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Report No. 報告號碼: 48308591b 002

Client 客戶: EVER OHMS TECHNOLOGY CO., LTD./天二科技股份有限公司
No.3, South 4th Road, Cianjhen Dist. Kaohsiung City, 80681 Taiwan, R.O.C./
高雄市前鎮區南四路3號

Identification/Model No(s): METAL ALLOY LOW RESISTANCE CHIP RESISTOR
樣品描述/規格: MA / MAL / MAF / MAH SERIES

Sample obtaining method: Sending by customer
樣品獲取方式:

Condition at delivery: Test item complete and undamaged.
樣品接收狀態:

Sample receiving date: 2026-08-04
收樣日期:

Testing period: 2026-08-04 – 2026-08-12
測試週期:

Place of testing: Chemical laboratory Hong Kong
測試地點:

Test specification 測試要求:	***Test result 測試結果:***
Testing according to customer's specification for the following parameters:	
RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU Annex II and its amendment Directive (EU) 2015/863: Total Content of Lead, Cadmium, Mercury, Chromium VI, Polybrominated Biphenyls, Polybrominated Diphenyl Ethers; and Benzyl butyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP) / 依據電機電子設備限用有害物質指令(RoHS 2011/65/EU) 附錄II及其修正指令(EU) 2015/863: 鉛、鎘、汞、六價鉻、多溴聯苯、多溴二苯醚、鄰苯二甲酸苯基丁酯、鄰苯二甲酸二丁酯、鄰苯二甲酸二(2-乙基己基)酯、鄰苯二甲酸二異丁酯 之總含量	Pass/合格
Perfluorooctane sulfonic acid (PFOS) /全氟辛烷磺酸, Perfluorooctanoic acid (PFOA)/ 全氟辛酸, Halogen/鹵素 (Fluorine/氟, Chlorine/氯, Bromine/溴, Iodine/碘)	Refer to result page *參照測試報告*

Other information: This test report supersedes test report no. 48308591b 001.
其他信息:

For and on behalf of
TÜV Rheinland Hong Kong Ltd.

2026-08-13
Date *日期*

Amenda Yung / Senior CS Manager
Name/Position *姓名/職位*

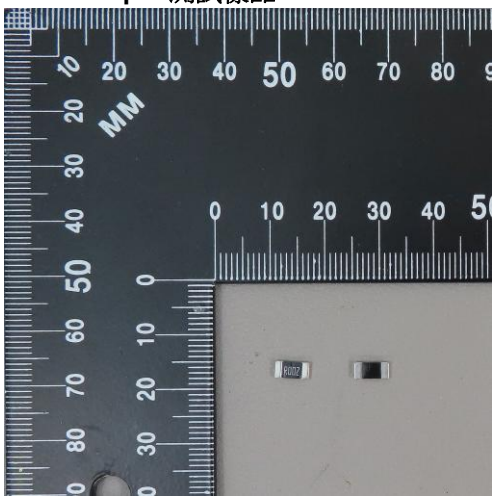
Report Authenticity Verification, please email: softlines@twn.tuv.com.
報告真實性確認，如需驗證，請電郵至 softlines@twn.tuv.com。

Sample information is provided by customer. Test result is drawn according to the kind and extent of tests performed.
This test report relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts.
This test report does not entitle to carry any safety mark on this or similar products.
"Decision Rule" document announced in our website (https://www.tuv.com/landingpage/en/qm-gcn/) describes the statement of conformity and its rule of enforcement for test results are applicable throughout this test report.
樣品信息由客戶提供。測試結果根據所做測試的種類和範圍而得出。本測試報告僅對來樣負責。未經本測試中心許可，測試報告不得部分複製。不能根據此報告在上述產品或類似產品上使用任何安全標誌。本測試報告中，描述符合性聲明所應用的判定規則發佈在我司官網 https://www.tuv.com/landingpage/en/qm-gcn/。

Tested Material list/測試材料清單

Mat. No./ 材料號碼	Material/材質	Color/顏色	Location/位置
1	Electronic components 電子零件	Metallic/Black/金屬色/黑色	TCL260804-02

