Test Report
- Products

TÜVRheinland®
Precisely Right.

Report No. 報告號:	238551364a9 001
Client 客戶:	Koan Hao Technology Co Ltd./冠好科技股份有限公司 No.239, Chenggong 3rd Rd., Nantou City, Nantou County 54066, Taiwan, R.O.C./ 台灣 南投市54066南崗工業區成功三路239號
Test item(s) 測試樣品:	1 material(s) of sticker/貼片, transparent/透明
Identification/Model No(s): 樣品描述/規格:	RIGID PVC FILM HOLOGRAPHY STICKER (Model no refer to page 2)
Sample obtaining method: 樣品獲取方式:	Sending by customer
Condition at delivery: 樣品接收狀態:	Test item complete and undamaged.
Sample receiving date: 收樣日期:	2022-12-15
Testing period: 測試週期:	2022-12-15 – 2023-01-11
Place of testing: 測試地點:	TÜV Rheinland Hong Kong Ltd., TÜV Rheinland (Shanghai) Co. Ltd.

Test specification 測試要求:	***Test result 測試結果:***
Testing according to customers 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 Benzylbutyl 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
Halogen (Fluorine, Chlorine, Bromine, Iodine)/鹵素 (氟, 氯, 溴, 碘), Phthalates/鄰苯二甲酸酯類 (DIDP/DINP/DNOP/DMEP/DnHP), Perfluorooctane Sulfonate (PFOS)/全氟辛烷磺酸, Perfluorooctanoic Acid (PFOA)/全氟辛酸, Hexabromocyclododecane (HBCDD)/ 六溴環十二烷, Tetrabromobisphenol-A (TBBP-A)/四溴雙酚-A, Polyvinyl chloride (PVC)/聚氯乙烯, Polycyclic Aromatic Hydrocarbons (PAHs)/多環芳香烴化合物	Refer to result page *參照測試報告*

For and on behalf of
TÜV Rheinland Taiwan Ltd.

Arthur Cheng

2023-01-11
Date *日期*

Arthur Cheng/Project Manager
Name/Position *姓名/職位*

TÜV Rheinland Taiwan Ltd. Softlines

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/。

Model No(s) / 品名型號:

(R2)HPFL50T-、HHPFL50-、HHPFL5006-、HHPFL50HP21、HHPFL50HP59、HPFL50-、HPFL5006-、R2HPFL50W-、R3HPFL50- ; HEHVKT40、HHVKT40、HHVKT40H、HVKT70T、HVKT70#66、HVKT100(E)、HVKT40、HVKT40L06、HVKT40T、HVKT40T75、HVKT40W#2R、HVKT40W#3R、HVKT70#3R、HVPAT100、HVPAT40、R2HVKT40T、R2HVKT40T75、R2HVKT40W 、R2HVKWM350、R3HVKT70DE、HVKT40W、HVKT70、HVKT100J、HVKT100、HVKT40Y、HVKT100W80

* All the above item no. are the same chemical composition/color/manufacturing process according to client's declaration dated on 2022-12-14.

Sample/樣品明細	RIGID PVC FILM HOLOGRAPHY STICKER sticker/貼片 / transparent/透明
Material/材質	TCL221215-09
Lab.-No./實驗室編號	

Test Item/測試項目	**Test Method/ 測試方法**	**Unit / 單位**	**RL**	**Result/結果**
Cadmium (Cd) / 鎘	with ref. to IEC 62321-4:2013 / IEC 62321-5:2013	mg/kg	2	< RL
Lead (Pb) / 鉛		mg/kg	2	< RL
Mercury (Hg) / 汞		mg/kg	2	< RL
Chromium VI (Cr VI) / 六價鉻	with ref. to IEC 62321-7-2:2017	mg/kg	8	< RL
Sum of Polybrominated biphenyls (PBBs) / 多溴聯苯	with ref. to IEC 62321-6:2015	mg/kg	-	< RL
Monobromobiphenyl		mg/kg	5	< RL
Dibromobiphenyl		mg/kg	5	< RL
Tribromobiphenyl		mg/kg	5	< RL
Tetrabromobiphenyl		mg/kg	5	< RL
Pentabromobiphenyl		mg/kg	5	< RL
Hexabromobiphenyl		mg/kg	5	< RL
Heptabromobiphenyl		mg/kg	5	< RL
Octabromobiphenyl		mg/kg	5	< RL
Nonabromobiphenyl		mg/kg	5	< RL
Decabromobiphenyl		mg/kg	5	< RL
Sum of Polybrominated diphenyl ethers (PBDEs) / 多溴二苯醚		mg/kg	-	< RL
Monobromodiphenyl ether		mg/kg	5	< RL
Dibromodiphenyl ether		mg/kg	5	< RL
Tribromodiphenyl ether		mg/kg	5	< RL
Tetrabromodiphenyl ether		mg/kg	5	< RL
Pentabromodiphenyl ether		mg/kg	5	< RL
Hexabromodiphenyl ether		mg/kg	5	< RL
Heptabromodiphenyl ether		mg/kg	5	< RL
Octabromodiphenyl ether		mg/kg	5	< RL
Nonabromodiphenyl ether		mg/kg	5	< RL
Decabromodiphenyl ether		mg/kg	5	< RL

