

SPECIFICATION

APPLICATION FOR APPROVAL

CUSTOMER : CipherLAB Co., Ltd
CS P/N : KZNF0FC260011
PART NAME : RK26 PlotoPlus
DEVE NO. : T-0305_RK26 _ PlotoPlus
AUDEN NO. : B12793-00

CUSTOMER APPROVED

Auden Techno Corp.			
RF	MECHANICAL	R&D	PRODUCT
ENGINEER	ENGINEER	MANAGER	MANAGER
CHECKED	CHECKED	CHECKED	CHECKED
Derek Yan	Tony Chen	Franky Lai	Tony Lee



No Perfect Status, Always Seek for Better

Auden Techno Corp.

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				Ver. 版本 A00		C.Ver. 客戶版本		AREA 区域		DATE 日期 2023/08/10		CONTENT OF CHANGE 變更事項 量產圖面	

1A

32.00±0.2

① 30.70

② 26.70

③ 26.20

④ 25.50

⑤ 3.60

36.52±0.2

⑥ 33.59

⑦ 33.02

⑧ 30.59

⑨ 19.58

⑩ 18.73

鐵氧體面

⑪ 30.00

12

28.29

FPC+FPC背膠

保護模撕手

背膠撕手

YYYY/MM/DD
T0350_NFC_A00

1

2

0.13 FPC背膠(3M 468MP)

0.1 FPC

0.2 鐵氧體

0.43±0.1 (鐵氧體+FPC含膠)
不含離型紙

3A

技术要求:
1、組裝後無明顯外觀不良
2、需通过品质部门要求的各项测试
3、未注公差见公差列表;
4、带“A”尺寸为进料必检尺寸。
5、离型紙不限形式。
6、CPK標準需≥☒1.33 ☐1.5 ☐不需
★7、芯线/网线焊点是否需点胶☐需 / ☒不需

DIMENSION TOLERANCE
6以下.....±0.05
6以上~30.....±0.10
30以上~120.....±0.15
120以上~315.....±0.20
315以上~1000.....±0.30
1000以上~2000.....±0.50

附：产品需符合耀登外观检验标准及可靠度测试要求		注：标注1A，2A，3A---等为重点尺寸，总计3A,全尺寸共计12（不含重点尺寸）										表面加工 ▽▽ ▽▽▽ ▽▽▽▽				
★环境物质要求：ROHS 铅，Cd <100 汞，Hg <1000 船，Pb <1000 六价铬，Cr(VI) <1000 多溴联苯，PBBS <1000 多溴二苯醚，PBDES <1000 邻苯二甲酸二（2-乙基己基）酯，DEHP<1000 邻苯二甲酸甲苯基丁酯，BBP<1000 邻苯二甲酸二丁基酯，DBP<1000 邻苯二甲酸二异丁酯，DIBP<1000 ★环境物质要求：HF BR <900 CL <900 BR+CL <1500		图 名				料 号				表面处理		适用機種		开发单号		
		NFC_總裝圖				B12793-40 KZNF0FC260011				-		RK26 PlutoPlus		T0350		
		材质		参照技术要求		投 影		文件編號/版本		階 段		量 產				
		单位		MM 比例 1:1				AD-QP-0002-24/B(T)		图纸 A4		第 1 頁 / 共 1 頁				
2	Ferrite	凌澤電子 Z系 0.2mm		1	-		耀登科技股份有限公司 AUDEN TECHNO CO.LTD				作 成	Danny	檢 图	Mumu	确 认	Derek
1	FPC	PI1218		1	黑色油墨											
序号	名称	材质 / 規格		用量	表面处理											

全尺寸测量报告

Vendor(供应商)						Part NO(料号)		B12792-00								Tool Number (模号)		Cav. Number (穴数)				Unit(单位)						Comments (设计者签字)		
						Part Name (零件名称)		T0350*										2#				INCHES ■MILLIMETER								
日期		2023/4/25																MEASURED DIMENSION(实测尺寸)												
						DIM. #	DIMENSION	DRAWING ZONE	+ TOL.	- TOL.	NOTE	SAMPLE E 1	SAMPLE E 2	SAMPLE E 3	SAMPLE E 4	SAMPLE E 5	SAMPLE E 6	SAMPLE E 7	SAMPLE E 8	SAMPLE E 9	SAMPLE E 10	UPPER	LOWER	0%-25%	25%-50%	50%-75%	75%-100%	100%+	Re-Measure	Accept
1	64.270	1A	0.15	0.15		64.214	64.230										0%	37%		X										
2	60.210	2A	0.15	0.00		60.210	60.225										10%	0%	X											
3	19.980	3A	0.15	0.15		19.908	19.920										0%	48%		X										
4	18.880	4A	0.15	0.15		18.830	18.826										0%	36%		X										
5	19.980	5A	0.15	0.15		19.914	19.930										0%	44%		X										
6	9.550	6A	0.15	0.15		9.558	9.556										5%	0%	X											
7	52.400	7A	0.15	0.15		52.410	52.425										17%	0%	X											
8	67.200	8A	0.15	0.15		67.272	67.285										57%	0%			X									
1	2.800	1	0.10	0.10		2.707	2.715										0%	93%				X								
2	57.400	2	0.10	0.10		57.402	57.405										5%	0%	X											
3	60.200	3	0.10	0.10		60.296	60.291										96%	0%				X								
4	42.400	4	0.10	0.10		42.452	42.449										52%	0%			X									
5	42.400	5	0.10	0.10		42.355	42.358										0%	45%		X										
核准： 李金																														

T0350 CPK Report

Part Number (料号)	B21792-00								厂商/量具
Description (零件名称)	T0350								测量人员/曹彭利
Tool Number (模号)	/								单位/mm
Cavity (穴号)	/								
Revision (版本)	/								测量日期/2023/4/25
Designator (尺寸序号)	1A	2A	3A	4A	5A	6A	7A	8A	
Nominal (公称尺寸)	64.27	60.21	19.98	18.88	19.98	9.55	52.40	67.20	
+ Tolerance (正公差)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
- Tolerance (负公差)	-0.15	0.00	-0.15	-0.15	-0.15	-0.15	-0.15	-0.15	
Upper Limit (规格上限)	64.42	60.36	20.13	19.03	20.13	9.70	52.55	67.35	
Lower Limit (规格下限)	64.12	60.21	19.83	18.73	19.83	9.40	52.25	67.05	
1	64.214	60.228	19.908	18.830	19.914	9.558	52.410	67.270	
2	64.230	60.224	19.920	18.826	19.930	9.556	52.425	67.285	
3	64.220	60.225	19.930	18.830	19.930	9.500	52.395	67.250	
4	64.190	60.223	19.900	18.800	19.900	9.570	52.410	67.260	
5	64.200	60.221	19.910	18.810	19.910	9.580	52.405	67.250	
6	64.210	60.230	19.920	18.820	19.920	9.590	52.395	67.250	
7	64.220	60.223	19.930	18.830	19.930	9.600	52.398	67.230	
8	64.200	60.225	19.910	18.810	19.910	9.580	52.410	67.250	
9	64.180	60.220	19.890	18.790	19.890	9.560	52.410	67.240	
10	64.200	60.220	19.910	18.810	19.910	9.580	52.380	67.250	
11	64.190	60.228	19.900	18.800	19.900	9.547	52.410	67.260	
12	64.220	60.223	19.930	18.830	19.930	9.600	52.395	67.250	
13	64.196	60.225	19.900	18.800	19.900	9.570	52.395	67.250	
14	64.200	60.227	19.910	18.810	19.910	9.580	52.398	67.230	
15	64.220	60.224	19.930	18.830	19.930	9.600	52.395	67.250	
16	64.190	60.229	19.900	18.800	19.900	9.570	52.410	67.240	
17	64.170	60.228	19.880	18.780	19.880	9.550	52.395	67.250	
18	64.200	60.226	19.910	18.810	19.910	9.580	52.398	67.260	
19	64.170	60.225	19.880	18.780	19.880	9.550	52.395	67.250	
20	64.190	60.224	19.900	18.800	19.900	9.570	52.398	67.250	
21	64.200	60.220	19.910	18.810	19.910	9.580	52.395	67.230	
22	64.190	60.219	19.900	18.800	19.900	9.570	52.395	67.250	
23	64.220	60.222	19.930	18.830	19.930	9.600	52.390	67.260	
24	64.190	60.225	19.900	18.800	19.900	9.570	52.395	67.250	
25	64.170	60.224	19.880	18.780	19.880	9.550	52.395	67.250	
26	64.230	60.223	19.940	18.840	19.940	9.610	52.395	67.230	
27	64.200	60.219	19.910	18.810	19.910	9.580	52.405	67.250	
28	64.220	60.224	19.930	18.830	19.930	9.600	52.395	67.240	
29	64.185	60.221	19.900	18.800	19.900	9.570	52.400	67.250	
30	64.200	60.221	19.940	18.840	19.940	9.610	52.395	67.270	
MAX.	64.23	60.23	19.94	18.84	19.94	9.61	52.43	67.29	
MIN.	64.17	60.22	19.88	18.78	19.88	9.50	52.38	67.23	
AVERAGE	64.20	60.22	19.91	18.81	19.91	9.57	52.40	67.25	
STDEV	0.02	0.00	0.02	0.02	0.02	0.02	0.01	0.01	
CP	2.93	8.81	2.96	2.87	2.90	2.18	5.83	4.09	
Opk	1.57	1.59	1.58	1.55	1.56	1.82	5.81	2.73	
TOOLING (测量工具)	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	2.5D	