Test Sample/測試樣品



Test Result 測試結果

Test Item/測試項目	Test Method/ 測試方法	Unit / 單位	MDL	Mat.1 Result/ 結果	Limit/限值
Cadmium (Cd) / 鎘	With ref. to IEC 62321-5:2013, ICP-OES/參考 IEC 62321-5: 2013,感應耦合電漿發射光譜儀	mg/kg	2	n.d.	100
Lead (Pb) / 鉛	With ref. to IEC 62321-5:2013, ICP-OES/參考 IEC 62321-5: 2013,感應耦合電漿發射光譜儀	mg/kg	2	n.d.	1000
Mercury (Hg) / 汞	With ref. to IEC 62321-4: 2013+ AMD1:2017, AAS/ 參考 IEC 62321-4: 2013+ AMD1: 2017, 原子吸收光譜儀	mg/kg	2	n.d.	1000
Chromium VI (Cr VI) / 六價鉻	With ref. to IEC 62321-7-2:2017, UV-VIS/參考 IEC 62321-7-2: 2017,紫外光-可見光分光光度計	mg/kg	8	n.d.	1000
Sum of Polybrominated biphenyls (PBBs) / 多溴聯苯總和	With ref. to IEC 62321-6:2015, GC-MS/參考 IEC 62321-6: 2015,氣相層析儀-質譜儀	mg/kg	-	n.d.	1000
Monobromobiphenyl/一溴聯苯		mg/kg	5	n.d.	-
Dibromobiphenyl/二溴聯苯		mg/kg	5	n.d.	-
Tribromobiphenyl/三溴聯苯		mg/kg	5	n.d.	-
Tetrabromobiphenyl/四溴聯苯		mg/kg	5	n.d.	-
Pentabromobiphenyl/五溴聯苯		mg/kg	5	n.d.	-
Hexabromobiphenyl/六溴聯苯		mg/kg	5	n.d.	-
Heptabromobiphenly/七溴聯苯		mg/kg	5	n.d.	-
Octabromobiphenyl/八溴聯苯		mg/kg	5	n.d.	-
Nonabromobiphenyl/九溴聯苯		mg/kg	5	n.d.	-
Decabromobiphenyl/十溴聯苯		mg/kg	5	n.d.	-
Sum of Polybrominated diphenyl ethers (PBDEs) / 多溴二苯醚總和		mg/kg	-	n.d.	1000
Monobromodiphenyl ether/一溴二苯醚		mg/kg	5	n.d.	-
Dibromodiphenyl ether/二溴二苯醚		mg/kg	5	n.d.	-
Tribromodiphenyl ether/三溴二苯醚		mg/kg	5	n.d.	-
Tetrabromodiphenyl ether/四溴二苯醚		mg/kg	5	n.d.	-
Pentabromodiphenyl ether/五溴二苯醚		mg/kg	5	n.d.	-
Hexabromodiphenyl ether/六溴二苯醚		mg/kg	5	n.d.	-
Heptabromodiphenyl ether/七溴二苯醚		mg/kg	5	n.d.	-
Octabromodiphenyl ether/八溴二苯醚		mg/kg	5	n.d.	-
Nonabromodiphenyl ether/九溴二苯醚		mg/kg	5	n.d.	-
Decabromodiphenyl ether/十溴二苯醚		mg/kg	5	n.d.	-

Test Item/測試項目	**Test Method/ 測試方法**	**Unit / 單位**	**MDL**	Mat.1 **Result/ 結果**	Limit/限值
Benzyl butyl phthalate (BBP)/ 鄰苯二甲酸苯基丁酯	With ref. to IEC 62321-8:2017, GC-MS/ 參考 IEC 62321-8: 2017, 氣相層析儀-質譜儀	mg/kg	50	n.d.	1000
Dibutyl phthalate (DBP)/ 鄰苯二甲酸二丁酯		mg/kg	50	n.d.	1000
Diethylhexyl phthalate (DEHP)/ 鄰苯二甲酸二(2-乙基己基)酯		mg/kg	50	n.d.	1000
Diisobutyl phthalate (DIBP)/ 鄰苯二甲酸二異丁酯		mg/kg	50	n.d.	1000
Halogen / 鹵素					
Fluorine (F) / 氟	With ref. to EN 14582:2016, IC/ 參考 EN 14582:2016, 離子層析儀	mg/kg	50	n.d.	-
Chlorine (Cl) / 氯		mg/kg	50	n.d.	-
Bromine (Br) / 溴		mg/kg	50	n.d.	-
Iodine (I) / 碘		mg/kg	50	n.d.	-
Perfluorooctane Sulfonate (PFOS) and its salts/全氟辛烷磺酸及其鹽類*	Modified EN 17681-1:2025, CI-GCMS / GC-MSMS and LC-MSMS / 修改 EN 17681-1:2025, 化學離子化氣相色譜-質譜儀 /氣相層析串聯質譜儀 /液相層析/質譜儀分析	mg/kg	0.01	n.d.	-
Perfluorooctanoic Acid (PFOA) and its salts/全氟辛酸及其鹽類*		mg/kg	0.01	n.d.	-

