $_{11}$ ))	56773-56-9
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	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
	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
	全氟辛烷磺酸四丁基磷 (PFOS-P(C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> )) Tetrabutylphosphonium perfluorooctane sulfonate (PFOS-P(C <sub>4</sub> H <sub>9</sub> ) <sub>4</sub> ))	2185049-59-4

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龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.)

台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

群組名稱	物質名稱	CAS No.
(Group Name)	(Substance Name)	
	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
PFOS, 及其鹽&衍生物 (PFOS, its salts & derivatives)	庚基二甲基 $\{2-[(2-甲基丙-2-烯酰基)氧基]乙基\}全氟辛烷磺酸氮紮鹽 (PFOS-C_{15}H_{30}NO_2) Heptyldimethyl\{2-[(2-methylprop-2-enoyl)oxy]ethyl\}azanium perfluorooctanesulfonate (PFOS-C_{15}H_{30}NO_2)$	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
	全氟辛基磺醯胺 (Perfluoroctanesulfonamide) (PFOSA)	754-91-6
	全氟辛基磺醯胺鋰鹽 (1:1) (PFOSA-Li) Perfluorooctanesulfonamide lithium salt (1:1) (PFOSA-Li)	76752-79-9
	全氟辛基磺醯胺鈉鹽 (1:1) (PFOSA-Na) Perfluorooctanesulfonamide Sodium salt (1:1) (PFOSA-Na)	76752-78-8
PFOSA, 及其鹽 (PFOSA, its salts)	全氟辛基磺醯胺鉀鹽 (1:1) (PFOSA-K) Perfluorooctanesulfonamide Potassium salt (1:1) (PFOSA-K)	76752-70-0
	全氟辛基磺醯胺銨鹽 (1:1) (PFOSA-NH <sub>4</sub> ) Perfluorooctanesulfonamide Ammonium salt (1:1) (PFOSA-NH <sub>4</sub> )	76752-72-2
	全氟辛基磺醯胺三乙胺的化合物(1:1) (PFOSA- $C_6H_{15}N$ ) heptadecafluorooctane-1-sulphonamide, compound with triethylamine(1:1) (PFOSA- $C_6H_{15}N$ )	76752-82-4
	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
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	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

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龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.)

台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

群組名稱 (Group Name)	物質名稱 (Substance Name)	CAS No.
	全氟辛酸銫 (PFOA-Cs) Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
	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
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・2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-十五氟-鉀鹽・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 <sub>5</sub> H <sub>5</sub> N) Octanoic acid, pentadecafluoro-, compd. with pyridine (1:1) (9CI) (PFOA-C <sub>5</sub> H <sub>5</sub> N)	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



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台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

群組名稱	物質名稱	CAS No.
(Group Name)	(Substance Name)	
PFOA, 及其鹽&衍生物 (PFOA, its salts & derivatives)	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 <sub>11</sub> H <sub>26</sub> 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 <sub>11</sub> H <sub>26</sub> N)	927835-01-6
8:2 FTS, 及其鹽	1H,1H,2H,2H-全氟癸磺酸 (1H,1H,2H,2H-Perfluorodecanesulfonic acid) (8:2 FTS)	39108-34-4
8.2 FTS, 汉兵鹽 (8:2 FTS, its salts)	1H, 1H, 2H, 2H-全氟癸磺酸鉀 (8:2 FTS-K) 1H,1H,2H,2H-Perfluorodencane sulfonate acid Potassium salt (8:2 FTS-K)	438237-73-1
	1H, 1H, 2H, 2H-全氟癸磺酸銨 (8:2 FTS-NH <sub>4</sub> ) 1H,1H,2H,2H-Perfluorodencane sulfonate acid Ammonium salt (8:2 FTS-NH <sub>4</sub> )	149724-40-3
8:2 FTS, 及其鹽 (8:2 FTS, its salts)	1H, 1H, 2H, 2H-全氟癸磺酸鈉 (8:2 FTS-Na) 1H,1H,2H,2H-Perfluorodencane sulfonate acid Sodium salt (8:2 FTS-Na)	27619-96-1
	1H,1H,2H,2H-全氟癸磺酸鹽 (8:2 FTS(anion)) 8: 2 Fluorotelomer sulfonate (anion) (8:2 FTS(anion))	481071-78-7
112DED A 77 世 56	2H,2H-全氟癸酸 (2H,2H-Perfluorodecane acid) (H2PFDA)	27854-31-5
H2PFDA, 及其鹽 (H2PFDA, its salts)	四丁基磷2H,2H-全氟癸酸酯 Tetrabutylphosphonium 2H,2H-Perfluorodecanoate	882489-14-7
	2H,2H,3H,3H-全氟癸酸 (2H,2H,3H,3H-Perfluoroundecanoic Acid) (4HPFUnA)	34598-33-9
4HPFUnA, 及其鹽 (4HPFUnA, its salts)	2H,2H,3H,3H-全氣癸酸鉀 (H4PFUnA-K) Potassium 2H,2H,3H,3H-Perfluoroundecanoate (H4PFUnA-K)	83310-58-1
	2H,2H,3H,3H-全氟癸酸鋰 (H4PFUnA-Li) Lithium 3-(perfluorooctyl)propanoate (H4PFUnA-Li)	67304-23-8
	雙(1H,1H,2H,2H-全氟癸基)磷酸酯 (Bis(1H,1H,2H,2H- Perfluorodecyl)phosphate) (8:2diPAP)	678-41-1
	雙(1H,1H,2H,2H-全氟癸基)磷酸酯鈉 (8:2diPAP-Na) Sodium bis(1H,1H,2H,2H-perfluorodecyl)phosphate (8:2diPAP-Na)	114519-85-6
8:2diPAP, 及其鹽 (8:2diPAP, its salts)	雙(2-羥乙基)雙((全氟辛基)乙基)磷酸氫銨 Bis(2-hydroxyethyl)ammonium bis((perfluorooctyl)ethyl) hydrogen phosphate	57677-97-1
	雙[2-(全氟辛基)乙基]磷酸銨鹽 (8:2diPAP-NH <sub>4</sub> ) Bis[2-(perfluorooctyl)ethyl] phosphate ammonium salt (8:2diPAP-NH <sub>4</sub> )	93776-20-6
	8:2 氟調聚物磷酸二酯離子 8:2 Fluorotelomer phosphate diester ion	1411713-91-1

