

檢測報告 Test Report

報告編號 ECL01I06723509E
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以下測試之樣品及樣品信息由申請者提供並確認 The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

樣品名稱 Sample Name 防焊綠色環保油墨 GREEN MATERIAL OF SOLDER MASK

樣品顏色 Color 綠色 GREEN

樣品型號 Part No. QL-05G

樣品接收日期 2016.11.16

Sample Received Date Nov. 16, 2016

樣品檢測日期 2016.11.16-2016.11.22

Testing Period Nov. 16, 2016 to Nov. 22, 2016

檢測要求 請參見下頁。

Test Requested Please refer to the following page(s).

檢測依據/檢測結果 請參見下頁。

Test Method/Test Result(s) Please refer to the following page(s).

主 檢
Tested by

王 东

審 核
Reviewed by

陶 英

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Approved by

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日 期
Date

2016.11.22

實驗室高級經理 Senior Laboratory Manager

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檢測要求

1. 根據客戶要求, 對所提交樣品中的鉛(Pb), 鎘(Cd), 汞(Hg), 六價鉻(Cr(VI)), 多溴聯苯(PBBs), 多溴二苯醚(PBDEs), 禁用偶氮染料, 氟(F), 氯(Cl), 溴(Br), 碘(I), 銻(Sb), 砷(As), 鉍(Be), 六溴環十二烷(HBCDD), 富馬酸二甲酯(DMF), 多氯三聯苯(PCTs), 多氯聯苯(PCBs), 多氯化萘(PCNs), 全氟辛烷磺酸鹽(PFOS), 全氟辛酸(PFOA), 短鏈氯化石蠟(SCCPs), 甲醛, 聚氯乙烯(PVC), 石棉, 有機錫化合物, 鄰苯二甲酸酯, 臭氧層破壞物質進行測試。
2. 根據客戶要求, 參照法規(EC) No 1907/2006(REACH), 對所提交樣品中 2 種高關注物質(SVHC)進行篩選測試。

Test Requested

1. As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyl(PBBs), Polybrominated Diphenyl Ethers(PBDEs), Azo Colorants, Fluorine(F), Chlorine(Cl), Bromine(Br), Iodine(I), Antimony(Sb), Arsenic(As), Beryllium(Be), Hexabromocyclododecane (HBCDD), Dimethyl fumarate(DMF), Polychlorinated Triphenyls(PCTs), Polychlorinated Biphenyls(PCBs), Polychlorinated Naphthalene(PCNs), Perfluorooctane Sulfonates(PFOS), Perfluorooctanoic Acid(PFOA), Short Chain Chlorinated Paraffins(SCCPs), Formaldehyde, Polyvinyl Chloride (PVC), Asbestos, Organotin compounds, Phthalates, Ozone Depleting Substances in the submitted sample(s).
2. As specified by client, to screen the 2 substances of very high concern (SVHC) under Regulation(EC) No 1907/2006 of REACH in the submitted sample(s).

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1.1 檢測依據 Test Method

測試項目 Tested Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
鉛(Pb) Lead (Pb)	IEC 62321-5:2013 Ed.1.0	ICP-OES
鎘(Cd) Cadmium (Cd)	IEC 62321-5:2013 Ed.1.0	ICP-OES
汞(Hg Mercury (Hg)	IEC 62321-4:2013 Ed.1.0	ICP-OES
六價鉻(Cr(VI)) Hexavalent Chromium (Cr(VI))	IEC 62321:2008 Ed.1 Annex C	UV-Vis
多溴聯苯(PBBs) Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚(PBDEs) Polybrominated Diphenyl Ethers(PBDEs)	IEC 62321-6:2015	GC-MS
氟(F) Fluorine(F)	參考 BS EN 14582: 2007 Refer to BS EN 14582: 2007	IC
氯(Cl) Chlorine(Cl)	參考 BS EN 14582: 2007 Refer to BS EN 14582: 2007	IC
溴(Br) Bromine(Br)	參考 BS EN 14582: 2007 Refer to BS EN 14582: 2007	IC
碘(I) Iodine (I)	參考 BS EN 14582: 2007 Refer to BS EN 14582: 2007	IC
砷(As) Arsenic (As)	參考 US EPA 3052:1996 & US EPA 6010C:2007 Refer to US EPA 3052:1996 & US EPA 6010C:2007	ICP-OES
銻(Sb) Antimony (Sb)	參考 US EPA 3052:1996 & US EPA 6010C:2007 Refer to US EPA 3052:1996 & US EPA 6010C:2007	ICP-OES
鈹(Be) Beryllium(Be)	參考 US EPA 3052:1996 & US EPA 6010C:2007 Refer to US EPA 3052:1996 & US EPA 6010C:2007	ICP-OES
全氟辛酸(PFOA) Perfluorooctanoic Acid(PFOA)	參考 US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS

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測試項目 Tested Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
全氟辛烷磺酸鹽(PFOS) Perfluorooctane Sulfonates(PFOS)	參考 US EPA 3550C:2007 & US EPA 8321B:2007 Refer to US EPA 3550C:2007 & US EPA 8321B:2007	LC-MS-MS
六溴環十二烷(HBCDD) Hexabromocyclododecane (HBCDD)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS
多氯化萘(PCNs) Polychlorinated Naphthalene (PCNs)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS
多氯三聯苯(PCTs) Polychlorinated Triphenyls (PCTs)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS
多氯聯苯(PCBs) Polychlorinated Biphenyls(PCBs)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS
鄰苯二甲酸酯 Phthalates	參考 IEC 62321-8 CDV Refer to IEC 62321-8 CDV	GC-MS
短鏈氯化石蠟(SCCPs) Short Chain Chlorinated Paraffins(SCCPs)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC- MS
有機錫化合物 Organotin compounds	參考 ISO 17353:2004(E) Refer to ISO 17353:2004(E)	GC-MS
富馬酸二甲酯(DMF) Dimethyl Fumarate (DMF)	參考 US EPA 3550C:2007 & US EPA 8270D:2007 Refer to US EPA 3550C:2007 & US EPA 8270D:2007	GC-MS

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測試項目 Tested Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
臭氧層破壞物質 Ozone Depleting Substance	參考 US EPA 8260C:2006 Refer to US EPA 8260C:2006	GC-MS
偶氮染料 Azo Colorants	EN 14362-1:2012(E)	GC-MS /HPLC
聚氯乙烯(PVC) Polyvinyl Chloride (PVC)	/	FT-IR
石棉 Asbestos	參考 ISO 22262-1:2012(E) Refer to ISO 22262-1:2012(E)	PLM
甲醛 Formaldehyde	參考 ISO 14184-1:2011(E) Refer to ISO 14184-1:2011(E)	UV-Vis

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1.2 檢測結果 Test Result(s)

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鉛 Lead (Pb)	N.D.	2 mg/kg
鎘 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六價鉻 Hexavalent Chromium (Cr(VI))	N.D.	2 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
多溴聯苯 Polybrominated Biphenyls(PBBs)		
一溴聯苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴聯苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴聯苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴聯苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴聯苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴聯苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴聯苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴聯苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴聯苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴聯苯 Decabromobiphenyl	N.D.	5 mg/kg
多溴二苯醚 Polybrominated Diphenyl Ethers(PBDEs)		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