Notes/ 註釋:
- < = less than/小於
- RL = Reporting Limit/報告極限值
- mg/kg = milligram per kilogram/毫克每公斤

Maximum permissible Limit acc. to 2011/65/EU (mg/kg) / 允許限值	**Cd/**鎘	**Cr(VI)/** 六價鉻	**Pb/**鉛	**Hg/**汞	**PBBs/** 多溴聯苯	**PBDEs/** 多溴二苯醚
	100	1000	1000	1000	1000	1000

Sample/樣品明細				RIGID PVC FILM HOLOGRAPHY STICKER sticker/貼片 / transparent/透明
Material/材質				
Lab.-No./實驗室編號				TCL221215-09
Test Item/測試項目	**Test Method/ 測試方法**	**Unit / 單位**	**RL**	**Result/結果**
Phthalates/鄰苯二甲酸酯類				
Benzylbutylphthalate (BBP) / 鄰苯二甲酸苯基丁酯	with ref. to IEC 62321-8:2017	mg/kg	50	< RL
Dibutylphthalate (DBP) / 鄰苯二甲酸二丁酯		mg/kg	50	< RL
Diethylhexylphthalate (DEHP) / 鄰苯二甲酸二(2-乙基己基)酯		mg/kg	50	< RL
Diisobutylphthalate (DIBP) / 鄰苯二甲酸二異丁酯		mg/kg	50	< RL
Diisodecylphthalate (DIDP) / 鄰苯二甲酸二異癸酯		mg/kg	50	< RL
Diisononylphthalate (DINP) / 鄰苯二甲酸二異壬酯		mg/kg	50	< RL
Di-n-octylphthalate (DNOP) / 鄰苯二甲酸二正辛酯		mg/kg	50	< RL
Bis (methoxyethyl)phthalate (DMEP)/ 鄰苯二甲酸二(2-甲氧基乙基)酯		mg/kg	50	< RL
Di-n-hexylphthalate (DnHP) / 鄰苯二甲酸二正己酯		mg/kg	50	< RL
Halogen / 鹵素				
Fluorine (F) / 氟	with ref. to EN 14582:2016, IC	mg/kg	50	< RL
Chlorine (Cl) / 氯		mg/kg	50	440000
Bromine (Br) / 溴		mg/kg	50	< RL
Iodine (I) / 碘		mg/kg	50	< RL
Perfluorooctane Sulfonate (PFOS) / 全氟辛烷磺酸	with ref. to CEN/TS 15968:2010	mg/kg	0.01	< RL
Perfluorooctanoic Acid (PFOA) / 全氟辛酸	with ref. to CEN/TS 15968:2010	mg/kg	0.01	< RL
Hexabromocyclododecane (HBCDD) / 六溴環十二烷	solvent extraction / GC-MS	mg/kg	10	< RL
Tetrabromobisphenol-A (TBBP-A) / 四溴雙酚-A	USEPA 3540C / GC-MS	mg/kg	10	< RL
Polyvinyl chloride (PVC) / 聚氯乙烯	FTIR	--	--	**Positive**

Notes/ 註釋:
- < = less than/小於 ; - RL = Reporting Limit/報告極限值 ; - mg/kg = milligram per kilogram/毫克每公斤 ;
- Negative = 陰性 ; Positive = 陽性
- The requirement of PFOS is based on (EU) No.757/2010 amending (EC) No. 850/2004 on persistent organic pollutants(POPs) as regards to Annex I / PFOS 依據 POPs 修正(EC) No. 850/2004 的版本(EU) No.757/2010 之附錄 I: Substances or in preparations/物質或製備須 ≤ 10 mg/kg; Semi-finished products or articles, or the part thereof/半成品, 成品或零部件須 < 1000 mg/kg; Textiles or other coated materials/紡織品或塗層材料須 < 1 μg/m²