RF TEST REPORT

1. ELECTRICAL SPECIFICATIONS

1-1 FREQUENCY BAND

Freq. Band	Frequency
NFC	13.56 MHZ

1-2 IMPEDANCE

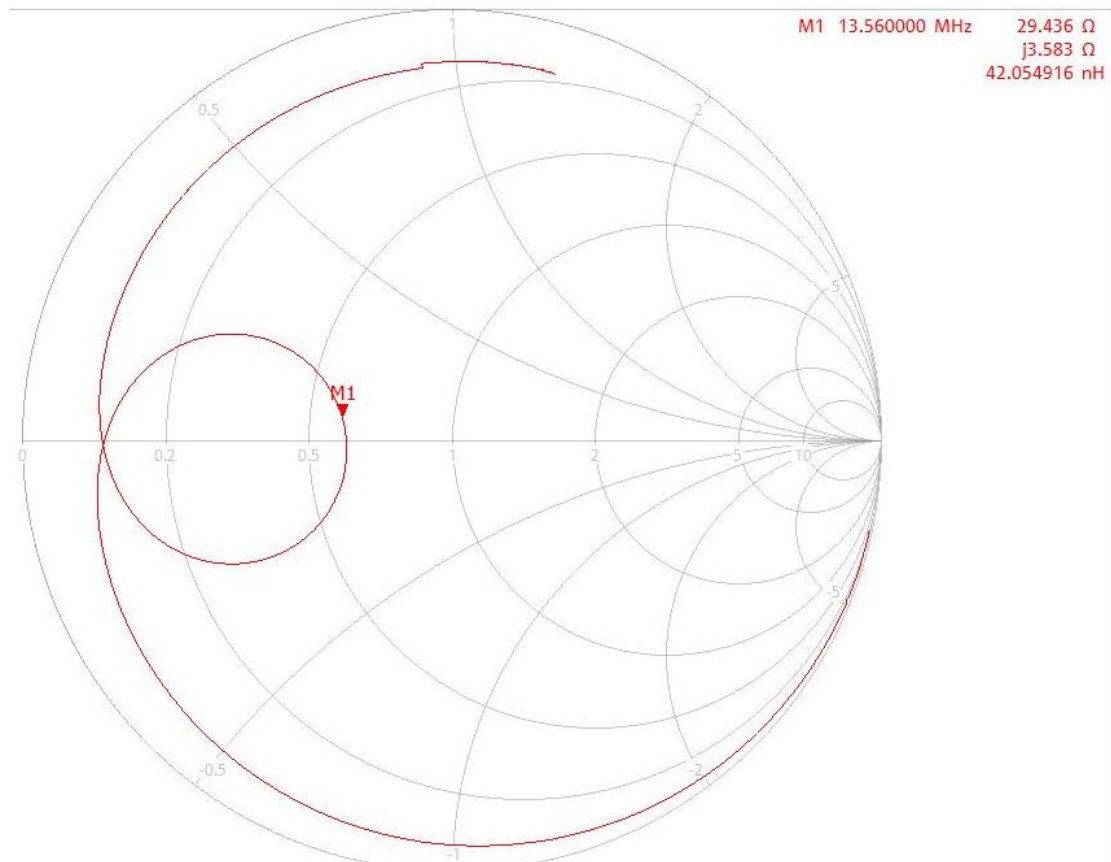
Nominal Impedance (including matching circuit) : **50 ohms**

1-3 MATCHING REQUIREMENTS

N/A

1-4 Smith Chart

1-4-1 Antenna Smith Chart Plot.



1-5 NFC Reading Distance

Performance evaluate for NFC			
Conditions		PT_Conc. 00	
Date		2023/05/24	
Antenna Matching	Rmatch, ohms		30
	L0, nH		160
	C0, pF		560
	C1, pF	C2929, C2905	47
		C2928, C2906	18
	C2, pF	C2907, C2930	150
		C2908, C2931	27
	Rrx, ohms		1k
	Detail		1. Tune matching by using RK26 DVT PCB 2. Config VDDPA set to 3v3
Card List		Reading Distance, mm	
NFC Tag Type 1 (NDEF Topaz)		36	
NFC Tag Type 2 (NDEF NTAG 203)		49	
NFC Tag Type 3 (NDEF FeliCa)		無法讀取	
NFC Tag Type 4 (NDEF DESFire)		24	
NXP i-Code SLI-X (1K, ISO 15693)		79	



測試報告

Test Report

號碼(No.): ETR22705905

日期(Date): 05-Aug-2022

頁數(Page): 1 of 13

優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, 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) :

送樣廠商(Sample Submitted By) : 優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)
樣品名稱(Sample Name) : 防焊油墨
樣品型號(Style/Item No.) : PSM-800/SMH-800/BK5/BK6/BK7/BK8/BK8A/DM6/DM7/FBK/
FBK5/FBK7/FDM/FMBL2/FMBL3/FMBL4/FMBL5/FMBL6/FMBL7/
FMBL8/FMBL9/FSBK/FSBK5/FSDM/FSDM-A/FSDM-B/FSDM-C/
FSDM-D/FSDM-F/FSMBL2/FSMBL4/FSMBL5/FSMBL6/FSMBL7/
FSMBL8/FSMBL9/FSDM9/FSUK
顏色(Color) : 黑色 (BLACK INK)

收件日(Sample Receiving Date) : 29-Jul-2022
測試期間(Testing Period) : 29-Jul-2022 to 05-Aug-2022

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測試鎘、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) 其他測試項目請見下一頁。 (Please refer to next pages for the other item(s).)
測試結果(Test Results) : 請參閱下一頁 (Please refer to following pages.)


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



PIN CODE: C751674B

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測試報告

Test Report

號碼(No.): ETR22705905

日期(Date): 05-Aug-2022

頁數(Page): 2 of 13

優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

測試部位敘述 (Test Part Description)

No.1 : 黑色片狀 (BLACK SHEET)

測試結果 (Test Results)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
鎘 (Cd) (Cadmium (Cd)) (CAS No.: 7440-43-9)	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.
鉛 (Pb) (Lead (Pb)) (CAS No.: 7439-92-1)	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.
汞 (Hg) (Mercury (Hg)) (CAS No.: 7439-97-6)	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.
六價鉻 Cr(VI) (Hexavalent Chromium Cr(VI)) (CAS No.: 18540-29-9)	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.
一溴聯苯 (Monobromobiphenyl)	參考IEC 62321-6: 2015, 以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	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)		mg/kg	5	n.d.
六溴聯苯 (Hexabromobiphenyl)		mg/kg	5	n.d.
七溴聯苯 (Heptabromobiphenyl)		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	-	n.d.