Notes/ 註釋:
MDL = Method Detection Limit/方法偵測極限值
n.d. = Not Detected/未檢出 ; Less than MDL/小於 MDL
mg/kg = milligram per kilogram/ 毫克每公斤

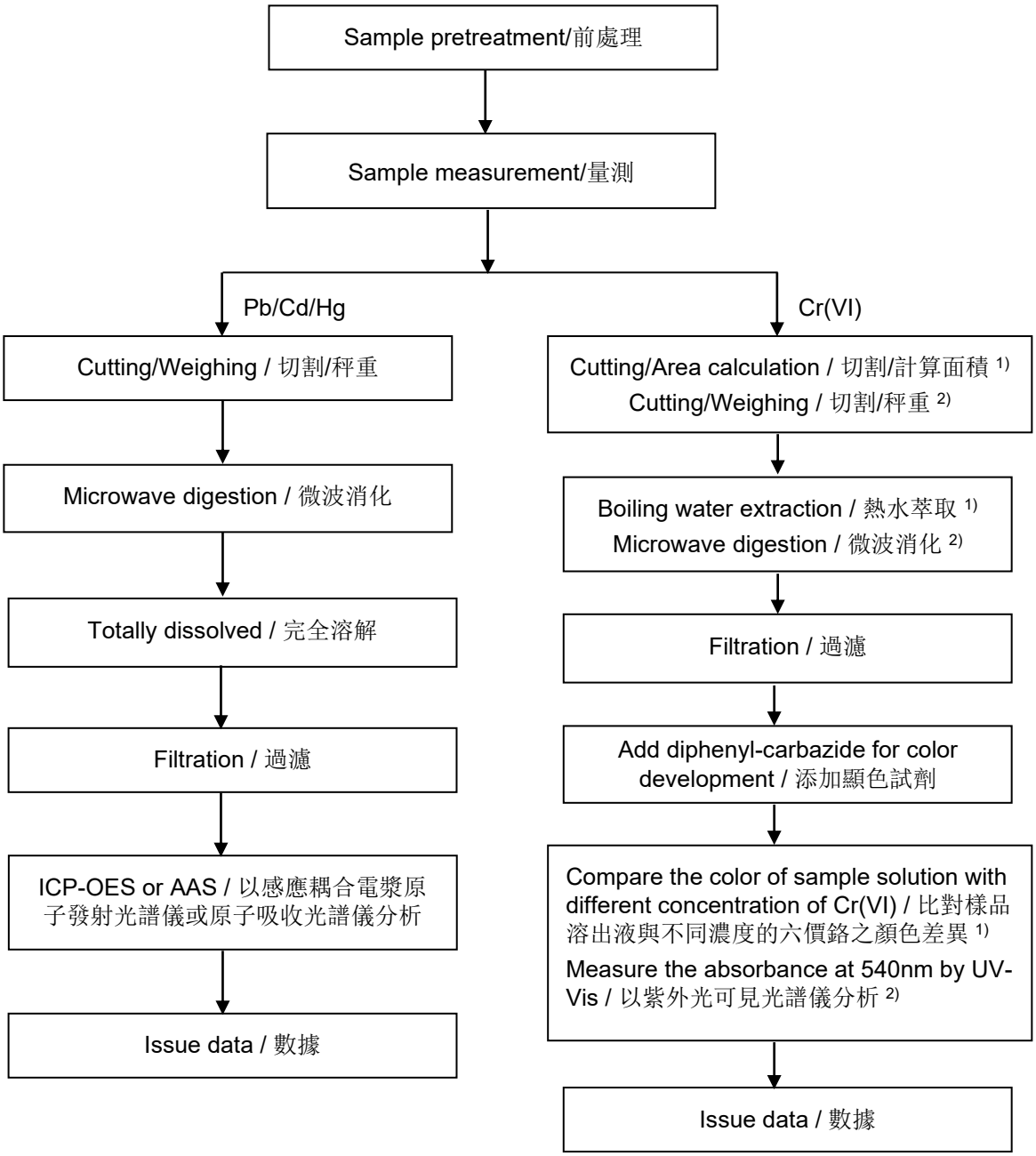
* This PFAS analyze based on the specific structure of PFAS, therefore the result only display the total concentration of same carbon numbers group, individual result of salt and relative substance do not present on this report, the following listed substances are included the result./此 PFAS 分析為針對特定 PFAS 物質之結構進行分析，因此本結果針對其相同碳數 PFAS 之鹽類及相關化合物僅提供濃度總和，不另行提供個別 PFAS 鹽類及相關化合物之結果，下表 PFAS 物質濃度皆已包含在測試結果中。