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測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
砷(As)Arsenic (As)	N.D.	10 mg/kg
銻(Sb)Antimony (Sb)	N.D.	5 mg/kg
鈹(Be)Beryllium(Be)	N.D.	10 mg/kg
全氟辛烷酸(PFOA) Perfluorooctanoic Acid(PFOA)	N.D.	5 mg/kg
全氟辛烷磺酸鹽(PFOS) Perfluorooctane Sulfonates(PFOS)	N.D.	5 mg/kg
六溴環十二烷(HBCDD) Hexabromocyclododecane (HBCDD)	N.D.	5 mg/kg
多氯化萘(PCNs) Polychlorinated Naphthalene (PCNs)	N.D.	5 mg/kg
多氯三聯苯(PCTs) Polychlorinated Triphenyls (PCTs)	N.D.	5 mg/kg
短鏈氯化石蠟(SCCPs) Short Chain Chlorinated Paraffins(SCCPs)	N.D.	100 mg/kg
富馬酸二甲酯(DMF) Dimethyl Fumarate (DMF)	N.D.	0.1 mg/kg
聚氯乙烯 Polyvinyl Chloride(PVC)	陰性 Negative	/
甲醛 Formaldehyde	N.D.	16mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
多氯聯苯 Poly chlorinated Biphenyls(PCBs)		
一氯聯苯 Monochlorobiphenyl	N.D.	5 mg/kg
二氯聯苯 Dichlorobiphenyl	N.D.	5 mg/kg
三氯聯苯 Trichlorobiphenyl	N.D.	5 mg/kg
四氯聯苯 Tetrachlorobiphenyl	N.D.	5 mg/kg
五氯聯苯 Pentachlorobiphenyl	N.D.	5 mg/kg
六氯聯苯 Hexachlorobiphenyl	N.D.	5 mg/kg
七氯聯苯 Heptachlorobiphenyl	N.D.	5 mg/kg
八氯聯苯 Octachlorobiphenyl	N.D.	5 mg/kg
九氯聯苯 Nonachlorobiphenyl	N.D.	5 mg/kg
十氯聯苯 Decachlorobiphenyl	N.D.	5 mg/kg

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測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
有機錫化合物 Organotin compounds		
三丁基錫(TBT) Tributyl Tins (TBT)	N.D.	5 mg/kg
二辛基錫(DOT) Dioctyl Tins (DOT)	N.D.	5 mg/kg
二丁基錫(DBT) Dibutyl Tins (DBT)	N.D.	5 mg/kg
三苯基錫(TPhT) Triphenyl Tins (TPhT)	N.D.	5 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鄰苯二甲酸酯 Phthalates		
鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50mg/kg
鄰苯二甲酸二正丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50mg/kg
鄰苯二甲酸二戊酯 Dipentyl phthalate (DnPP) CAS#:131-18-0	N.D.	50mg/kg
鄰苯二甲酸丁基苄酯 Benzylbutyl phthalate(BBP) CAS#:85-68-7	N.D.	50 mg/kg
鄰苯二甲酸二(2-乙基己基)酯 Bis(2-ethyl(hexyl)) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
鄰苯二甲酸二異壬酯 Diisononyl phthalate(DINP) CAS#:28553-12-0,68515-48-0	N.D.	50 mg/kg
鄰苯二甲酸二正辛酯 Di-n-octyl phthalate(DNOP) CAS#:117-84-0	N.D.	50 mg/kg
鄰苯二甲酸二異癸酯 Diisodecyl phthalate(DIDP) CAS#:26761-40-0,68515-49-1	N.D.	50 mg/kg
鄰苯二甲酸二己酯 Di-n-hexyl phthalate (DNHP) CAS#:84-75-3	N.D.	50mg/kg

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測試項目 Tested Item(s)	CAS No.	結果 Result	方法檢出限 MDL
臭氧層破壞物質(ODS) Ozone Depleting Substanc(ODS)			
氯氟化碳(CFCs) Chlorofluorocarbon (CFCs)			
三氯一氟甲烷(CFC-11) Trichloromonofluoromethane (CFC-11)	75-69-4	N.D.	5 mg/kg
二氯二氟甲烷(CFC-12) Dichlorodifluoromethane(CFC-12)	75-71-8	N.D.	5 mg/kg
1,1,1-三氯三氟乙烷(CFC-113) 1,1,1-Trichlorotrifluoroethane(CFC-113)	354-58-5	N.D.	5 mg/kg
1,2-二氯-1,1,2,2-四氟乙烷(CFC-114) 1,2-dichloro-1,1,2,2-tetrafluoroethane(CFC-114)	76-14-2	N.D.	5 mg/kg
一氯五氟乙烷(CFC-115) Chloropentafluoroethane(CFC-115)	76-15-3	N.D.	5 mg/kg
哈龍 Halon			
一溴一氯二氟甲烷 (Halon-1211) Bromochlorodifluoromethane(Halon-1211)	353-59-3	N.D.	5 mg/kg
一溴三氟甲烷 (Halon-1301) BromotrifluoroMethane (Halon-1301)	75-63-8	N.D.	5 mg/kg
1,2-二溴-1,1,2,2-四氟乙烷 (Halon-2402) 1,2-Dibromo-1,1,2,2-tetrafluoroethane (Halon-2402)	124-73-2	N.D.	5 mg/kg
其它全鹵化氟氯化碳(CFCs) Other Fully Halogenated(CFCs)			
一氯三氟甲烷 (CFC-13) Monochlorotrifluoromethane(CFC-13)	75-72-9	N.D.	5 mg/kg
四氯化碳(CCl4) Carbon tetrachloride (CCl4)			
四氯化碳 Carbon Tetrachloride	56-23-5	N.D.	5 mg/kg
甲基氯仿 methyl chloroform			
1,1,1-三氯乙烷 1,1,1-Trichlororoethane	71-55-6	N.D.	5 mg/kg
氫氯氟烴(HCFC) Hydrochlorofluorocarbon (HCFCs)			
二氯一氟甲烷(HCFC-21) Fluorodichloromethane(HCFC-21)	75-43-4	N.D.	5 mg/kg
一氯二氟甲烷(HCFC-22) Chlorodifluoromethane(HCFC-22)	75-45-6	N.D.	5 mg/kg

