

Table 1: List of Raw Materials covered by this report

Total Parts	Raw Material Part Number	Raw Material Description	Page(s)
1	C5191	PH	3-10
2	NA	Tin Plating	11-13

測試報告 Test Report

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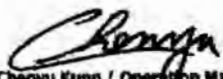
SGS TAIWAN LTD.

以下測試樣品係由客戶送樣，且由客戶學術並經客戶確認如下 (The following samples was/were submitted and identified by/on behalf of the client as):

樣品名稱(Sample Description)	: 磷青銅
樣品型號(Style/Item No.)	: CS191 (PBR)
收件日期(Sample Receiving Date)	: 2010/1/19
測試期間(Testing Period)	: 2010/1/19 TO 2010/01/26

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

結論(Conclusion) : 根據客戶所提供的樣品，其鎘、鉛、汞、六價鉻、多溴聯苯及多溴聯苯醚的測試結果符合RoHS(2002/95/EC)及其修訂指令之要求 (Based upon the performed tests by submitted samples, the test results of Cadmium, Lead, Mercury, Hexavalent Chromium Cr(VI), PBBs and PBDEs comply with the limits of RoHS Directive 2002/95/EC and its subsequent amendments).


Chenyu Kung / Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.
Chemical Laboratory - Taipei

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測試報告 Test Report

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測試結果(Test Results)

測試部位(PART NAME) NO.1

: 銅色金屬片 (COPPER COLORED METAL SHEET)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)	法規 限值 (Limit)
				NO.1	
鎘 / Cadmium (Cd)	ng/kg	參考IEC 62321: 2008 - Clause 9 方法, 用感應耦合電漿原子發射 光譜儀檢測鎘含量。 / With reference to IEC 62321: 2008 - Clause 9. Determination of Cadmium by ICP-AES.	2	n.d.	100
鉛 / Lead (Pb)	ng/kg	參考IEC 62321: 2008 - Clause 9 方法, 用感應耦合電漿原子發射 光譜儀檢測鉛含量。 / With reference to IEC 62321: 2008 - Clause 9. Determination of Lead by ICP-AES.	2	13	1000
汞 / Mercury (Hg)	ng/kg	參考IEC 62321: 2008 - Clause 7 方法, 用感應耦合電漿原子發射 光譜儀檢測汞含量。 / With reference to IEC 62321: 2008 - Clause 7. Determination of Mercury by ICP-AES.	2	n.d.	1000
六價鉻 / Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	參考IEC 62321: 2008 - Annex B 方法檢測, 用Spot test / boiling water extraction方法檢 測六價鉻含量。 / With reference to IEC 62321: 2008 - Annex B. Determination of Hexavalent Chromium by Spot test / boiling water extraction Method. (See Note 6)	0.02mg/kg with 50 cm ² surface area	Negative	#