Maximum permissible Limit acc. to (EU) 2015/863 (mg/kg) / 允許限值	**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
	1000	1000	1000	1000

Sample/樣品明細				RIGID PVC FILM HOLOGRAPHY STICKER sticker/貼片 / transparent/透明
Material/材質				
Lab.-No./實驗室編號				TCL221215-09
Test Item/測試項目	**Test Method/ 測試方法**	**Unit / 單位**	**RL**	**Result/結果**
Polycyclic Aromatic Hydrocarbons (PAHs) /多環芳香烴化合物				
Anthracene/蒽	AfPS GS 2019:01 PAK	mg/kg	0.2	< RL
Benz[a]anthracene/苯並[a]蒽		mg/kg	0.2	< RL
Benzo[a]pyrene (BaP)/苯並[a]芘		mg/kg	0.2	< RL
Benzo[b]fluoranthene/苯並[b]熒蒽		mg/kg	0.2	< RL
Benzo[e]pyrene/苯並[e]芘		mg/kg	0.2	< RL
Benzo[ghi]perylene/苯並[ghi] 苝		mg/kg	0.2	< RL
Benzo[j]fluoranthene/苯並[j]熒蒽		mg/kg	0.2	< RL
Benzo[k]fluoranthene/苯並[k]熒蒽		mg/kg	0.2	< RL
Chrysene/䓛		mg/kg	0.2	< RL
Dibenz[ah]anthracene/二苯並[ah]蒽		mg/kg	0.2	< RL
Fluoranthene/熒蒽		mg/kg	0.2	< RL
Indeno[1,2,3-cd]pyrene/ 茚並[1,2,3-cd] 芘		mg/kg	0.2	< RL
Naphthalene/萘		mg/kg	0.2	0.4
Phenanthrene/菲		mg/kg	0.2	< RL
Pyrene/芘		mg/kg	0.2	< RL
Sum/總量 of 蒽 (Anthracene), 熒蒽(Fluorathene), 菲(Phenanthrene), 芘(Pyrene)		mg/kg	0.2	< RL
Sum/總量 of 15 PAHs		mg/kg	0.2	0.4

Notes/ 註釋:
- < = less than/小於
- RL = Reporting Limit/報告極限值
- mg/kg = milligram per kilogram/毫克每公斤
- PAH maximum permissible limits requirement from the GS-Mark Approval published by the German Federal Institute for Occupational Safety and Health (BAuA)/ PAH 最大允許限值來自德國聯邦職業安全與健康研究所(BAuA)發佈的 GS-Mark 認證。

Parameter 項目	Unit 單位	Category 1/第 1 類	Category 2/第 2 類		Category 3/第 3 類	
		Materials intended to be put into the mouth or materials of toy for children with long term intended skin contact (longer than 30 s) 意圖放入口中的材料，或與皮膚長期接觸的玩具材料(大於 30 秒)	Materials not covered by category 1, with foreseeable long term skin contact (longer than 30 s) or repeated short-term skin contact 不屬於 1 類，且可預見的會與皮膚長期接觸(大於 30 秒)或多次短期接觸		Materials not covered by category 1 or 2, with foreseeable short term contact (shorter than 30 s) 不屬於 1 類或 2 類的材料，且可預見會與皮膚多次短期接觸(小於 30 秒)	
			Cat. 2a Use by children / 類別 2a 兒童用品***	Cat. 2b Other consumer products / 類別 2b 其他消費品	Cat. 3a Use by children / 類別 3a 兒童用品***	Cat. 3b Other consumer products / 類別 3b 其他消費品
苯並[a]芘 (Benzo[a]pyrene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[e]芘 (Benzo[e]pyrene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[a]蒽 (Benzo[a]anthracene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[b]熒蒽 (Benzo[b]fluoranthene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[j] 熒蒽 (Benzo[j]fluoranthene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[k] 熒蒽 (Benzo[k]fluoranthene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
䓛 (Chrysene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
二苯並[a,h]蒽 (Dibenzo[a,h]anthracene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
苯並[g,h,i]苝 (Benzo[g,h,i]perylene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
茚並[1,2,3-c,d]芘 (Indeno[1,2,3-c,d]pyrene)	mg/kg	<0.2	<0.2	<0.5	<0.5	<1
萘 (Naphthalene)	mg/kg	<1	<2	<2	<10	<10
Sum/總量 of 蒽 (Anthracene), 熒蒽(Fluorathene), 菲(Phenanthrene), 芘(Pyrene)	mg/kg	<1	<5	<10	<20	<50
Sum/總量 of 15 PAHs	mg/kg	<1	<5	<10	<20	<50