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測試項目 Tested Item(s)	CAS No.	結果 Result	方法檢出限 MDL
1,2,2-三氯-1,1-二氟乙烷(HCFC-122) 1,2,2-trichloro-1,1-difluoroethane(HCFC-122)	354-21-2	N.D.	5 mg/kg
1,1-二氯-2,2,2-三氟乙烷(HCFC-123) 2,2-Dichloro-1,1,1-trifluoroethane (HCFC-123)	306-83-2	N.D.	5 mg/kg
2-氯-1,1,1,2-四氟乙烷(HCFC-124) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	2837-89-0	N.D.	5 mg/kg
二氯二氟乙烷(HCFC-132) 1,2-dichloro-1,1-difluoroethane(HCFC-132)	1649-08-7	N.D.	5 mg/kg
1,1-二氯-1-氟乙烷(HCFC-141b) 1,1-Dichloro-1-fluoroethane(HCFC-141b)	1717-00-6	N.D.	5 mg/kg
1- 氯-1,1-二氟乙烷(HCFC-142b) 1-chloro-1,1-difluoroethane (HCFC-142b)	75-68-3	N.D.	5 mg/kg
1,3,3-三氯-1,1-二氟丙烷(HCFC-242) 1,3,3-Trichloro-1,1-difluoropropane(HCFC-242)	460-63-9	N.D.	5 mg/kg
2, 3-二氯-1, 1, 1-三氟丙烷(HCFC-243) 2,3-dichloro-1,1,1-trifluoropropane(HCFC-243)	338-75-0	N.D.	5 mg/kg
一氯-2,2,3,3-四氟丙烷(HCFC-244) 1-Chloro-2,2,3,3-tetrafluoropropane (HCFC-244)	679-85-6	N.D.	5 mg/kg
含氫溴氟烴 (HBFCs) Hydrobromofluorocarbon (HBFCs)			
2,2,3-三溴-1,1,1-三氟丙烷 2,2,3-Tribromo-1,1,1-trifluoropropane	421-90-9	N.D.	5 mg/kg
1,2-二溴-3,3,3-三氟丙烷 1,2-Dibromo-3,3,3-trifluoropropane	431-21-0	N.D.	5 mg/kg
一溴-1,1,1-三氟丙烷 3-Bromo-1,1,1-trifluoropropane	460-32-2	N.D.	5 mg/kg
溴氯甲烷(CH₂BrCl) Bromochloromethane (CH₂BrCl)			
溴氯甲烷 Bromochloromethane	74-97-5	N.D.	5 mg/kg
甲基溴(CH₃Br) Methyl bromide (CH₃Br)			
一溴甲烷 Bromomethane	74-83-9	N.D.	5 mg/kg

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編號 No.	芳香胺 Aromatic Amines	結果 Result	方法檢出限 MDL
1	4-氨基聯苯 4-aminodiphenyl CAS# : 92-67-1	N.D.	5mg/kg
2	聯苯胺 benzidine CAS# : 92-87-5	N.D.	5mg/kg
3	4-氯-鄰甲基苯胺 4-chloro-o-toluidine CAS# : 95-69-2	N.D.	5mg/kg
4	2-萘胺 2-naphthylamine CAS# : 91-59-8	N.D.	5mg/kg
5	鄰氨基偶氮甲苯 o-aminoazotoluene CAS# : 97-56-3	N.D.	5mg/kg
6	5-硝基-鄰甲基苯胺 5-nitro-o- toluidine CAS# : 99-55-8	N.D.	5mg/kg
7	對氯苯胺 p-chloroaniline CAS# : 106-47-8	N.D.	5mg/kg
8	2,4-二氨基苯甲醚 2,4-diaminoanisole CAS# : 615-05-4	N.D.	5mg/kg
9	4,4'-二氨基二苯甲烷 4,4'-diaminodiphenylmethane CAS# : 101-77-9	N.D.	5mg/kg
10	3,3'-二氯聯苯胺 3,3'-dichlorobenzidine CAS# : 91-94-1	N.D.	5mg/kg
11	3,3'-二甲氧基聯苯胺 3,3'-dimethoxybenzidine CAS# : 119-90-4	N.D.	5mg/kg
12	3,3'-二甲基聯苯胺 3,3'-dimethylbenzidine CAS# : 119-93-7	N.D.	5mg/kg
13	3,3'-二甲基-4,4'-二氨基二苯甲烷 3,3'-dimethyl-4,4'-diaminodiphenylmethane CAS# : 838-88-0	N.D.	5mg/kg

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編號 No.	芳香胺 Aromatic Amines	結果 Result	方法檢出限 MDL
14	2-甲氧基-5-甲基苯胺 p-cresidine CAS# : 120-71-8	N.D.	5mg/kg
15	4,4'-亞甲基-二-(2-氯苯胺) 4,4'-methylene-bis(2-chloroaniline) CAS# : 101-14-4	N.D.	5mg/kg
16	4,4'-二氨基二苯醚 4,4'-oxydianiline CAS# : 101-80-4	N.D.	5mg/kg
17	4,4'-二氨基二苯硫醚 4,4'-thiodianiline CAS# : 139-65-1	N.D.	5mg/kg
18	鄰甲苯胺 o-toluidine CAS# : 95-53-4	N.D.	5mg/kg
19	2,4-二氨基甲苯 2,4-toluylenediamine CAS# : 95-80-7	N.D.	5mg/kg
20	2,4,5-三甲基苯胺 2,4,5-trimethylaniline CAS# : 137-17-7	N.D.	5mg/kg
21	鄰氨基苯甲醚 o-anisidine CAS# : 90-04-0	N.D.	5mg/kg
22	4-氨基偶氮苯 p-aminoazobenzene CAS# : 60-09-3	N.D.	5mg/kg
* ¹ 23	2,4-二甲基苯胺 2,4-xylidine CAS# : 95-68-1	N.D.	5mg/kg
* ¹ 24	2,6-二甲基苯胺 2,6-xylidine CAS# : 87-62-7	N.D.	5mg/kg

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物質類別 Material Category	物質/CAS 號 Substances/CAS Numbers	結果 Result
石棉 Asbestos	溫石棉 Chrysotile /12001-29-5	未檢出 N.A.D.
	青石棉 Crocidolite / 12001-28-4	未檢出 N.A.D.
	鐵石棉(鐵閃石)Amosite (Grunerite)/ 12172-73-5	未檢出 N.A.D.
	纖維狀透閃石 Fibrous Tremolite / 77536-68-6	未檢出 N.A.D.
	纖維狀陽起石 Fibrous Actinolite / 77536-66-4	未檢出 N.A.D.
	纖維狀直閃石 Fibrous Anthophyllite / 77536-67-5	未檢出 N.A.D.

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
鹵素 Halogen		
氟 Fluorine (F)	N.D.	10 mg/kg
氯 Chlorine (Cl)	262 mg/kg	10 mg/kg
溴 Bromine (Br)	N.D.	10 mg/kg
碘 Iodine (I)	N.D.	10 mg/kg

測試樣品/部位描述 綠色油墨

Tested Sample/Part Description Green ink

備註: 對於檢測鉛, 鎘, 汞, 砷, 銻, 鉍之樣品已完全溶解。

-N.D. = 未檢出 (小於方法檢出限)

-mg/kg = ppm = 百萬分之一

-陰性表示不含有聚氯乙烯(PVC)

-未檢出 = 未檢出石棉, 未發現任何石棉成分 (小於檢出限)

*¹=23-24 項的測試結果僅供參考。

Remark: The sample had been dissolved totally tested for Lead, Cadmium, Mercury, Arsenic, Antimony, Beryllium.

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

- Negative = Not contained Polyvinyl Chloride (PVC)

-N.A.D.= No Asbestos Detected(<Limit of detection)

*¹= The results of additional amines (23-24) are reported for reference only.