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測試報告 Test Report

號碼(No.): CR/2010/13746A 日期(Date): 2010/01/26 頁數(Page): 3 of 8

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法使用 標準值 (MOL)	結果 (Result) NO.1	法規 限值 (Limit)
全氟辛酸鹽 / Perfluorooctane sulfonates (PFOS) PFOS - Acid PFOS - Metal Salt PFOS - Amide	mg/kg	參考US EPA 3540C: 1996方法, 以 液相層析質譜儀檢測全氟辛酸鹽 含量。 / With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	10	n.d.	-
全氟辛酸(鈹) / PFCA (CAS No.: 000335- 67-1)	ug/kg	參考US EPA 3540C: 1996方法, 以 液相層析質譜儀檢測全氟辛酸(鈹) 含量。 / With reference to US EPA 3540C: 1996 method for PFCA Content. Analysis was performed by LC/MS.	10	n.d.	-
多溴聯苯總和 / Sum of PBBs	ug/kg	參考IEC 62321: 2008 - Annex A 方法, 以氣相層析質譜儀檢測。 / With reference to IEC 62321: 2008 - Annex A and performed by GC/MS.	-	n.d.	1000
一溴聯苯 / Monobromobiphenyl			5	n.d.	-
二溴聯苯 / Dibromobiphenyl			5	n.d.	-
三溴聯苯 / Tribromobiphenyl			5	n.d.	-
四溴聯苯 / Tetrabromobiphenyl			5	n.d.	-
五溴聯苯 / Pentabromobiphenyl			5	n.d.	-
六溴聯苯 / Hexabromobiphenyl			5	n.d.	-
七溴聯苯 / Heptabromobiphenyl			5	n.d.	-
八溴聯苯 / Octabromobiphenyl			5	n.d.	-
九溴聯苯 / Nonabromobiphenyl			5	n.d.	-
十溴聯苯 / Decabromobiphenyl			5	n.d.	-
多溴聯苯醚總和 / Sum of PBDEs			-	n.d.	1000
一溴聯苯醚 / Monobromodiphenyl ether			5	n.d.	-
二溴聯苯醚 / Dibromodiphenyl ether			5	n.d.	-
三溴聯苯醚 / Tribromodiphenyl ether			5	n.d.	-
四溴聯苯醚 / Tetrabromodiphenyl ether			5	n.d.	-
五溴聯苯醚 / Pentabromodiphenyl ether			5	n.d.	-
六溴聯苯醚 / Hexabromodiphenyl ether			5	n.d.	-
七溴聯苯醚 / Heptabromodiphenyl ether			5	n.d.	-
八溴聯苯醚 / Octabromodiphenyl ether			5	n.d.	-
九溴聯苯醚 / Nonabromodiphenyl ether			5	n.d.	-
十溴聯苯醚 / Decabromodiphenyl ether			5	n.d.	-

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測試報告 Test Report

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備註(Note):

1. mg/kg = ppm; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "n.r." = Not Regulated (無規範值)
5. ** = Qualitative analysis (No Unit) 定性分析(無單位)
6. Spot test:
Negative = Absence of Cr(VI) coating / surface layer (鍍層中偵測不到六價鉻).
Positive = Presence of Cr(VI) coating / surface layer (鍍層中偵測到六價鉻).
The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.
(當該測項無浸提過時, 測試樣品可藉由boiling-water-extraction測試方法進一步確認)
Boiling-water-extraction:
Negative = Absence of Cr(VI) coating / surface layer (鍍層中偵測不到六價鉻).
Positive = Presence of Cr(VI) coating / surface layer (鍍層中偵測到六價鉻).
The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm² sample surface area.
抽溶液濃度 \geq 0.02 mg/kg with 50 cm² (sample surface area)
7. # = Positive indicates the presence of Cr(VI) on the tested areas and result be regarded as not comply with RoHS requirement. (Positive表示測試區域之六價鉻不符合RoHS要求)
Negative indicates the absence of Cr(VI) on the tested areas and result be regarded as comply with RoHS requirement. (Negative表示測試區域之六價鉻符合RoHS要求)

PPOS參考資訊(Reference Information): 指令 2006/122/EC (Directive 2006/122/EC)

- (1) 該物質不可置於市場上或使用者於特殊物質或配置成分重量濃度等於或大於0.005%。
(May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.)
- (2) 該物質不可置於市場上的半成品或商品或其物件: 倘若零件上明顯地具有PPOS並參照結構上及細細構造上計算PPOS重量濃度等於或大於0.1%, 而紡織品或其他覆蓋物質, 如果PPOS在覆蓋物質中含量等於或大於1µg/m².
(May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PPOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PPOS or, for textiles or other coated materials, if the amount of PPOS is equal to or higher than 1µg/m² of the coated material.)