Limit: Specific evaluation required according to type of foreseeable use.
限值: 根據可預見的用途類型進行具體評估。

** Single components with an amount of <0.2 mg/kg were not considered by the calculation of the sum. In the case of all PAHs were not detected, the result is stated < RL.
** 單一組分含量 <0.2 毫克/千克 不計入總和計算。如 PAHs 均未檢測到，結果顯示為 < RL。

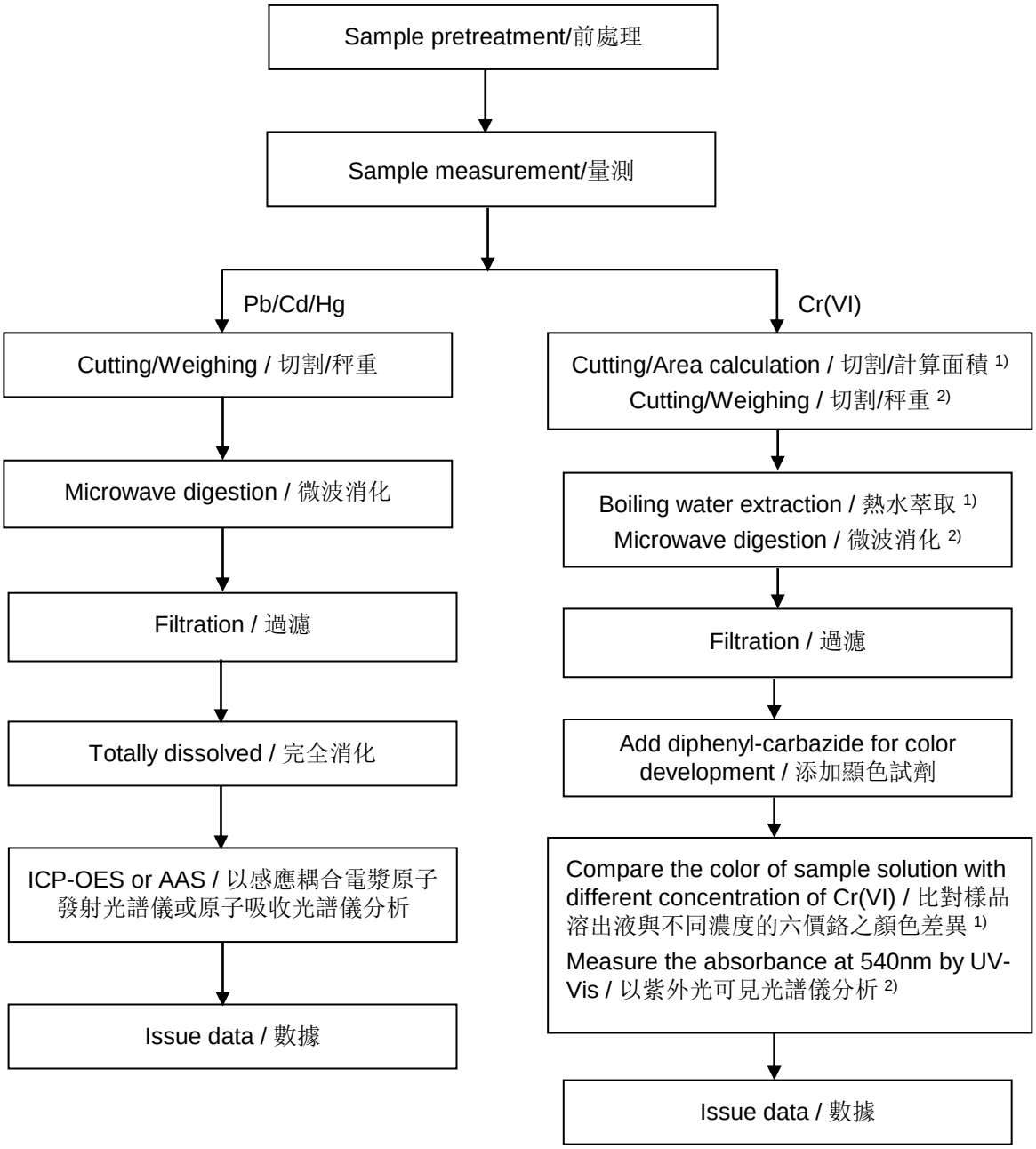
*** The definition of "child" means persons before the age of 14 years. “Use by children” includes both active and passive direct contact by children.
***兒童意指為小於14歲之人。兒童用品包含主動或被動的被兒童接觸的產品。