Classification/ 類別	Substance/ 物質	CAS no.
Perfluorooctanesulfonic acid and its salts 全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No. 1763-23-1 and its salts)	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, zirconium(4+) salt	101360-77-4
	Tetrabutylammonium perfluorooctanesulfonate	111873-33-7
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with graphite	114174-50-4
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, iron(3+) salt	114519-83-4
	Heptyldimethyl{2-[(2-methylprop-2-enoyl)oxy]ethyl} azanium perfluorooctanesulfonate (PFOS-C15H30NO2)	1203998-97-3
	N,N-Dibutyl-N-methylbutan-1-aminium heptadecafluorooctane-1-sulfonate	124472-68-0
	Iodonium, bis[4-(1,1-dimethylethyl)phenyl]-, salt with perfluoro-1-octanesulfonic acid (1:1)	213740-80-8
	Tetrabutylphosphonium perfluorooctane sulfonate	2185049-59-4
	Perfluorooctanesulfonic acid diethylamine salt (PFOS-C4H11N)	2205029-08-7
	N-Decyl-N,N-dimethyl-1-decanaminium 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulfonate(PFOS-DDA)	251099-16-8
	Diphenyl(2,4,6-trimethylphenyl)sulfonium perfluoro-1-octanesulfonate	258341-99-0
	Perfluorooctanesulfonic acid, potassium salt (PFOS-K)	2795-39-3
	Perfluorooctanesulfonic acid, ammonium salt (PFOS-NH4)	29081-56-9
	Perfluorooctanesulfonic acid, lithium salt (PFOS-Li)	29457-72-5
	Perfluoro-1-octanesulfonyl fluoride (PFOS-F)	307-35-7
	1-Hexadecylpyridinium perfluoro-1-octanesulfonate	334529-63-4
	Sodium heptadecafluorooctane-1-sulfonate (PFOS-Na)	4021-47-0
	1-Octanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, barium salt (2:1)	4021-48-1
	Heptadecafluoro-1-Octanesulfonyl Chloride	423-60-9
	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
	Perfluorooctanesulfonate	45298-90-6
	Triethylammonium perfluorooctane sulfonate	54439-46-2
	Perfluorooctanesulfonic acid, tetraethylammonium salt (PFOS-N(C2H5)4)	56773-42-3
	Tetramethylammonium perfluorooctanesulfonate (PFOS-N(CH3)4)	56773-44-5
	N,N,N-Tripropylpentan-1-aminium heptadecafluorooctane-1-sulfonate	56773-56-9
	Perfluorooctane sulfonate diethanolamine salt (PFOS-NH(OH)2)	70225-14-8
	Piperidinium perfluorooctanesulfonate	71463-74-6
	N,N,N-Triethyldecan-1-aminium eptadecafluorooctane-1-sulfonate	773895-92-4