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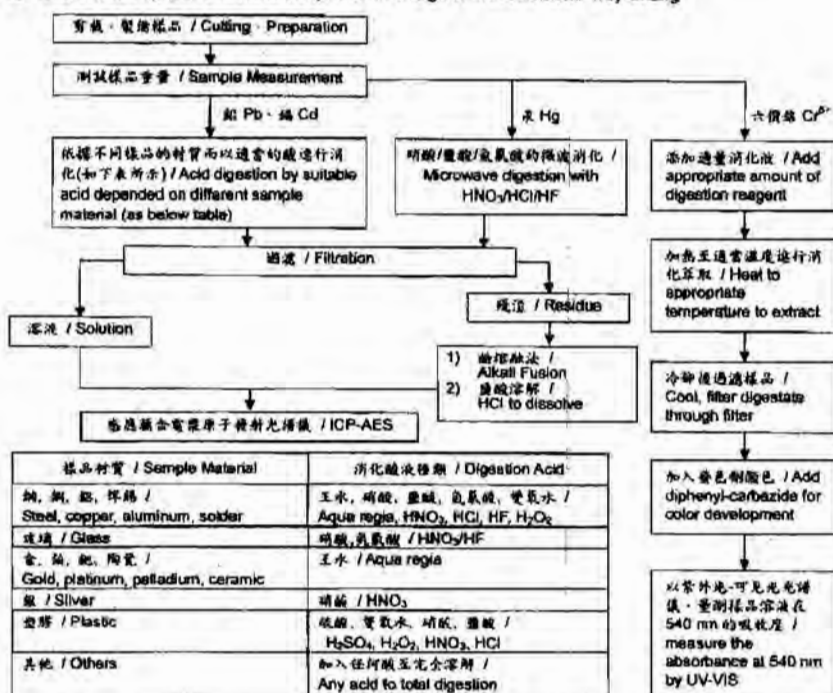
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測試報告 Test Report

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- 1) 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)
- 2) 測試人員: 楊登偉 / Name of the person who made measurement: Climgreat Yang
- 3) 測試負責人: 張偉典 / Name of the person in charge of measurement: Troy Chang



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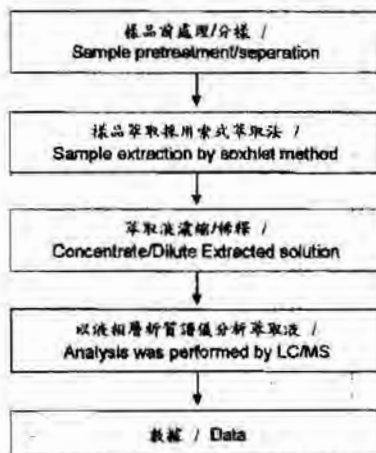
測試報告 Test Report

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索式萃取(LC/MS)分析流程圖 /

Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) 測試人員: 傅莉雅 / Name of the person who made measurement: Lydia Fu
- 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjiy Chen
- 測試項目(Test Items): 全氟辛酸/全氟辛酸(銜)、苯並三唑化合物 /
PFOS/PFOA, Benzotriazole



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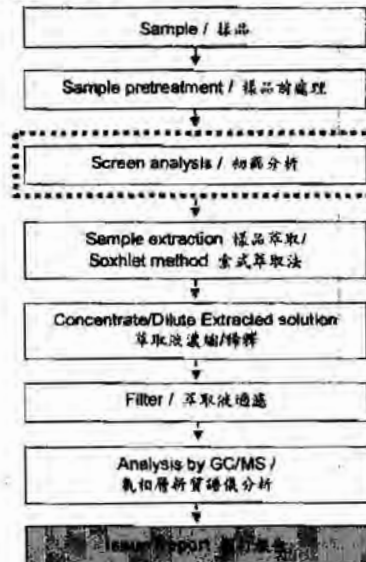
測試報告 Test Report

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SGS GROUP

多溴聯苯/多溴聯苯醚分析流程圖 / PBB/PBDE analytical FLOW CHART

- 1) 測試人員: 翁賜彬 / Name of the person who made measurement: Roman Wong
 - 2) 測試負責人: 陳新智 / Name of the person in charge of measurement: Shinjyh Chen
- 初次測試程序 / First testing process ———→
- 選擇性篩檢程序 / Optional screen process→
- 確認程序 / Confirmation process ---→