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測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result) No.1
一溴聯苯醚 (Monobromodiphenyl ether)	參考IEC 62321-6: 2015，以氣相層析儀/質譜儀分析。(With reference to IEC 62321-6: 2015, analysis was performed by GC/MS.)	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)		mg/kg	5	n.d.
六溴聯苯醚 (Hexabromodiphenyl ether)		mg/kg	5	n.d.
七溴聯苯醚 (Heptabromodiphenyl ether)		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	-	n.d.
鄰苯二甲酸丁苯甲酯 (BBP) (Butyl benzyl phthalate (BBP)) (CAS No.: 85-68-7)	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 performed by GC/MS.)	mg/kg	50	n.d.
鄰苯二甲酸二丁酯 (DBP) (Dibutyl phthalate (DBP)) (CAS No.: 84-74-2)		mg/kg	50	n.d.
鄰苯二甲酸二(2-乙基己基)酯 (DEHP) (Di-(2-ethylhexyl) phthalate (DEHP)) (CAS No.: 117-81-7)		mg/kg	50	n.d.
鄰苯二甲酸二異丁酯 (DIBP) (Diisobutyl phthalate (DIBP)) (CAS No.: 84-69-5)		mg/kg	50	n.d.
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.
鄰苯二甲酸二異壬酯 (DINP) (Diisononyl phthalate (DINP)) (CAS No.: 28553-12-0, 68515-48-0)		mg/kg	50	n.d.
鄰苯二甲酸二正辛酯 (DNOP) (Di-n-octyl phthalate (DNOP)) (CAS No.: 117-84-0)		mg/kg	50	n.d.
四溴雙酚-A (TBBP-A) (Tetrabromobisphenol A (TBBP-A)) (CAS No.: 79-94-7)	參考RSTS-E&E-121，以液相層析儀/質譜儀分析。(With reference to RSTS-E&E-121, analysis was performed by LC/MS.)	mg/kg	10	n.d.

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測試報告

Test Report

號碼(No.): ETR22705905

日期(Date): 05-Aug-2022

頁數(Page): 4 of 13

優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
中鏈氯化石蠟(C14-C17) (MCCP) (Medium Chain Chlorinated Paraffins(C14-C17) (MCCP)) (CAS No.: 85535-85-9)	參考ISO 18219: 2015 · 以氣相層析儀/質譜儀分 析。(With reference to ISO 18219: 2015, analysis was performed by GC/MS.)	mg/kg	50	n.d.
銻 (Sb) (Antimony (Sb)) (CAS No.: 7440- 36-0)	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.
全氟辛烷磺酸及其鹽類 (PFOS and its salts) (CAS No.: 1763-23-1 and its salts)	參考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.)	mg/kg	0.01	n.d.
N-乙基全氟正辛磺醯胺 (EtFOSA) (N- ethylperfluoro-1-octanesulfonamide (EtFOSA)) (CAS No.: 4151-50-2)	參考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.)	mg/kg	0.01	n.d.
N-甲基全氟正辛磺醯胺 (N-Me-FOSA) (N-Methyl-Perfluorooctanesulfonamide (N-Me-FOSA)) (CAS No.: 31506-32-8)	參考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.)	mg/kg	0.01	n.d.
N-乙基全氟辛基磺醯胺乙醇 (N-Et-FOSE alcohol) (N-Ethyl- Perfluorooctanesulfonamidoethanol (N- Et-FOSE alcohol)) (CAS No.: 1691-99-2)	參考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.)	mg/kg	0.01	n.d.
N-甲基全氟辛基磺醯胺乙醇 (N-Me-FOSE alcohol) (N-Methyl- Perfluorooctanesulfonamidoethanol (N- Me-FOSE alcohol)) (CAS No.: 24448- 09-7)	參考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.)	mg/kg	0.01	n.d.
全氟辛基磺醯胺 (PFOSA) (Perfluorooctanesulfonamide (PFOSA)) (CAS No.: 754-91-6)	參考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.)	mg/kg	0.01	n.d.
全氟辛酸及其鹽類 (PFOA and its salts) (CAS No.: 335-67-1 and its salts)	參考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.)	mg/kg	0.01	n.d.

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測試報告

Test Report

號碼(No.): ETR22705905

日期(Date): 05-Aug-2022

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優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

測試項目 (Test Items)	測試方法 (Method)	單位 (Unit)	MDL	結果 (Result)
				No.1
1H,1H,2H,2H-全氟癸磺酸 (8:2 FTS) (1H,1H,2H,2H-Perfluorodecanesulfonic acid (8:2 FTS)) (CAS No.: 39108-34-4)	參考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.)	mg/kg	0.01	n.d.
全氟辛酸甲酯 (Me-PFOA) (Methyl perfluorooctanoate (Me-PFOA)) (CAS No.: 376-27-2)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.
全氟辛酸乙酯 (Et-PFOA) (Ethyl perfluorooctanoate (Et-PFOA)) (CAS No.: 3108-24-5)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.
1H,1H,2H,2H-全氟-1-癸醇 (8:2 FTOH) (1H,1H,2H,2H-Perfluoro-1-decanol (8:2 FTOH)) (CAS No.: 678-39-7)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.
1H,1H,2H,2H-全氟癸基丙烯酸酯 (8:2 FTA) (1H,1H,2H,2H-Perfluorodecyl acrylate (8:2 FTA)) (CAS No.: 27905-45- 9)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.
1H,1H,2H,2H-全氟癸基甲基丙烯酸鹽 (8:2 FTMA) (1H,1H,2H,2H-Perfluorodecyl methacrylate (8:2 FTMA)) (CAS No.: 1996-88-9)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	n.d.
全氟辛基碘烷 (PFOI) (Perfluoro-1- iodooctane (PFOI)) (CAS No.: 507-63-1)	參考CEN/TS 15968: 2010 · 以氣相層析儀/質譜儀 分析。(With reference to CEN/TS 15968: 2010, analysis was performed by GC/MS.)	mg/kg	0.1	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. 全氟辛烷磺酸及其鹽類包含 (PFOS and its salts including) :
CAS No.: 29081-56-9, 2795-39-3, 29457-72-5, 70225-14-8, 56773-42-3, 251099-16-8, 307-35-7.
6. 全氟辛酸及其鹽類包含 (PFOA and its salts including) :
CAS No.: 3825-26-1, 335-95-5, 2395-00-8, 335-93-3, 335-66-0.

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測試報告

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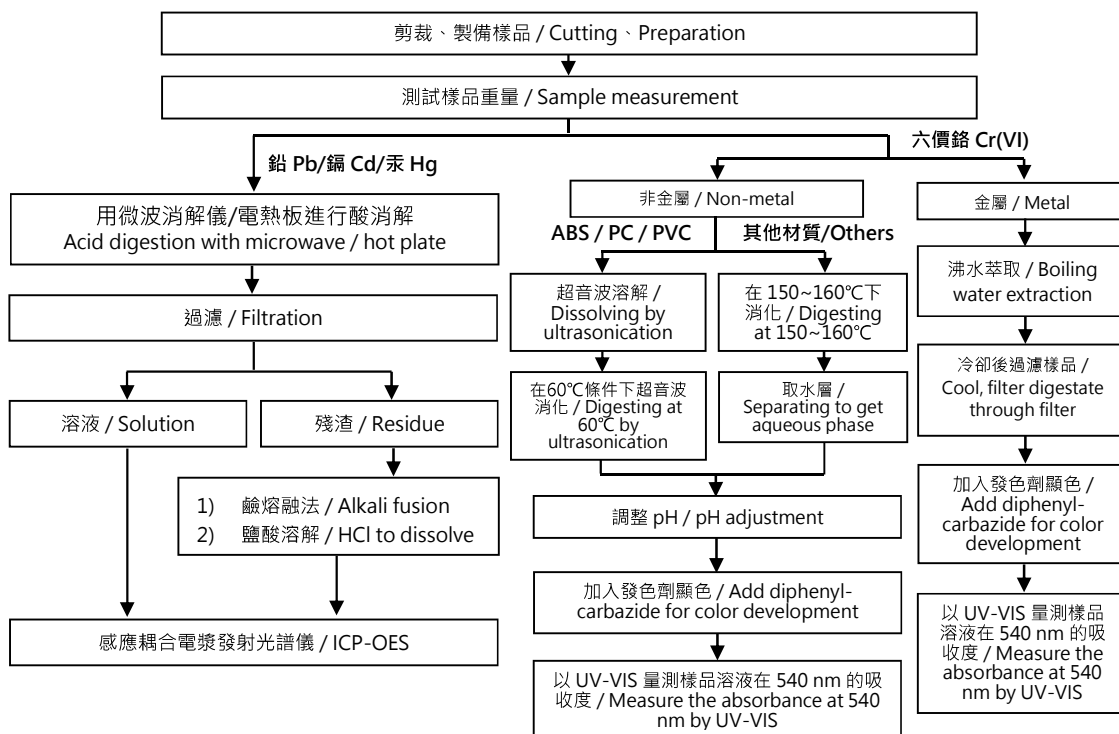
優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

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.