Classification/ 類別	**Substance/ 物質**	**CAS no.**
Perfluorooctanesulfonic acid and its salts 全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No. 1763-23-1 and its salts)	1-Octanesulfonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ion(1-), tris (triphenylphosphine)rhodium (1+)	88825-77-8
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, nickel salt	89560-90-7
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, cobalt salt	89560-91-8
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, iron salt	89560-92-9
	magnesium bis[heptadecafluorooctanesulphonate] (PFOS-Mg)	91036-71-4
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, zinc salt	91036-72-5
	1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, cesium salt	92011-18-2
Pentadecafluorooctanoic acid and its salts 全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.335-67-1 and its salts)	Octanoic acid, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluoro-, compd. with ethanamine (1:1) (PFOA-C2H7N)	1376936-03-6
	pentadecafluorooctanoic acid- 1-phenylpiperazine(1:1)	1514-68-7
	Lithium perfluorooctanoate (PFOA-Li)	17125-58-5
	Cesium perfluorooctanoate (PFOA-Cs)	17125-60-9
	potassium perfluorooctanoate (PFOA-K)	2395-00-8
	Perfluorooctanoyl Bromide (PFOA-Br)	222037-87-8
	Tetrapropylammonium perfluorooctanoate	277749-00-5
	Perfluorooctanoate N,N,N-trimethylmethanaminium	32609-65-7
	Perfluorooctanoic anhydride	33496-48-9
	Perfluorooctanoyl chloride	335-64-8
	Perfluorooctyl fluoride (F-PFO)	335-66-0
	silver(1+) perfluorooctanoate (PFOA-Ag)	335-93-3
	sodium pentadecafluorooctanoate (PFOA-Na)	335-95-5
	Cobalt perfluorooctanoate (PFOA-Co)	35965-01-6
	Ammonium perfluorooctanoate (APFO)	3825-26-1
	Pentadecafluorooctanoic acid-piperazine (1:1)	423-52-9
	Pentadecafluorooctanoate (PFOA ion)	45285-51-6
	Chromium(3+) perfluorooctanoate (1:3) (PFOA-Cr)	68141-02-6
	N,N,N-Trimethyloctan-1-aminium pentadecafluorooctanoate	927835-01-6
	Pentadecafluorooctanoic acid-pyridine (1/1) (PFOA-Pyridine)	95658-47-2
	Potassium pentadecafluorooctanoate-water (1:1:2) (PFOA-K·2H2O)	98065-31-7
	N,N,N-Triethylethanaminium perfluorooctanoate	98241-25-9

Testing procedure / 測試流程圖 :

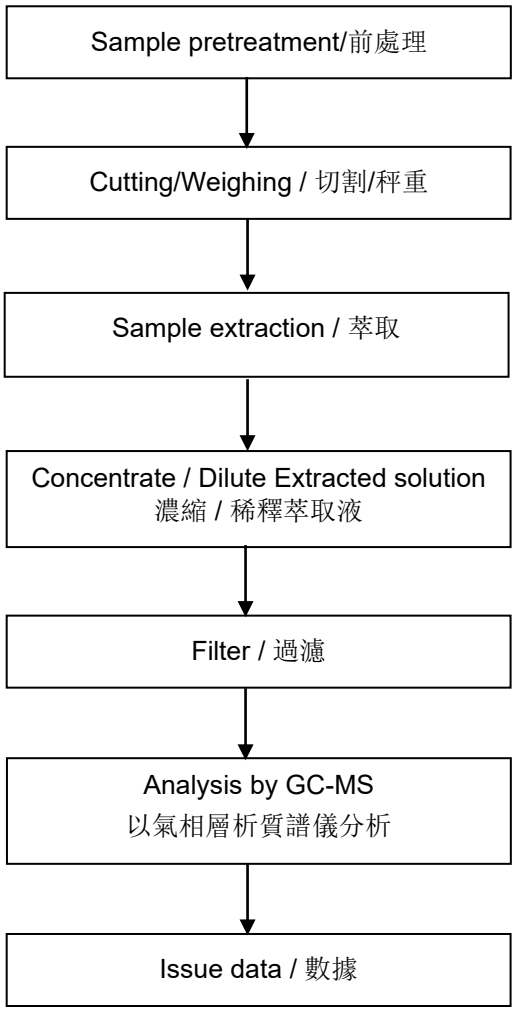
RoHS (Pb/鉛, Cd/鎘, Hg/汞, Cr(VI)/六價鉻)



Notes/ 註釋: 1) For metallic material / 用於金屬物質
2) For non-metallic material / 用於非金屬物質