Test Sample/測試樣品



Testing procedure / 測試流程圖 :

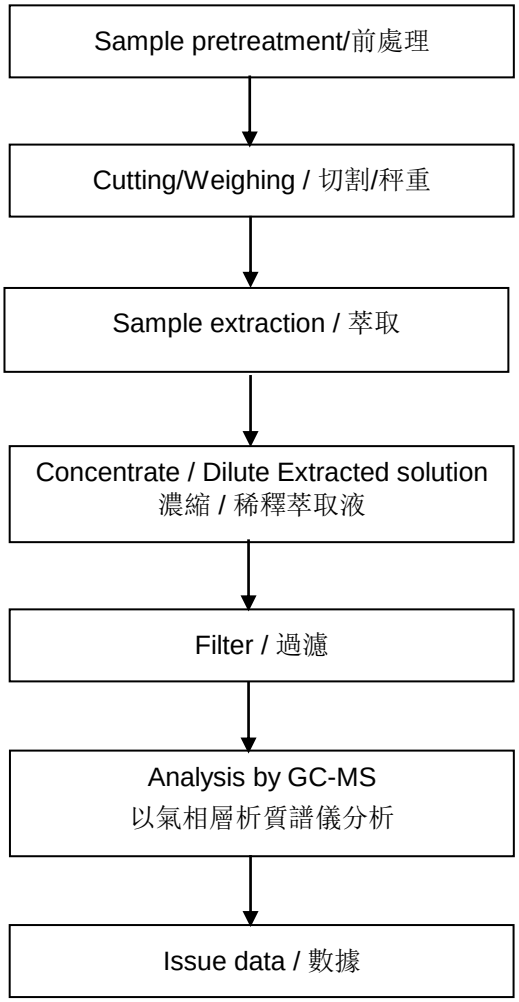
RoHS (Pb/鉛, Cd/鎘, Hg/汞, Cr(VI)/六價鉻) [3)]



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
[3)] These samples were dissolved totally by pre-conditioning method according to above flow chart (Cr6+ test method excluded) / 根據上述流程圖的條件,樣品已完全溶解 (六價鉻測試方法除外)

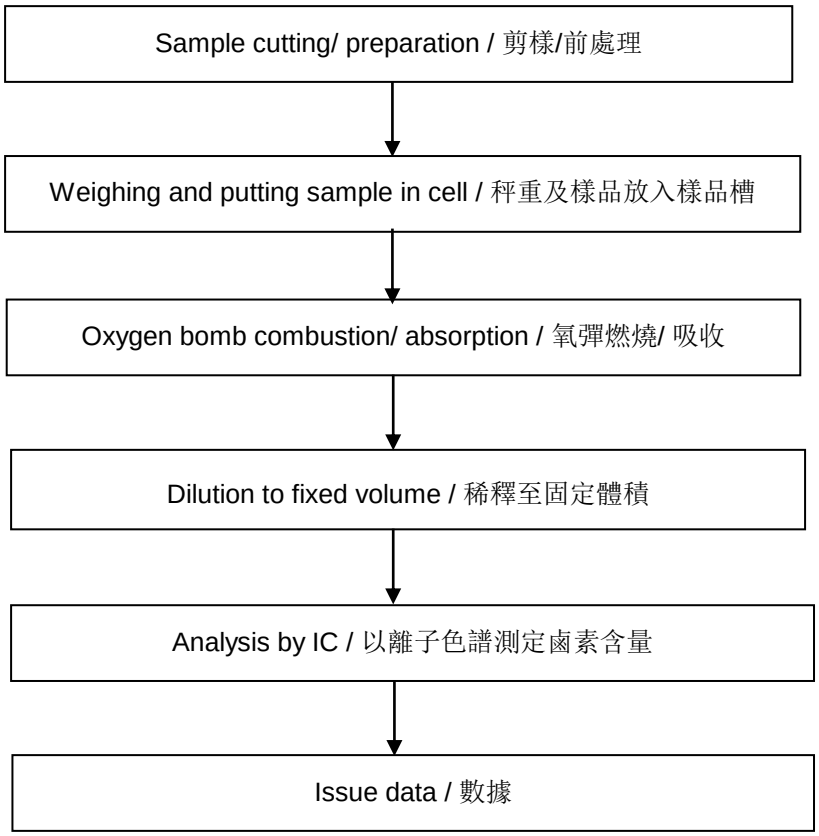
Testing procedure / 測試流程圖 :