(Cr⁶⁺ test method excluded)

測試報告

Test Report

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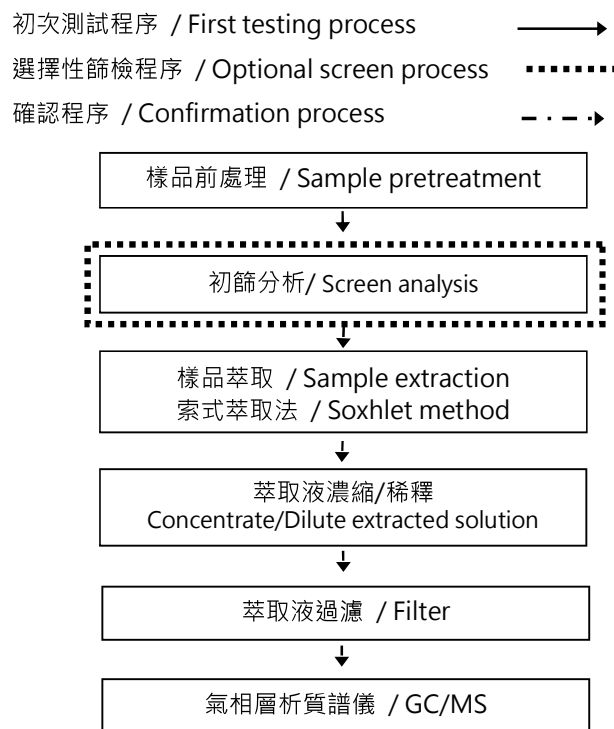
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桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

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



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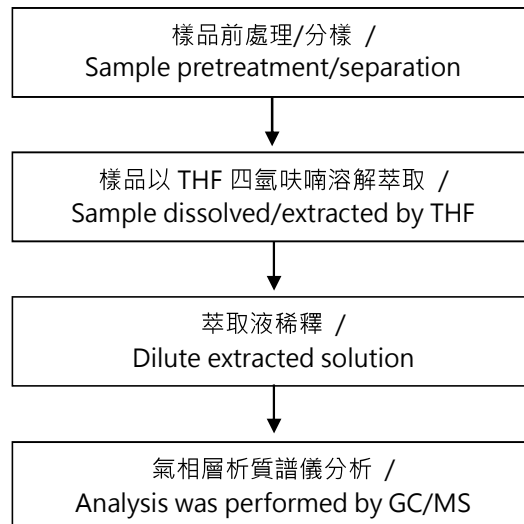
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桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

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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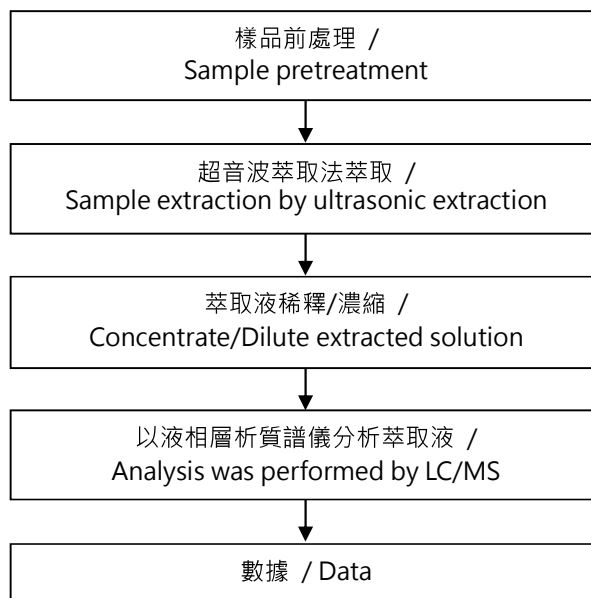
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四溴雙酚-A 分析流程圖 / Analytical flow chart - TBBP-A



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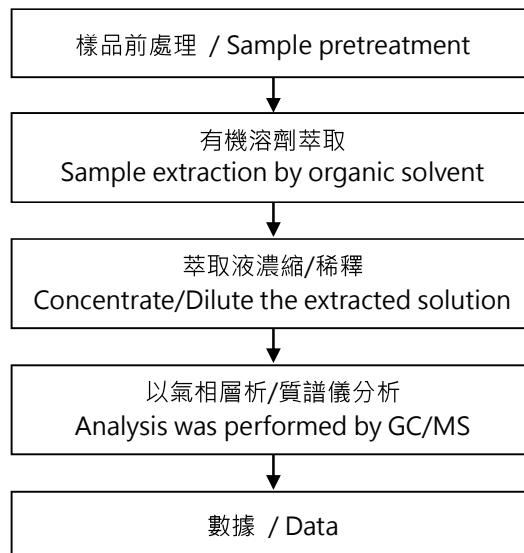
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桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

分析流程圖 / Analytical flow chart

【適用於：多氯聯苯、多氯奈、多氯三聯苯、滅蟻靈、氯化石蠟、DBBT】

*Apply to: PCBs, PCNs, PCTs, Mirex, Chlorinated Paraffins, DBBT



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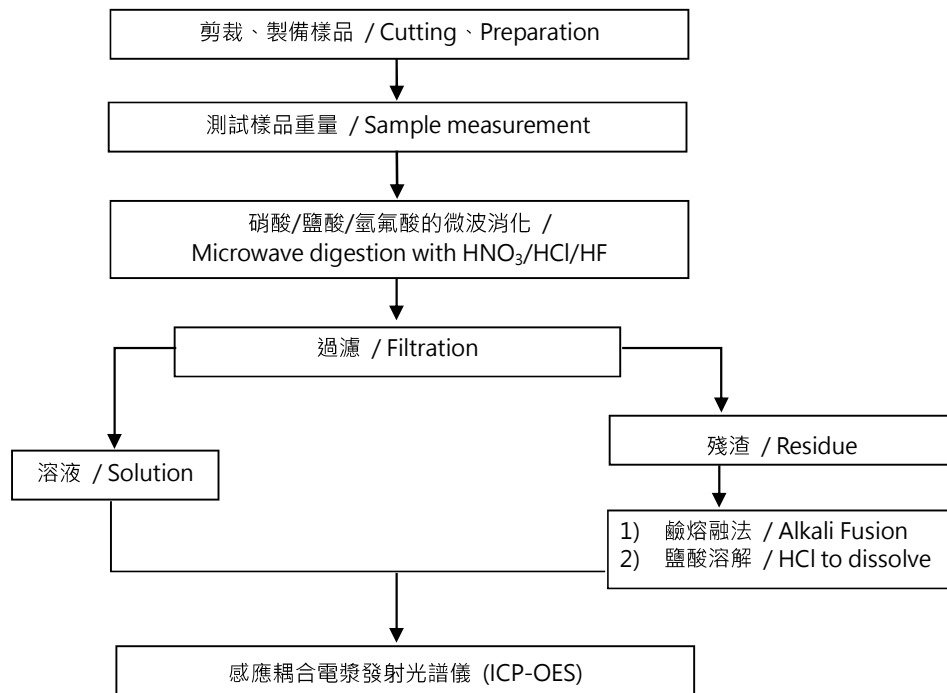
桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

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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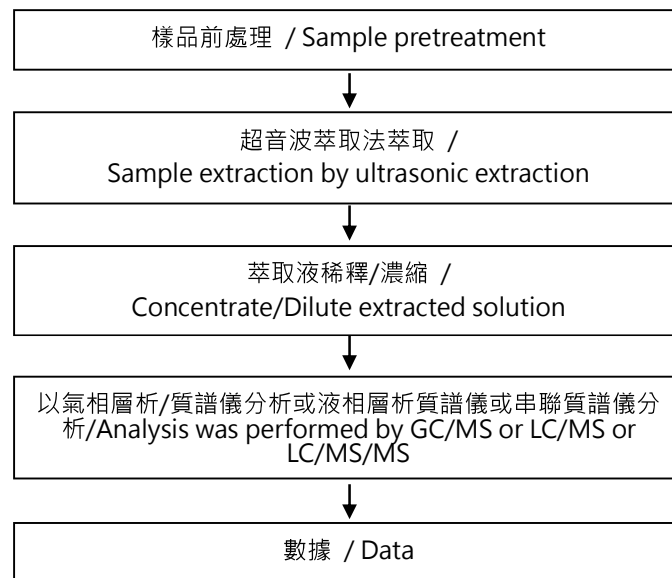
日期(Date): 05-Aug-2022

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優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

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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優立實業股份有限公司 (UNIRES CHEMICAL IND. CO., LTD.)