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石棉符合性聲明

- 檢出限：對於樣品中纖維或者纖維束的檢出及分辨能力定義為該方法的檢出限。對於本方法來說，經過適當的前處理步驟後，檢出限能夠低於 0.1%
- 如果檢出石棉，報告上將體現含量範圍：微量（<0.1%），0.1%~5%，5%~50%和 50%~100%。
- 針對含有經過研磨處理的石棉纖維或者纖維體積（長度、直徑）過小的製品，使用偏光顯微鏡方法很難發現其中的石棉纖維的存在。
- 華測檢測石棉檢測中心按照國際標準建立了嚴格的品質監督和品質保證程式，並定期參加英國 AIMS*能力比對計畫（一年四次）以驗證實驗室的檢測能力。
- *AIMS 是一項國際實驗室間針對材料中石棉檢測的能力比對計畫，它是由代表英國職業健康安全委員會（HSE）的職業健康安全實驗室（HSL）組織舉辦的。

Asbestos Compliance Statement

- The limit of detection of this method is defined as the detection and identification of one fibre or fibre bundle in the amount of sample examined. With appropriate matrix reduction procedures that are tailored to the nature of the sample, the limit of detection can be significantly lower than 0.1%
- The estimated concentration(s) of the asbestos varieties detected in ranges is/are as follows: Trace (<0.1%), 0.1%~5%, 5%~50%, and 50%~100%
- Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarized light microscopy. These materials often contain milled asbestos with too small fibre diameter and length to be detected.
- CTI Asbestos Testing Center has established strict quality assurance and supervision procedures in accordance with international standard. And the laboratory participates in the AIMS* every year (four times per year) to confirm our proficiency.
- *The Asbestos in Materials Scheme (AIMS) is an international inter-laboratory testing scheme, and it is managed by the Health and Safety Laboratory (HSL) which on behalf of the Health and Safety Executive (HSE) of UK

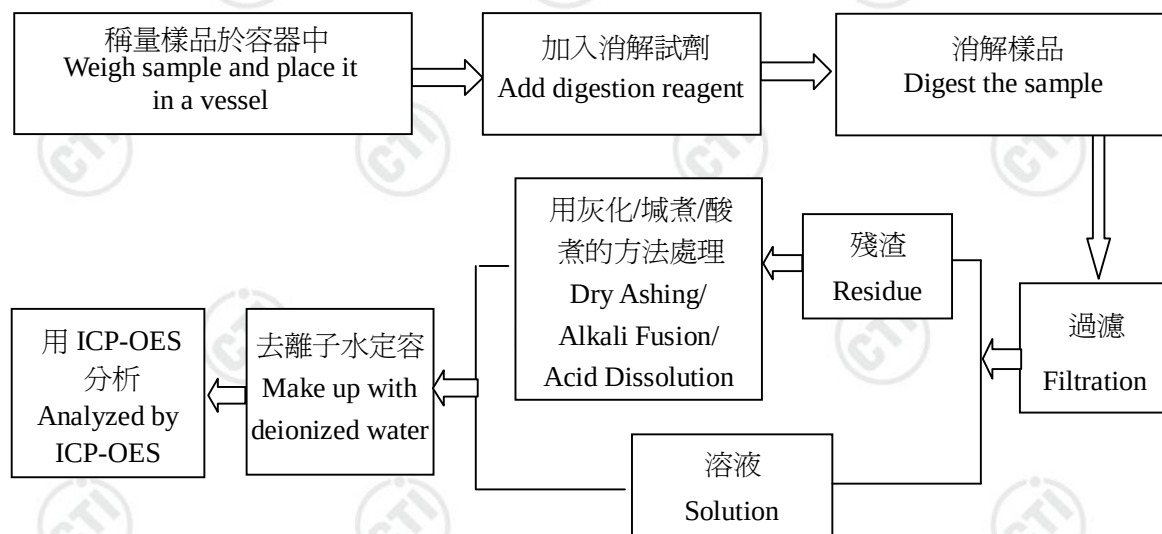
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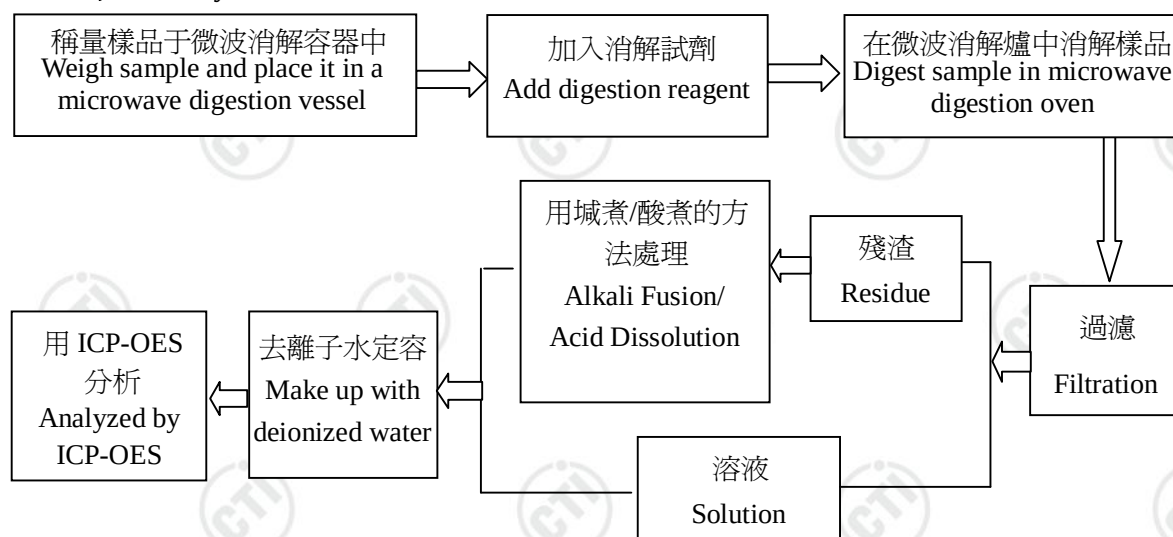
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1.3 檢測流程 Test process