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## **Test Report**

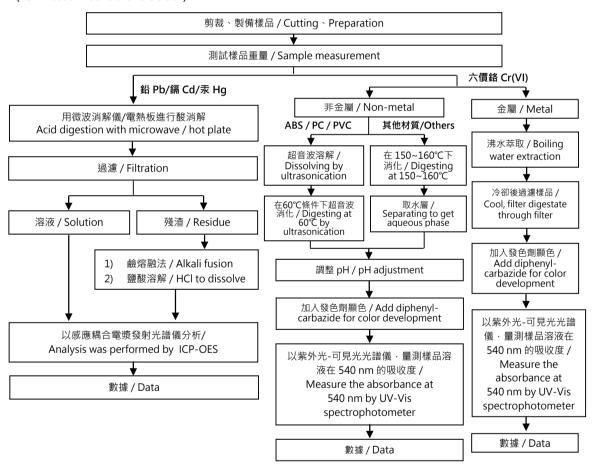
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#### 重金屬流程圖 / Analytical flow chart of heavy metal

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)



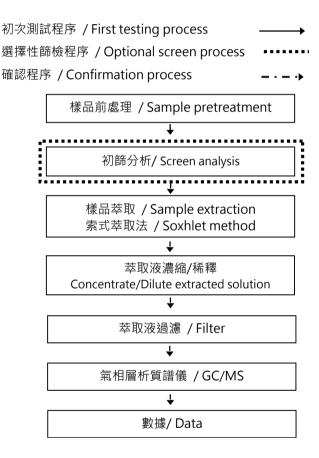


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#### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBBs/PBDEs





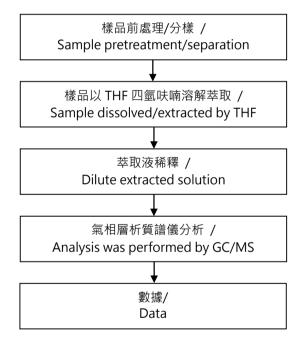
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可塑劑分析流程圖 / Analytical flow chart - Phthalate

【測試方法/Test method: IEC 62321-8】



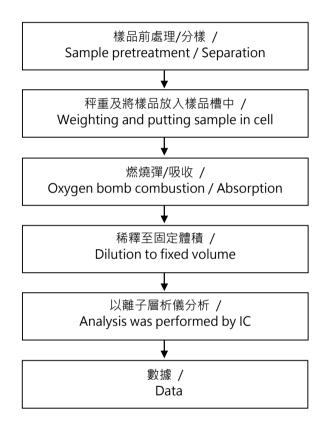


## **Test Report**

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龍德數位科技有限公司 (LONGDER DIGITAL TECHNOLOGY CO., LTD.) 台南市南區新和一路3巷3號 (NO. 3, LANE 3, SINHE 1ST RD., SOUTH DISTRICT, TAINAN CITY 70248, TAIWAN (R. O. C.))

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



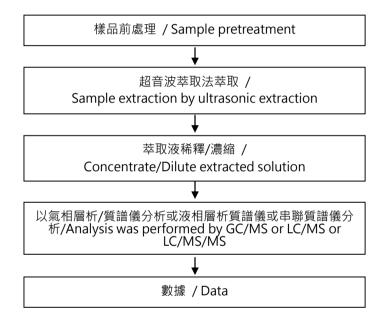


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全氟化合物(包含全氟辛酸/全氟辛烷磺酸/其相關化合物等等)分析流程圖 / Analytical flow chart – PFAS (including PFOA/PFOS/its related compound, etc.)





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\* 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.)

## ETR25101611



\*\* 報告結尾 (End of Report) \*\*