桃園市觀音工業區經建四路22號 (NO.22, JINGJIAN 4TH RD., GUANYIN DISTRICT, TAOYUAN CITY, TAIWAN)

* 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.)

ETR22705905

** 報告結尾 (End of Report) **

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检测报告

编号: SHAEC23001049106

日期: 2023 年 02 月 15 日

第 1 页, 共 9 页

客户名称: 苏州蔡伦格蒂电子材料有限公司

客户地址: 江苏省太仓市太平北路 168 号

样品名称: 电解柔性覆铜箔基材

以上样品及信息由客户提供。

SGS 工作编号: SP23-002431

样品接收时间: 2023 年 02 月 09 日

检测周期: 2023 年 02 月 09 日 - 2023 年 02 月 15 日

检测要求: 根据客户要求检测。

检测方法: 见后续页。

检测结果: 见后续页。

检测要求	结论
卤素	见检测结果
欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸二丁酯 (DBP)、邻苯二甲酸丁基酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP)	符合

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胡敏

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批准签署人

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检测报告

编号: SHAEC23001049106

日期: 2023 年 02 月 15 日

第 2 页, 共 9 页

检测结果:

检测部件外观描述:

样品序号	样品编号	SGS 样品 ID	样品描述
SN1	A2	SHA23-0010491-0001.C002	棕色/铜色固体片

备注:

- (1) 1 mg/kg = 1 ppm = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

卤素

检测方法: 参考 EN 14582:2016, 采用 IC 进行分析。

检测项目	单位	MDL	A2
氟 (F)	mg/kg	50	ND
氯 (Cl)	mg/kg	50	ND
溴 (Br)	mg/kg	50	ND
碘 (I)	mg/kg	50	ND

欧盟 RoHS 指令 2011/65/EU 附录 II 的修正指令(EU) 2015/863- 铅、汞、镉、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸二丁酯 (DBP)、邻苯二甲酸丁苄酯(BBP)、邻苯二甲酸二(2-乙基己基)酯 (DEHP)和邻苯二甲酸二异丁酯(DIBP)

检测方法: 参考 IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 和 IEC 62321-8:2017, 采用 ICP-OES, UV-Vis 和 GC-MS 进行分析。

检测项目	限值	单位	MDL	A2
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1000	mg/kg	2	ND
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯(MonoBB)	-	mg/kg	5	ND
二溴联苯(DiBB)	-	mg/kg	5	ND
三溴联苯(TriBB)	-	mg/kg	5	ND
四溴联苯(TetraBB)	-	mg/kg	5	ND
五溴联苯(PentaBB)	-	mg/kg	5	ND
六溴联苯(HexaBB)	-	mg/kg	5	ND
七溴联苯(HeptaBB)	-	mg/kg	5	ND
八溴联苯(OctaBB)	-	mg/kg	5	ND
九溴联苯(NonaBB)	-	mg/kg	5	ND
十溴联苯(DecaBB)	-	mg/kg	5	ND



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检测报告

编号: SHAEC23001049106

日期: 2023 年 02 月 15 日

第 3 页, 共 9 页

检测项目	限值	单位	MDL	A2
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚(MonoBDE)	-	mg/kg	5	ND
二溴二苯醚(DiBDE)	-	mg/kg	5	ND
三溴二苯醚(TriBDE)	-	mg/kg	5	ND
四溴二苯醚(TetraBDE)	-	mg/kg	5	ND
五溴二苯醚(PentaBDE)	-	mg/kg	5	ND
六溴二苯醚(HexaBDE)	-	mg/kg	5	ND
七溴二苯醚(HeptaBDE)	-	mg/kg	5	ND
八溴二苯醚(OctaBDE)	-	mg/kg	5	ND
九溴二苯醚(NonaBDE)	-	mg/kg	5	ND
十溴二苯醚(DecaBDE)	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯 (BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯 (DIBP)	1000	mg/kg	50	ND

备注:

(1) 最大允许极限值引用自 RoHS 指令(EU) 2015/863。

(2) IEC 62321 系列等同于 EN 62321 系列。

(3) 2021 年 7 月 22 号开始, DEHP, BBP, DBP 和 DIBP 的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

除非另有说明, 参照 ILAC-G8:09/2019, 使用简单接受 ($w=0$) 的二元判定规则进行符合性判定。

除非另有说明, 此报告结果仅对检测的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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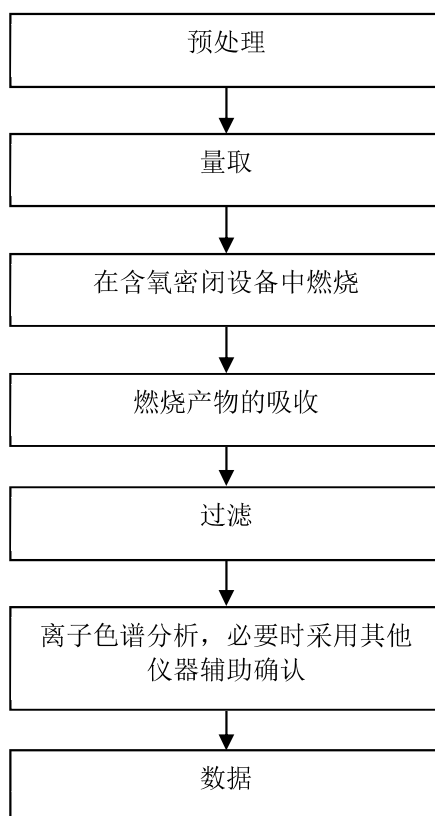
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卤素检测流程图