1.3.1. 鉛, 鎘 Lead, Cadmium



1.3.2. 汞 Mercury

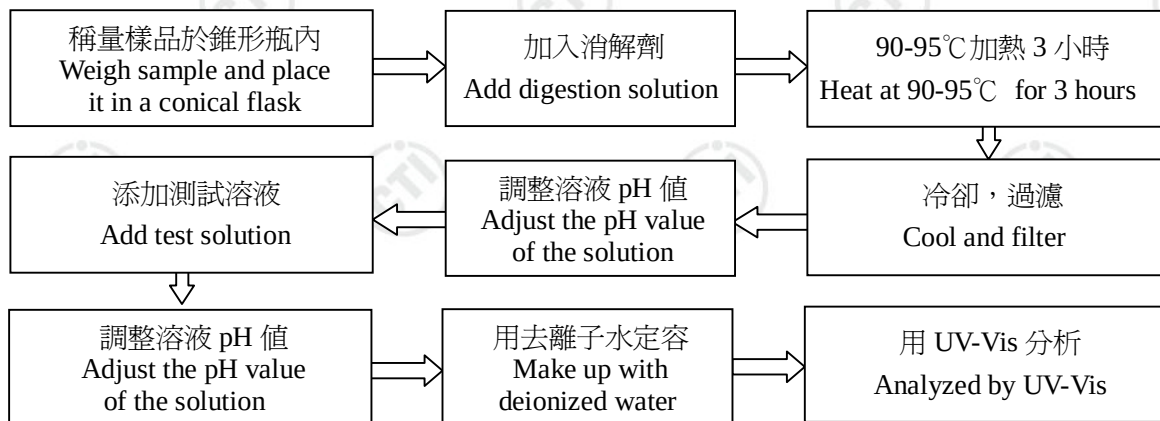


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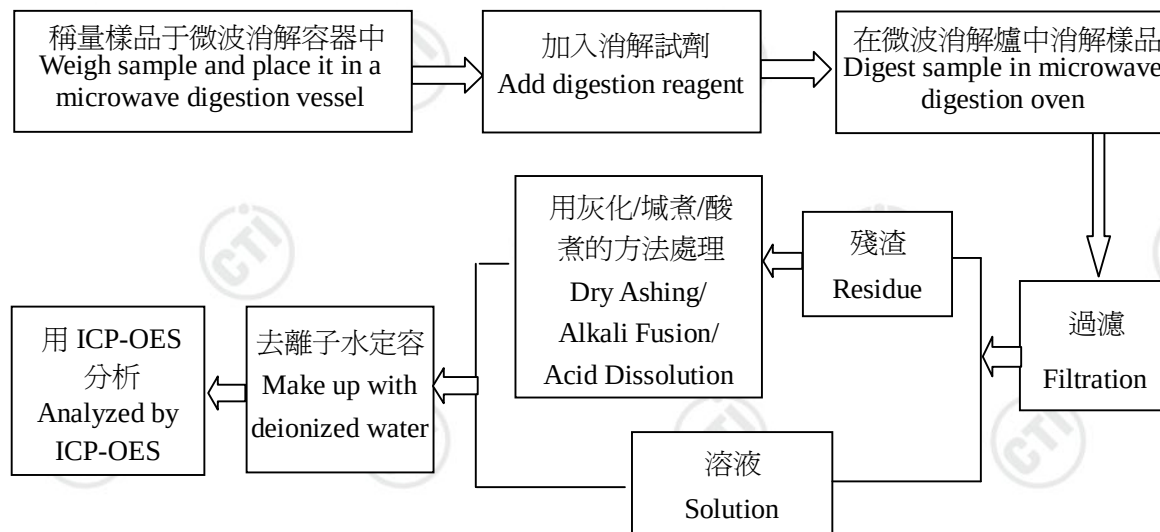
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1.3.3. 六價鉻 Hexavalent Chromium