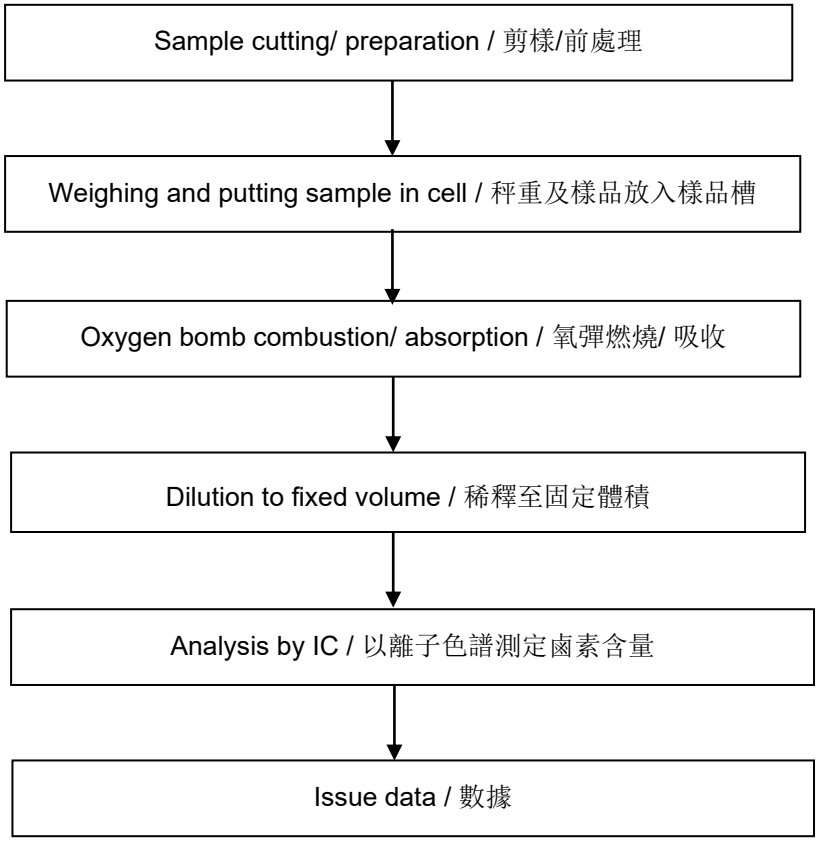
Testing procedure / 測試流程圖 :

RoHS (PBBs/多溴聯苯, PBDEs/多溴二苯醚, BBP/鄰苯二甲酸苯基丁酯、DBP/鄰苯二甲酸二丁酯、DEHP/鄰苯二甲酸二(2-乙基己基)酯、DIBP/鄰苯二甲酸二異丁酯)



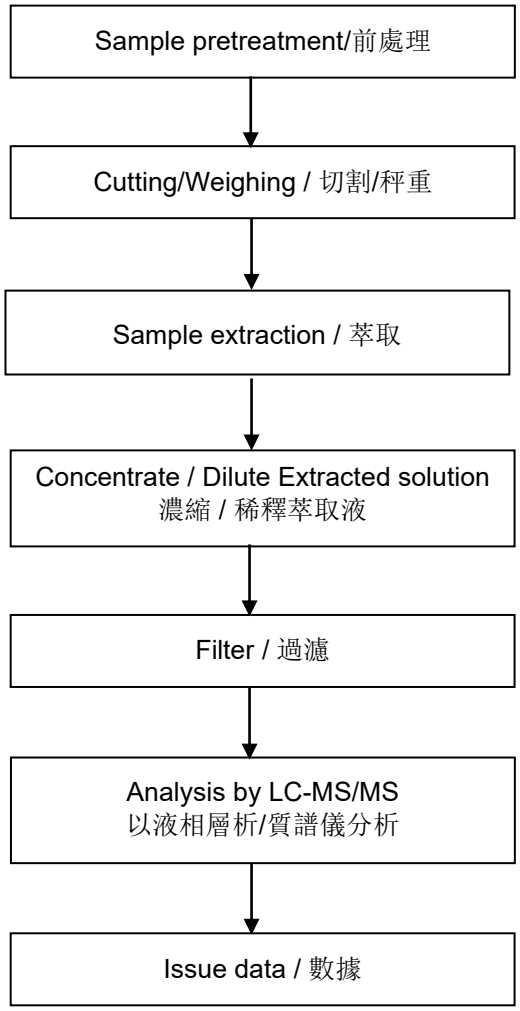
Testing procedure / 測試流程圖 :

Halogen/鹵素



Testing procedure / 測試流程圖 :

PFOS/全氟辛烷磺酸, PFOA/全氟辛酸



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