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);
Phthalates/鄰苯二甲酸酯類, HBCDD/六溴環十二烷, TBBP-A/四溴雙酚-A, PAHs/多環芳香烴化合物



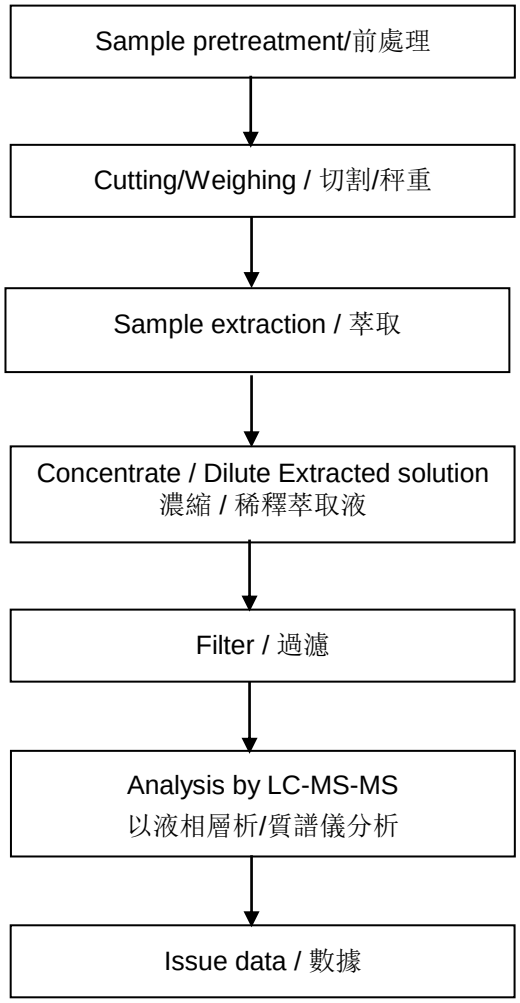
Testing procedure / 測試流程圖：

Halogen/鹵素



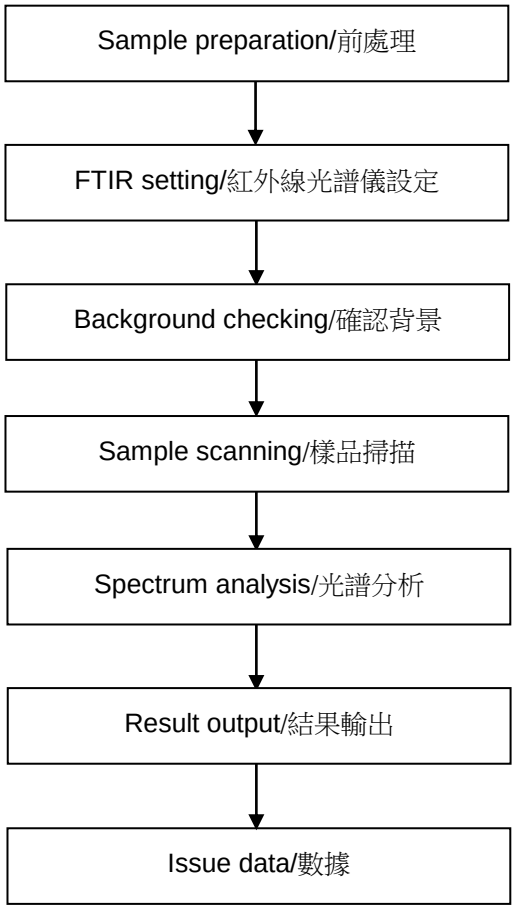
Testing procedure / 測試流程圖：

PFOS/全氟辛烷磺酸, PFOA/全氟辛酸



Testing procedure / 測試流程圖：

PVC/聚氯乙烯



--- End of Test-Report / 此報告結束---