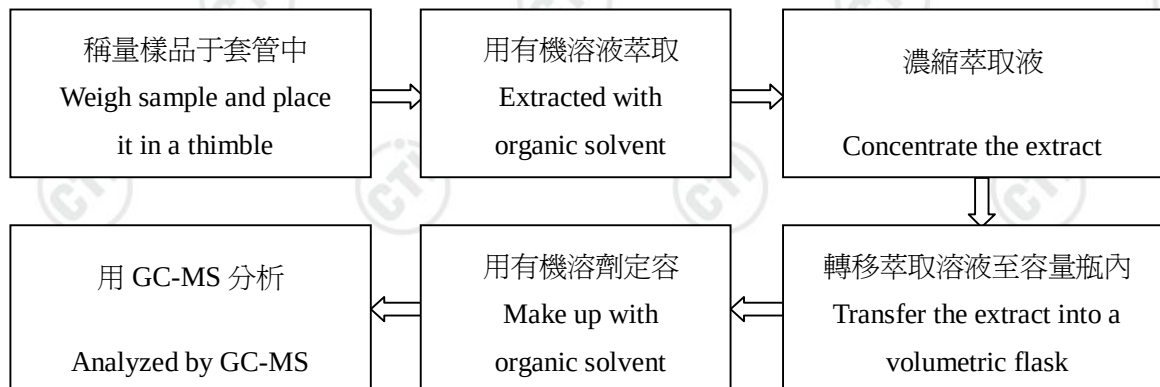


1.3.4. 砷, 銻, 鉍 Arsenic, Antimony, Beryllium



1.3.5. 多溴聯苯，多溴二苯醚

Polybrominated Biphenyls, Polybrominated Diphenyl Ethers

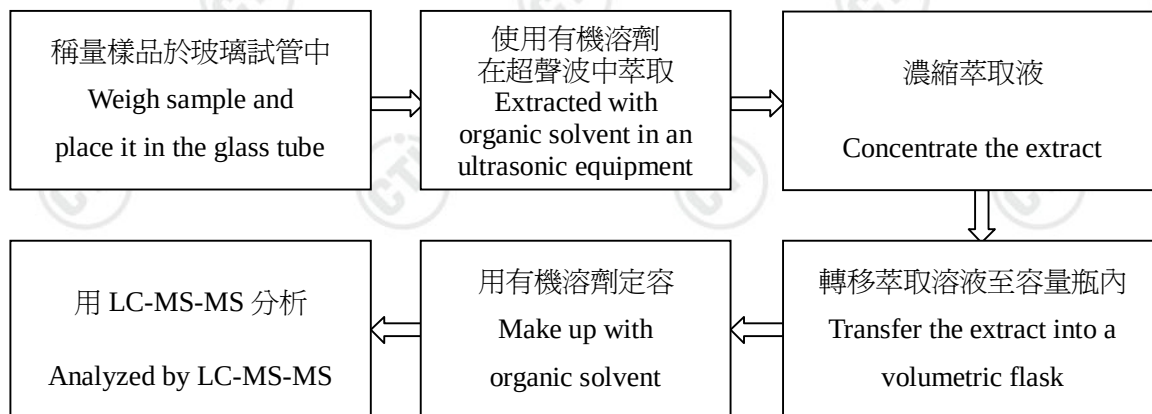


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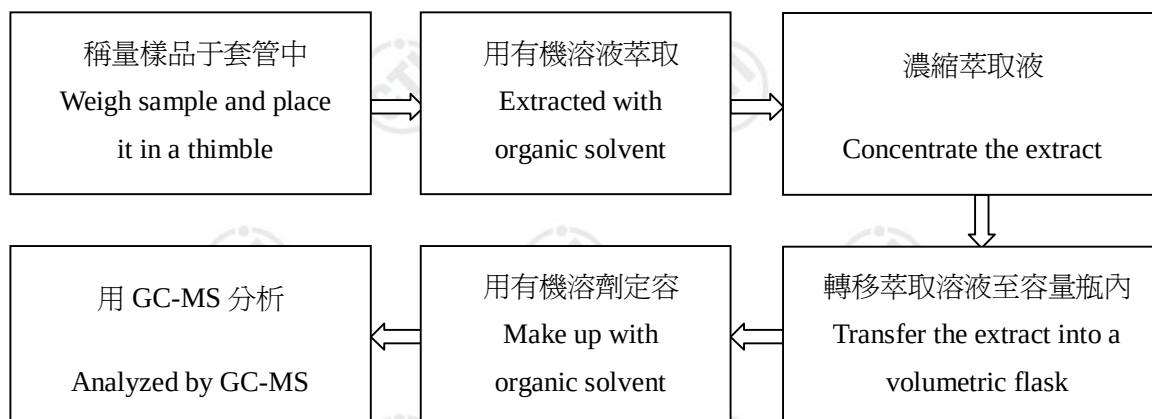
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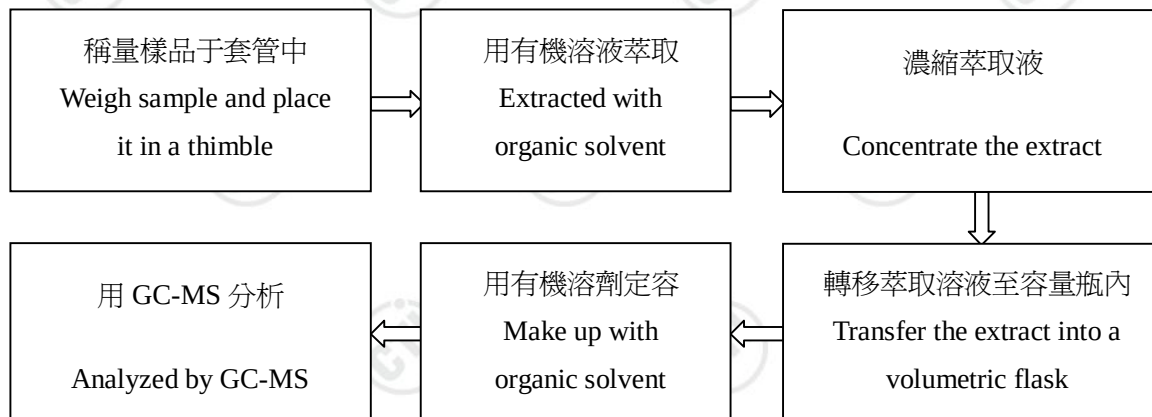
1.3.6. 全氟辛酸,全氟辛酸磺酸鹽 PFOA, PFOS



1.3.7. 六溴環十二烷,多氯化萘,多氯三聯苯,多氯聯苯 HBCDD, PCNs, PCTs, PCBs



1.3.8. 鄰苯二甲酸酯 Phthalates

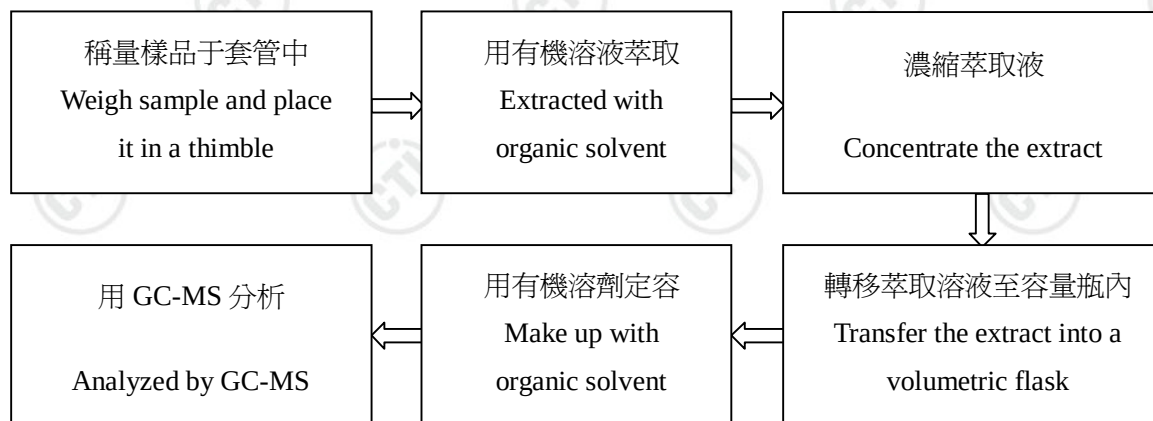


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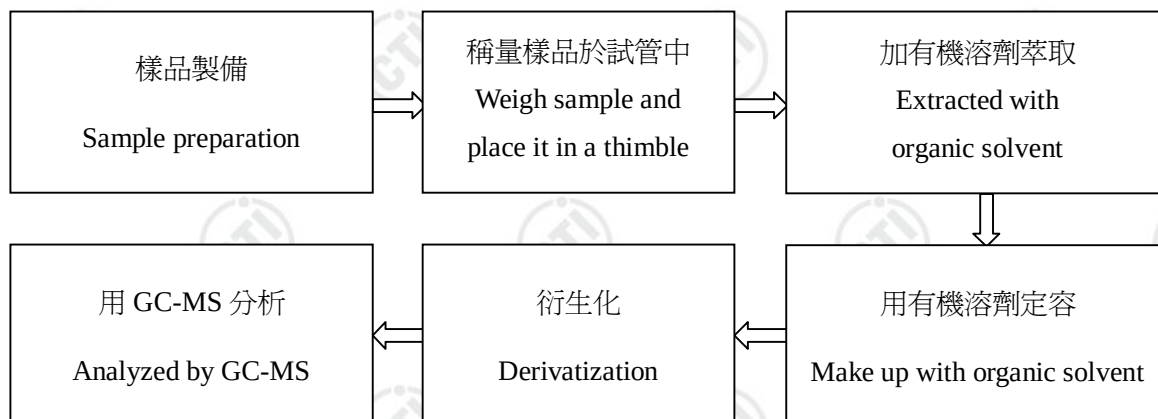
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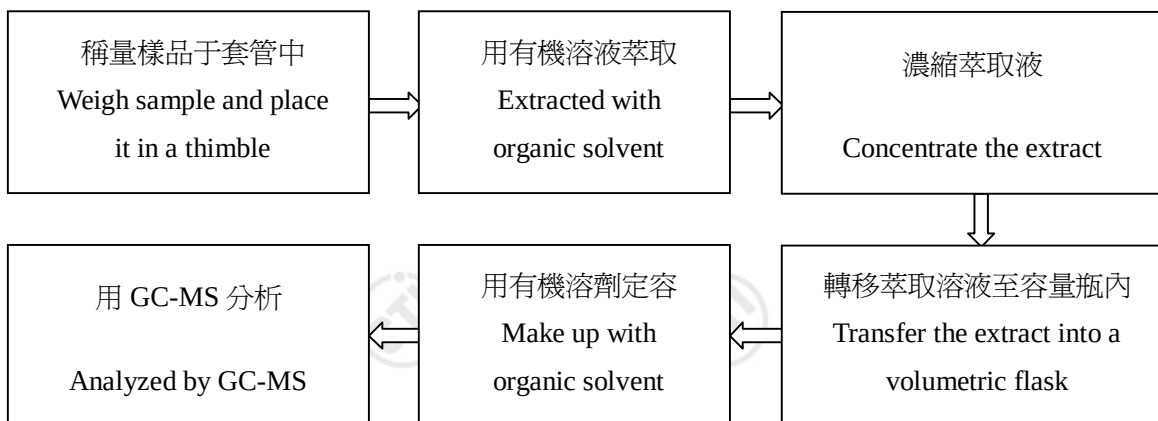
1.3.9. 短鏈氧化石蠟 SCCPs