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检测报告

编号: SHAEC23001049106

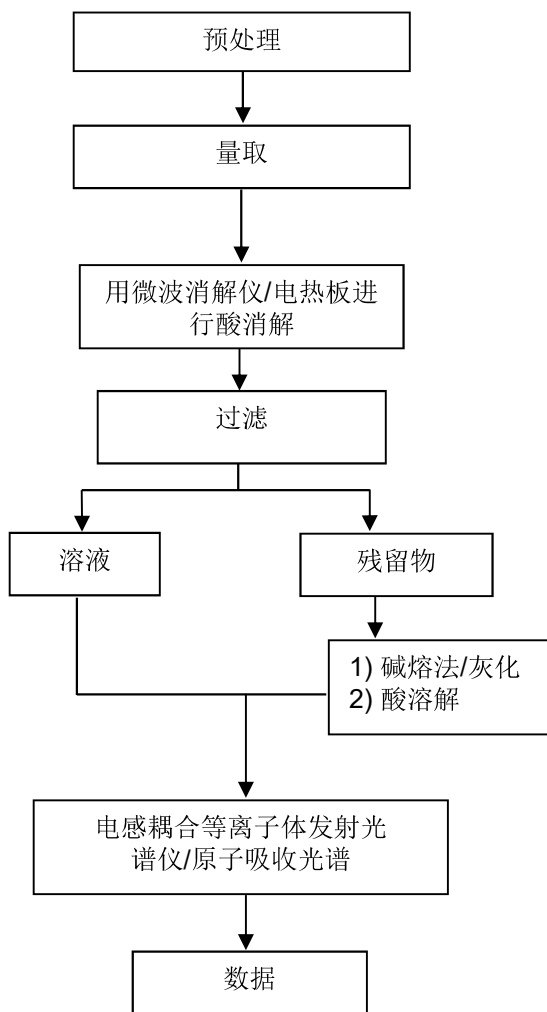
日期: 2023 年 02 月 15 日

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附件

元素 (IEC62321) 检测流程图

样品按照下述流程被完全消解



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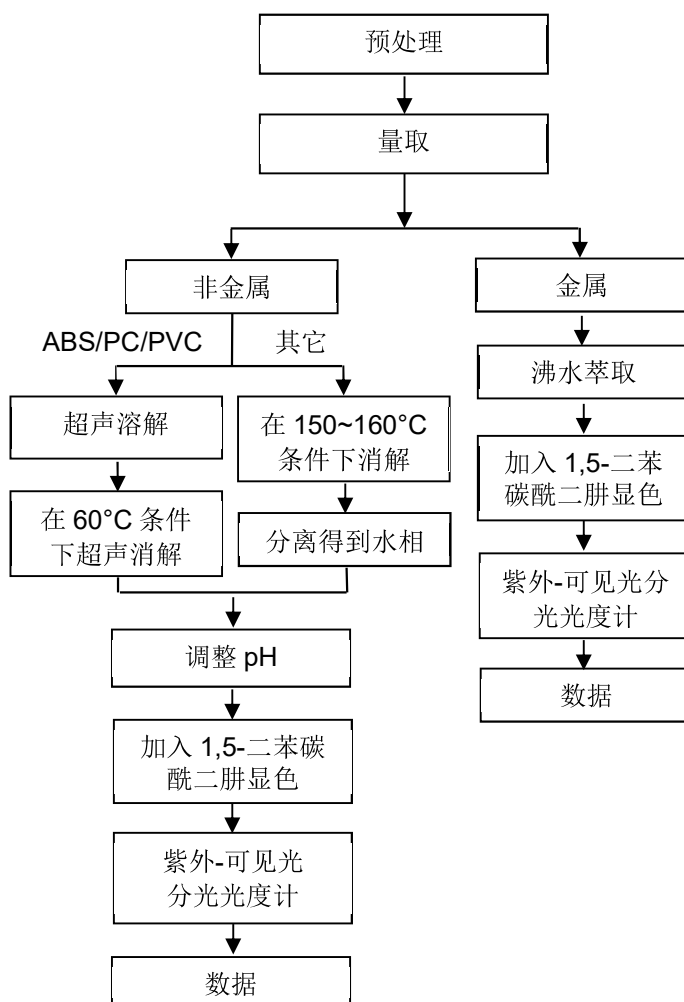
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六价铬检测流程图



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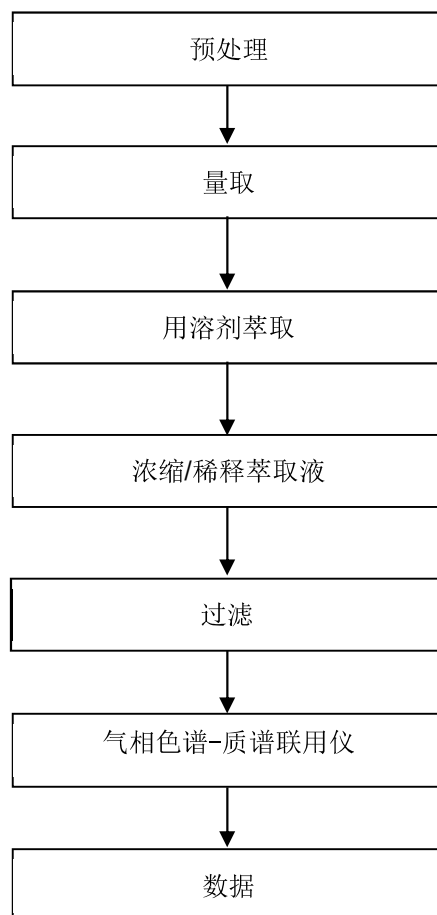
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PBBs/PBDEs 检测流程图



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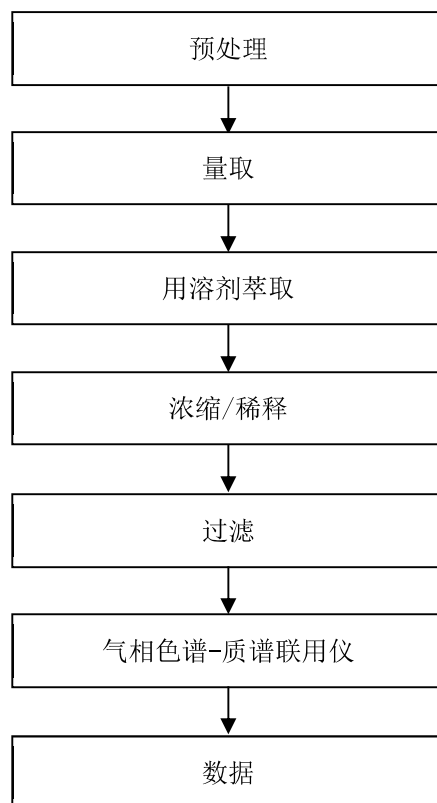
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Phthalates 检测流程图



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检测报告

编号: SHAEC23001049106

日期: 2023 年 02 月 15 日

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Test Report

No. SHAEC2217569205

Date: 04 Jan 2023

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Client Name : 3M CHINA LIMITED

Client Address : 222 TIANLIN ROAD, SHANGHAI

Sample Name : 3M 9471LE

Model No. : 3M 9471LE

Client Ref. Information : 3M 9472LE, 3M 9671LE, 3M 9653LE, 3M 9672LE

The above sample(s) and information were provided by the client.

SGS Job No. : SP22-030957 - SH

Date of Sample Received : 23 Dec 2022

Testing Period : 23 Dec 2022 - 30 Dec 2022

Test Requested : Selected test(s) as requested by the client.

Test Method(s) : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Conclusion : Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Sue Sheng

Sue Sheng
Approved Signatory

scan to see the report



6263C1DC



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Test Report

No. SHAEC2217569205

Date: 04 Jan 2023

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Test Result(s) :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA22-175692.001	Colorless transparent adhesive film

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

Test Method : With reference to IEC 62321-4:2013+AMD1:2017, IEC62321-5:2013, IEC62321-7-2:2017, IEC 62321-6:2015 and IEC62321-8:2017, analyzed by ICP-OES, UV-Vis and GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND



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Test Report

No. SHAEC2217569205

Date: 04 Jan 2023

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Test Item(s)	Limit	Unit	MDL	001
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Di-butyl Phthalate (DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
IEC 62321 series is equivalent to EN 62321 series
- (2) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

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.



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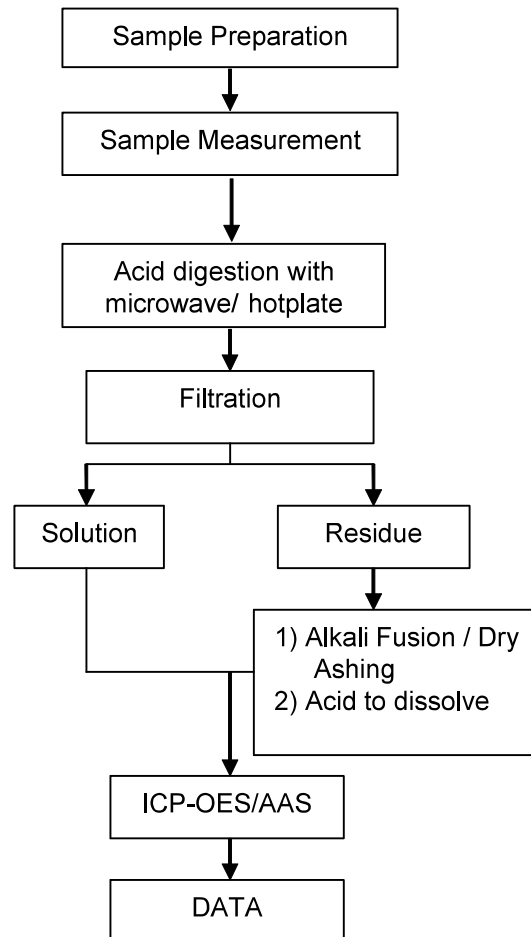
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Elements (IEC62321) Testing Flow Chart