1.3.10. 有機錫化合物 Organotin compounds



1.3.11. 富馬酸二甲酯 DMF

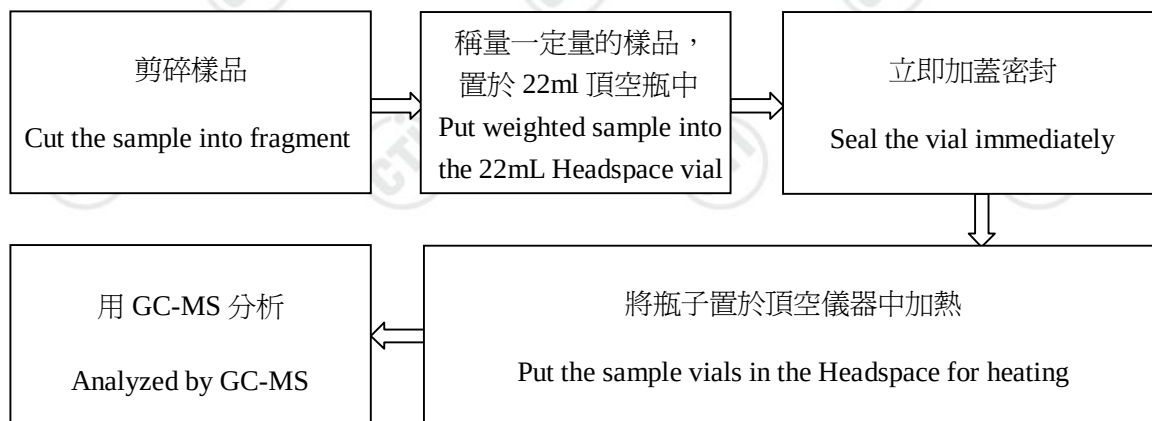


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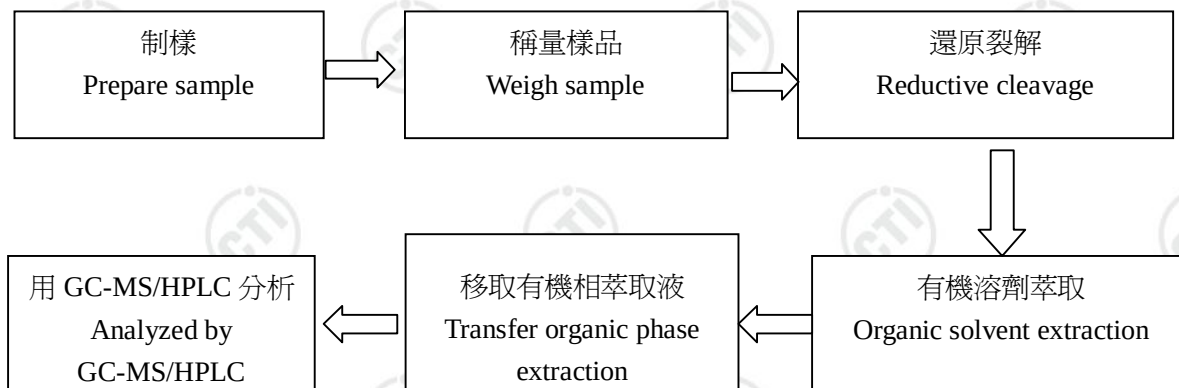
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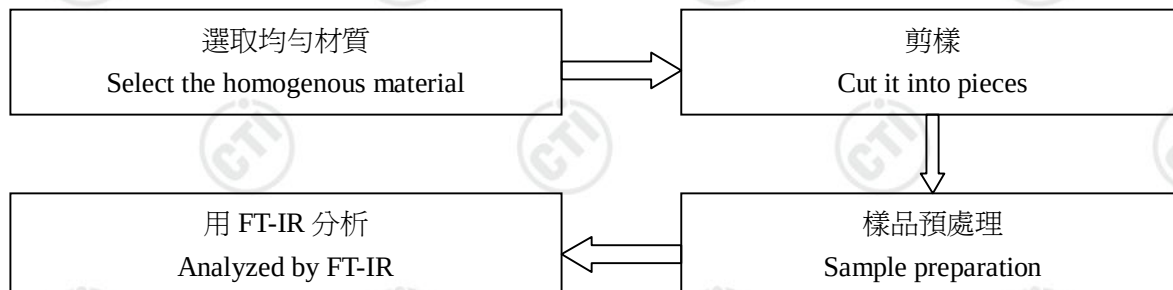
1.3.12. 臭氧層破壞物質 Ozone Depleting Substance



1.3.13. 偶氮染料 Azo Colorants



1.3.14. 聚氯乙烯 PVC

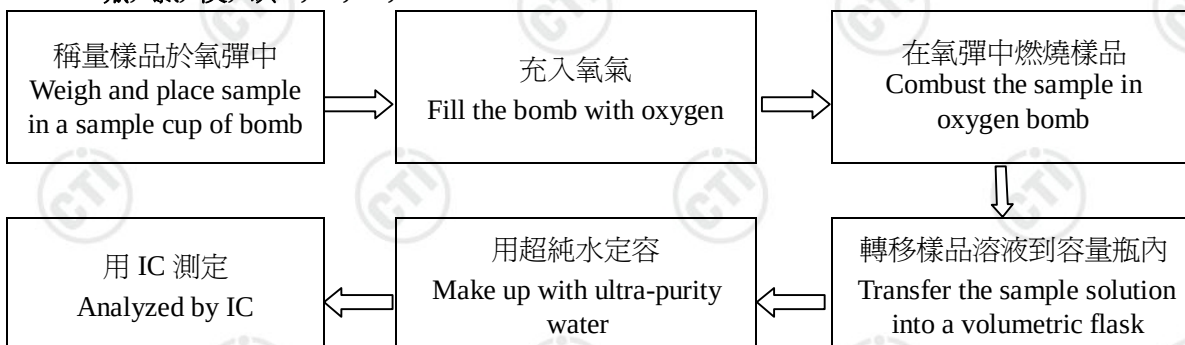


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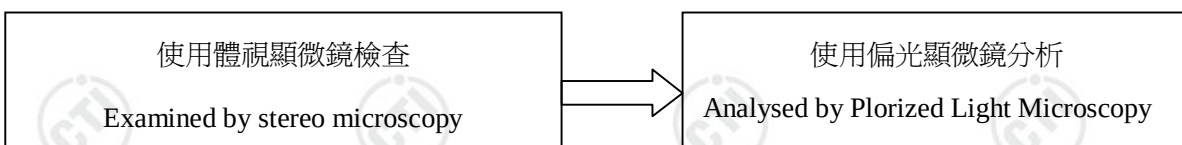
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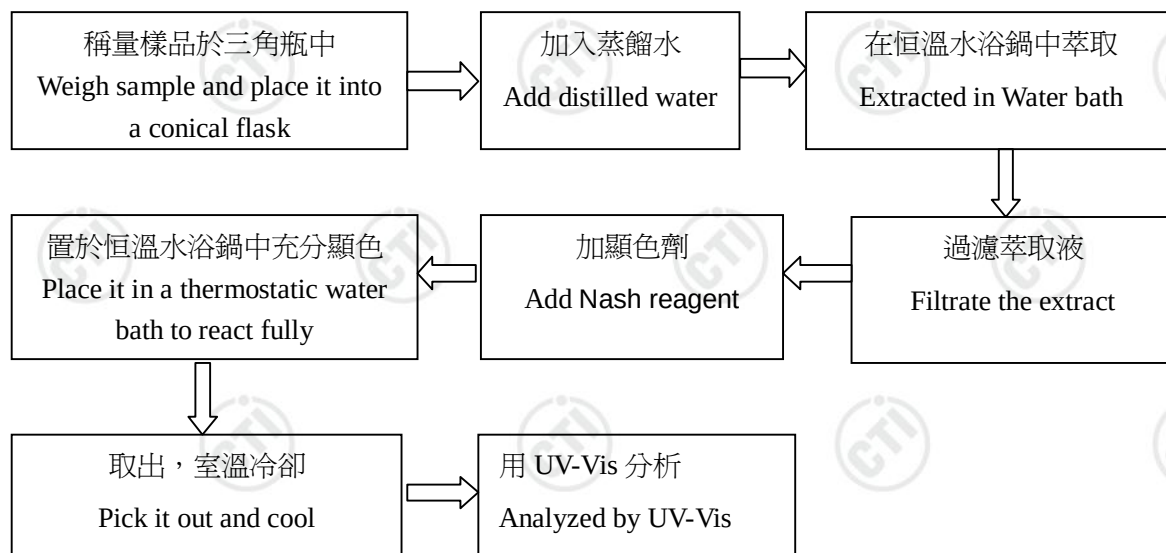
1.3.15. 氟, 氯, 溴, 碘 F, Cl, Br, I



1.3.16. 石棉 Asbestos



1.3.17. 甲醛 Formaldehyde



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2.1 摘要 Summary

根據分析結果，所提交樣品中 2 種 SVHC 濃度均小於 0.1%(w/w)。
According to the analytical results, concentrations of 2 SVHC substances are all less than 0.1%(w/w) in the submitted sample(s).

2.2 檢測結果 Test Result(s)

批次 Batch	序號 No.	物質名稱 Substance Name(s)	CAS 號 CAS No.	EC 號 EC No.	濃度 Concentration (%)	報告 檢出限 Report Limit
I	1	二氧化鈷 Cobalt dichloride*	7646-79-9	231-589-4	N.D.	0.01%
XII	2	2-(2'-羥基-3',5'-二叔丁基苯基)- 苯並三唑 2-Benzotriazol-2-yl-4,6- di-tert-butylphenol (UV-320)	3846-71-7	223-346-6	N.D.	0.01%

檢測依據 Test Method:

參考 US EPA3052:1996, US EPA 3050B:1996, US EPA 3550C:2007 進行樣品預處理。
Refer to US EPA3052:1996, US EPA 3050B:1996, US EPA 3550C:2007 for sample pretreatment.
採用 ICP-OES, HPLC 分析。
Analyzed by ICP-OES, HPLC.

測試樣品/部位描述 綠色油墨
Tested Sample/Part Description Green ink

注釋 Note:

- w/w % = 重量百分比 weight by weight; 0.1% = 1000mg/kg = 1000ppm
- N.D. = 未檢出 Not Detected (小於報告檢出限<report limit)
- *:該物質的濃度值是由物質中的特徵元素測試結果換算而來。Concentration value of the substance by the conversion from the test results of certain elements.
- 根據客戶聲明，本報告中的樣品和報告 ECL01I067235E 中的樣品為同材質，本報告中樣品的結果引自報告 ECL01I067235E 中樣品的結果。
According to the client's statement, the material of sample in this report is the same as the sample in report No. ECL01I067235E, so the test result(s) is presented in reference to that one.

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2.3 附加信息 Appendix:

1. 根據歐盟 REACH 法規（編號 1907/2006）第 33 條款之規定，物品類產品如果含有候選清單上的高度關注物質且在物品中的質量百分比超過 0.1%時，物品供應方需履行相關信息傳遞義務：

Any supplier of an article containing a substance that is included in the Candidate List in a concentration above 0.1 % weight by weight (w/w) has the duty to communicate information in accordance with Article 33 of European Union regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

- 1) 物品供應方應提供給接收方關於產品的足夠信息以確保物品的安全使用，至少需提供所含高度關注物質的名稱。Any supplier shall provide the recipient of the article with sufficient information to allow safe use of the article including, as a minimum, the name of that substance.
 - 2) 應消費者請求，物品供應方應在 45 天內免費提供關於產品的足夠信息以確保物品的安全使用，至少需提供所含高度關注物質的名稱。On request by a consumer any supplier shall provide the consumer with sufficient information to allow safe use of the article including, as a minimum, the name of that substance within 45 days of receipt of the request, free of charge.
2. 根據歐盟 REACH 法規（編號 1907/2006）第 31 條款及附件 2 之規定，提供高度關注物質的物質類產品供應方，應免費提供接收方該物質的安全資料表。The supplier of a substance that is included in the Candidate List on their own shall provide the recipient of the substance with a safety data sheet for free compiled in accordance with Article 3 and Annex II of REACH.
 3. 根據歐盟 REACH 法規（編號 1907/2006）第 31、32 條款及附件 2 之規定，提供含有高度關注物質的混合物產品供應方需傳遞相關信息：

The supplier of a mixture that containing a substance that is included in the Candidate List shall exchange information in accordance with Article 31, Article 32, and Annex II of REACH.

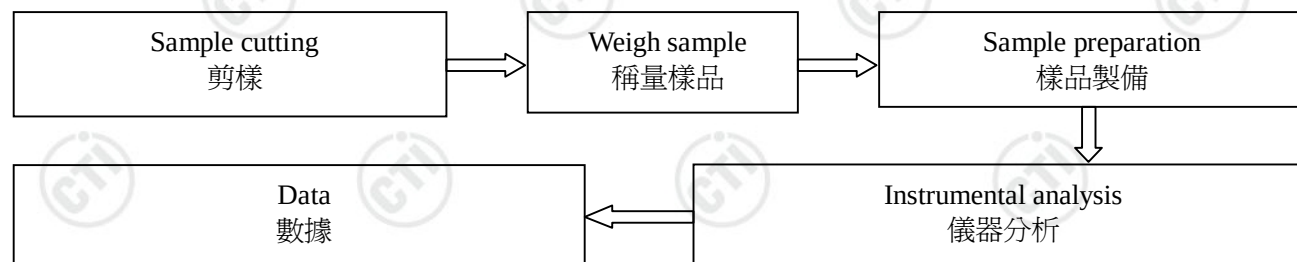
- 1) 如果混合物產品按照 1999/45/EC 被判定為危險品時，供應方應免費提供產品的安全資料表。Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation meets the criteria for classification as dangerous in accordance with Directives 1999/45/EC.
- 2) 如果混合物產品按照 1999/45/EC 判定並非危險品，但是任一高度關注物質在非氣體混合物中質量分數超過 0.1%或在氣體混合物中體積分數超過 0.2%，供應方也應免費提供產品的安全資料表。Any supplier shall provide the recipient of the mixture with a safety data sheet for free where a preparation does not meet the criteria for classification as dangerous in accordance with Directive 1999/45/EC, but contains any substance that is included in the Candidate List in an individual concentration of ≥ 0.1 % by weight for non-gaseous mixtures or ≥ 0.2 % by volume for gaseous mixtures.

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2.4 檢測流程 Test Process



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樣品圖片 Photo(s) of the sample(s)



*** 報告結束 ***

***End of report ***

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