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



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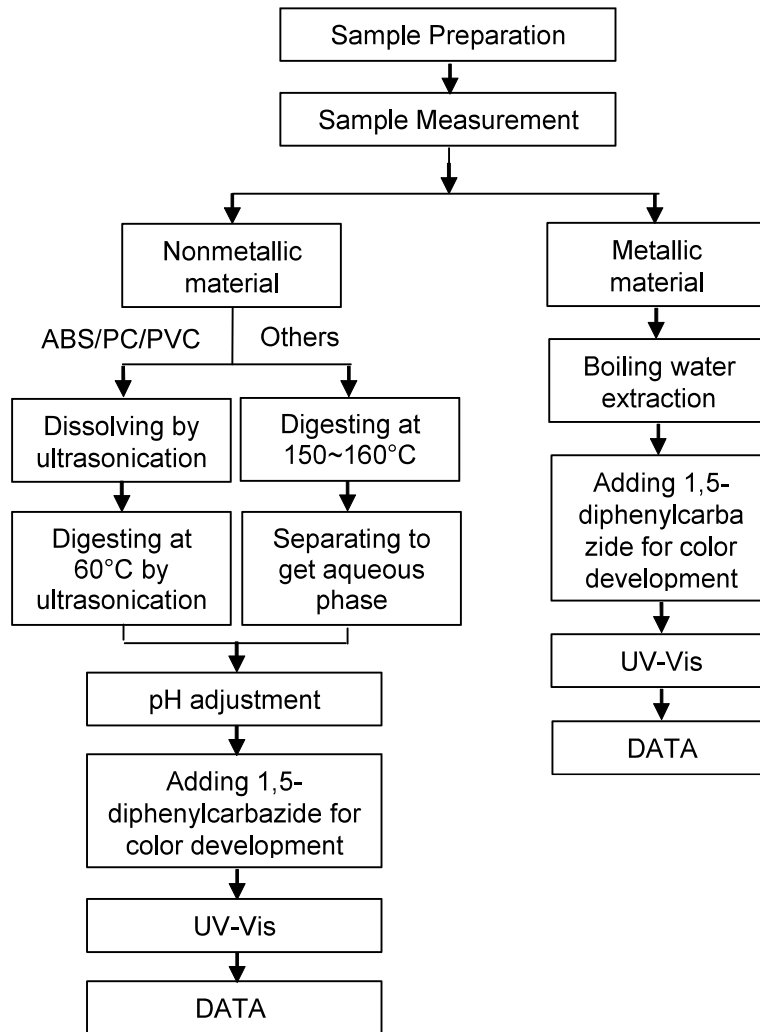
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Hexavalent Chromium (Cr(VI)) Testing Flow Chart



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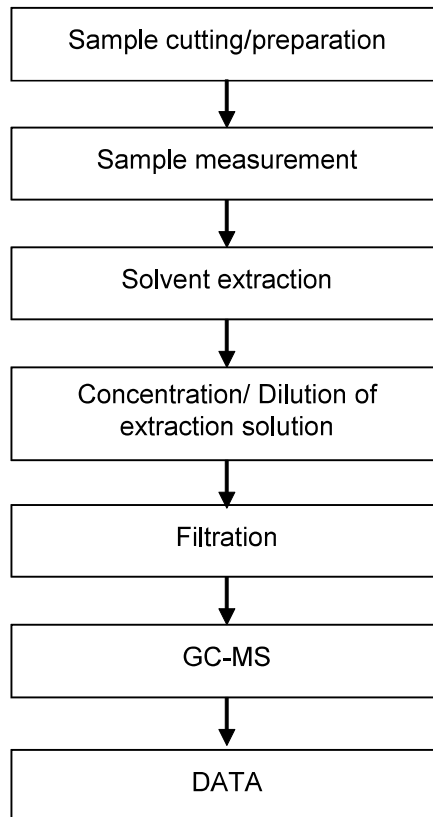
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PBBs/PBDEs Testing Flow Chart



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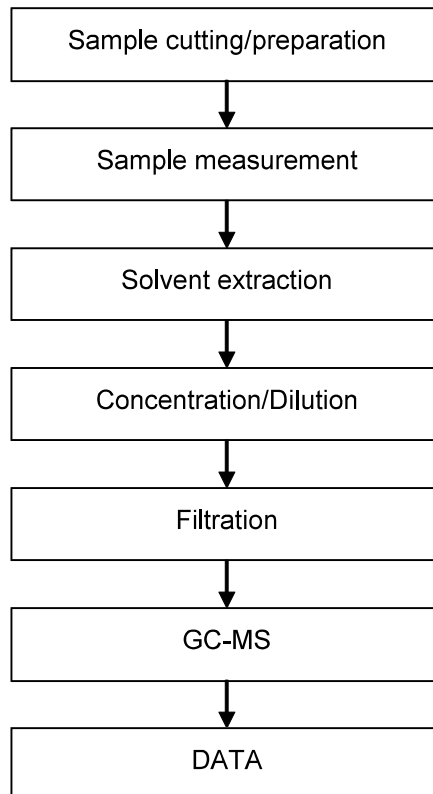
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Phthalates Testing Flow Chart



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No. SHAEC2217569205

Date: 04 Jan 2023

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Sample photo:



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测试报告

NO.: BRCWUUVB3047967D1

第 1 页, 共 7 页

委托单位: 昆山凌泽电子有限公司

地址: 昆山市玉山镇新塘路 619 号 5 号 6 层

委托单位提供样品信息如下:

样品名称: 镍锌铁氧体

样品型号: JF150-XXX

样品来源: 送样

样品接收日期: 2023-05-11

样品测试日期: 2023-05-11~2023-05-17

测试依据:

- (1) IEC 62321-5 Edition 1.0:2013 的方法, 用原子吸收光谱仪测定铅的含量
- (2) IEC 62321-5 Edition 1.0:2013 的方法, 用原子吸收光谱仪测定镉的含量
- (3) IEC 62321-4:2013+AMD1:2017 CSV 的方法, 用电感耦合等离子体发射光谱仪测定汞的含量
- (4) IEC 62321-7-1 Edition 1.0:2015 的方法, 用紫外-可见分光光度计测定六价铬的含量
- (5) IEC 62321-6 Edition 1.0:2015 的方法, 用气相色谱质谱联用仪测定多溴联苯和多溴二苯醚的含量
- (6) IEC 62321-8 Edition 1.0:2017 的方法, 用气相色谱质谱联用仪测定邻苯二甲酸酯类的含量
- (7) EN 14582: 2016 的方法, 用离子色谱仪测定氟, 氯, 溴, 碘的含量

测试结果: 请参见下页

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2023-05-17



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测试报告 NO.: BRCWUUVB3047967D1

第 2 页, 共 7 页

测试结果 (单位: mg/kg)

样品编号及名称: B3047967D1 镍锌铁氧体

测试项目	方法检出限	测试结果	RoHS 限量
铅	1	未检出	1000
镉	1	未检出	100
汞	1	未检出	1000
六价铬	参见备注(4)	阴性	—
多溴联苯之和	—	未检出	1000
一溴联苯	5	未检出	—
二溴联苯	5	未检出	—
三溴联苯	5	未检出	—
四溴联苯	5	未检出	—
五溴联苯	5	未检出	—
六溴联苯	5	未检出	—
七溴联苯	5	未检出	—
八溴联苯	5	未检出	—
九溴联苯	5	未检出	—
十溴联苯	5	未检出	—
多溴二苯醚之和	—	未检出	1000
一溴二苯醚	5	未检出	—
二溴二苯醚	5	未检出	—
三溴二苯醚	5	未检出	—
四溴二苯醚	5	未检出	—
五溴二苯醚	5	未检出	—
六溴二苯醚	5	未检出	—
七溴二苯醚	5	未检出	—
八溴二苯醚	5	未检出	—
九溴二苯醚	5	未检出	—
十溴二苯醚	5	未检出	—

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测试报告 NO.: BRCWUUVB3047967D1

第 3 页, 共 7 页

测试结果 (单位: mg/kg)

测试项目	CAS 号	方法检出限	测试结果	RoHS 限量
邻苯二甲酸二(2-乙基己基)酯 (DEHP)	117-81-7	30	未检出	1000
邻苯二甲酸二丁酯 (DBP)	84-74-2	30	未检出	1000
邻苯二甲酸苄基丁酯 (BBP)	85-68-7	30	未检出	1000
邻苯二甲酸二异丁酯 (DIBP)	84-69-5	30	未检出	1000

测试结果 (单位: mg/kg)

测试项目	方法检出限	测试结果
氟	50	未检出
氯	50	未检出
溴	50	未检出
碘	50	未检出

备注: (1) 0.1% = 1000 mg/kg = 1000 ppm

(2) “—”= 未规定

(3) 最大允许极限值引用 RoHS 2011/65/EU 及修订指令(EU)2015/863 附录 II 的要求

(4) 沸水萃取测试:

<0.10 $\mu\text{g}/\text{cm}^2$ 以阴性表示, 即镀层中不存在六价铬

0.10 $\mu\text{g}/\text{cm}^2$ ~0.13 $\mu\text{g}/\text{cm}^2$ 无法判定镀层中是否存在六价铬, 需进一步确定。

>0.13 $\mu\text{g}/\text{cm}^2$ 以阳性表示, 即镀层中存在六价铬。

(5) 未检出(<方法检出限)

样品编号和照片:



仅对报告照片中的样品负责

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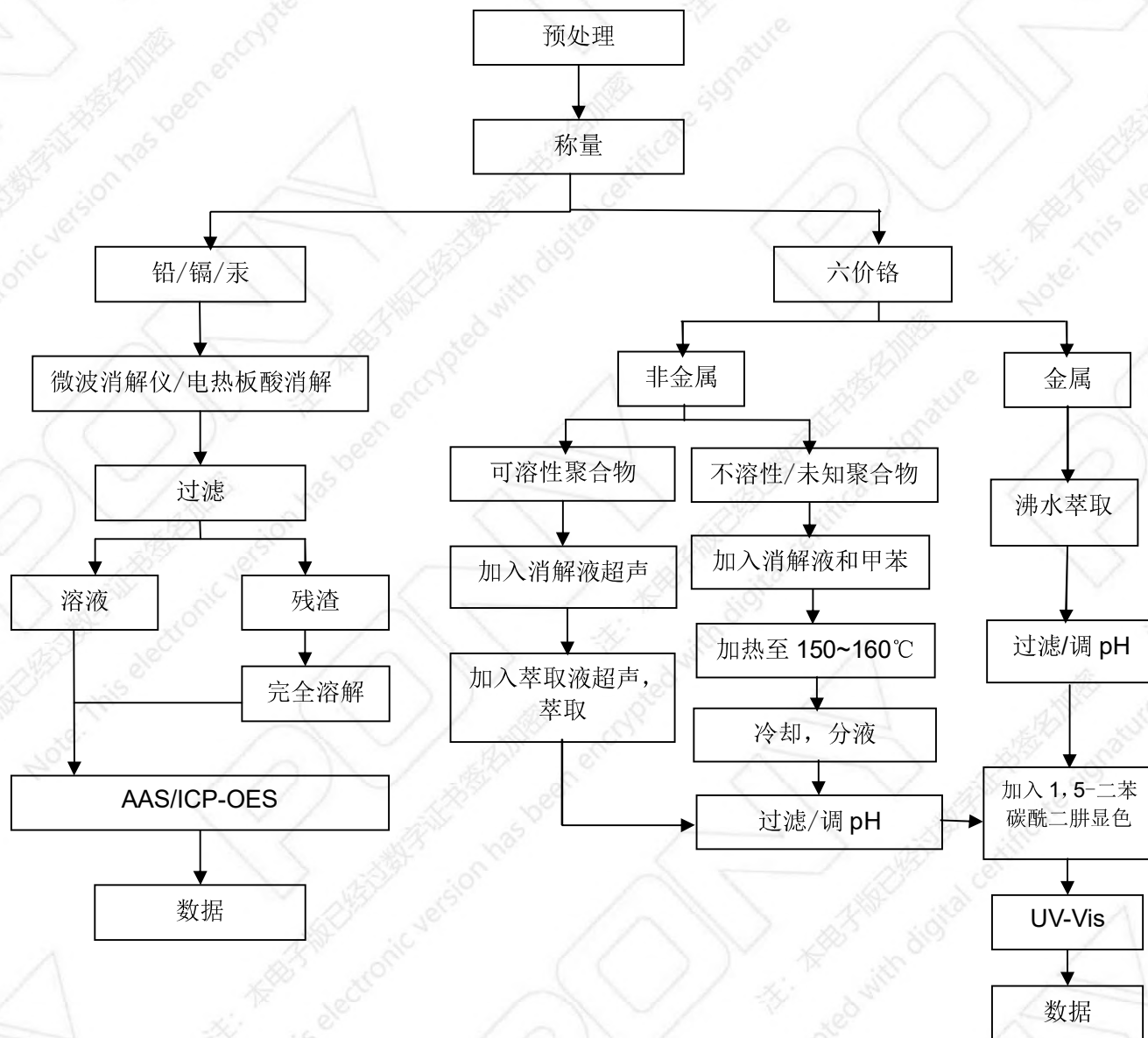


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第 4 页, 共 7 页

测试流程图

样品按照下述流程被完全消解（六价铬除外）。



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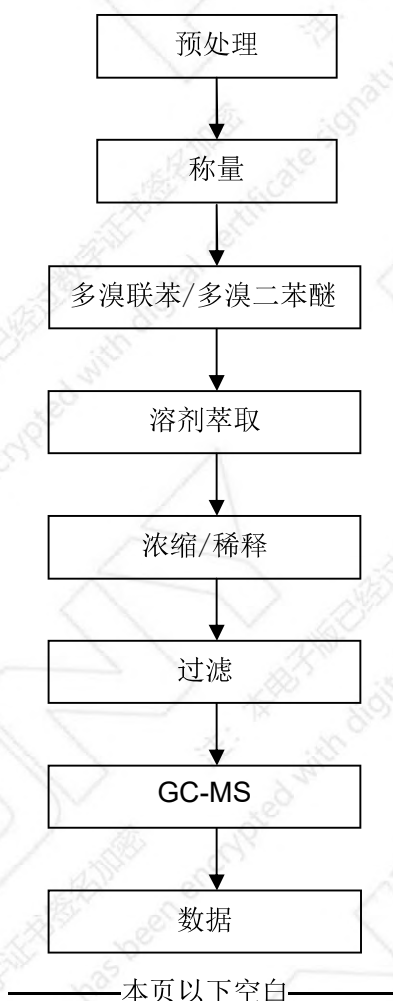




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测试流程图



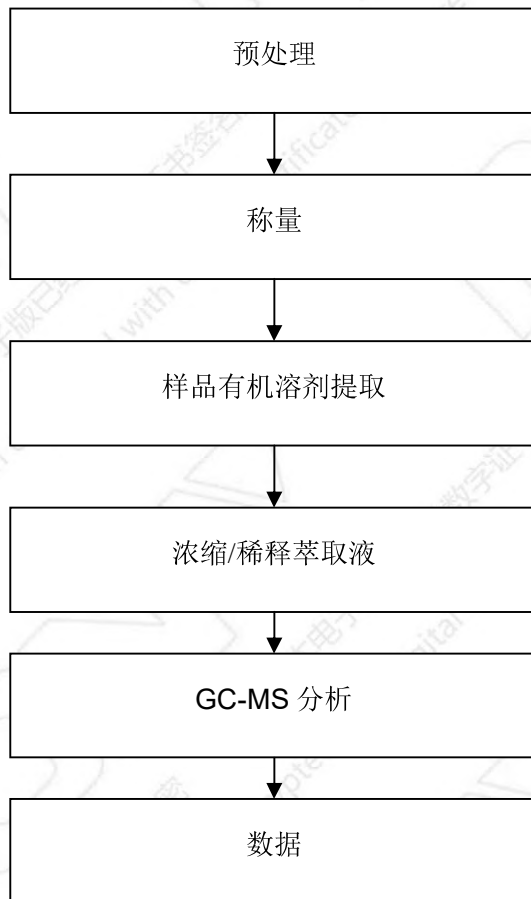


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邻苯二甲酸酯类测试流程



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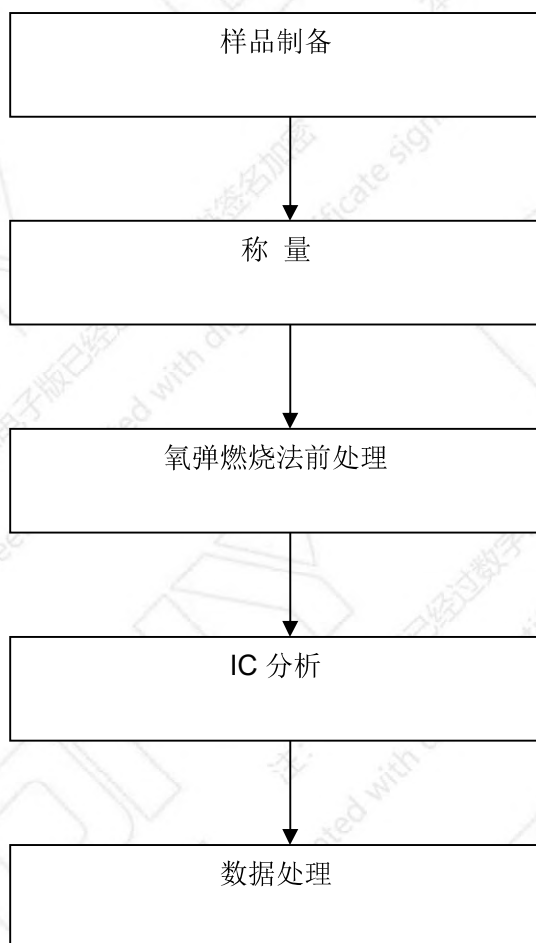


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卤素测试流程图



——报告结束——