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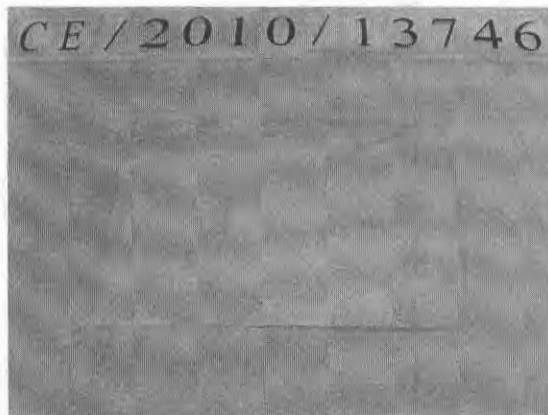
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測試報告
Test Report

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** 報告結尾(End of Report) **

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检测报告

报告编号 RLSZB000371440001C

第 1 页 共 3 页

样品信息

样品名称

锡药水

样品描述

浅绿色液体

样品接收日期

2009.11.10

样品检测日期

2009.11.10—2009.11.13

检测要求

根据客户要求,测定所提交样品中的铅(Pb),镉(Cd),汞(Hg),六价铬(Cr(VI))的含量。

检测依据

测试项目	测试方法	测试仪器	方法检测限
铅(Pb)	IEC 62321:2008 Ed.1 Sec.10	ICP-OES	2 mg/kg
镉(Cd)	IEC 62321:2008 Ed.1 Sec.10	ICP-OES	2 mg/kg
汞(Hg)	IEC 62321:2008 Ed.1 Sec.7	ICP-OES	2 mg/kg
六价铬(Cr(VI))	IEC 62321:2008 Ed.1 Annex C	UV-Vis	2 mg/kg

检测结果 请参见下页。



主 检:

审 核:

签 发:

签发日期:

2009.11.13

技术经理

No. 56654433



检测报告

报告编号 RLSZB000371440001C

第 2 页 共 3 页

检测结果

测试项目	含量
铅(Pb)	N. D.
镉(Cd)	N. D.
汞(Hg)	N. D.
六价铬(Cr(VI))	N. D.

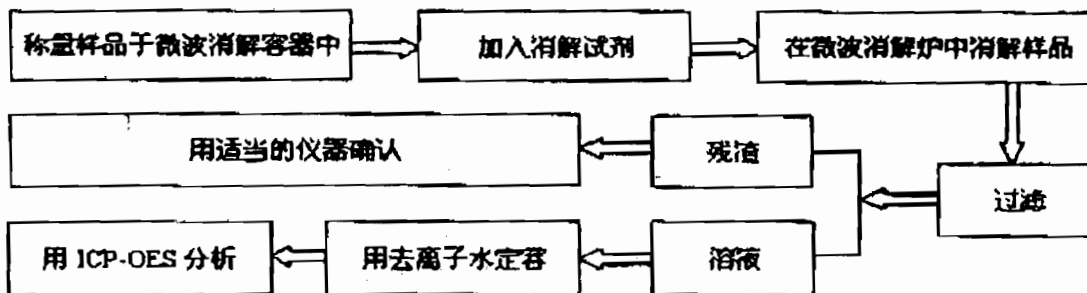
注释: -N.D. = 未检出 (小于方法检测限)

-mg/kg = ppm = 百万分之几

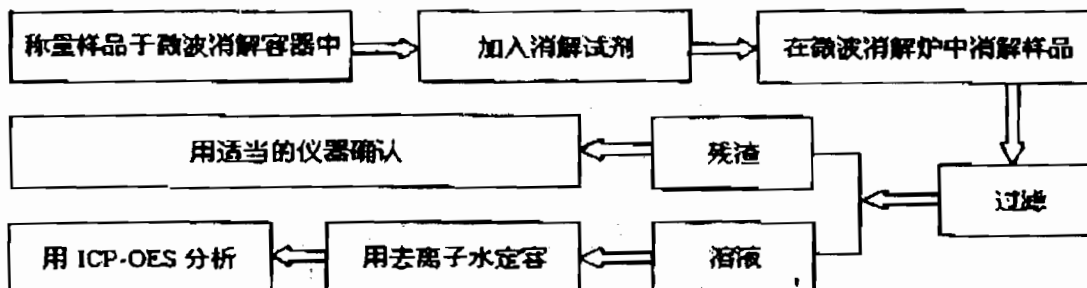
备注: 报告编号中“C”表示此报告为中文版本。

检测流程

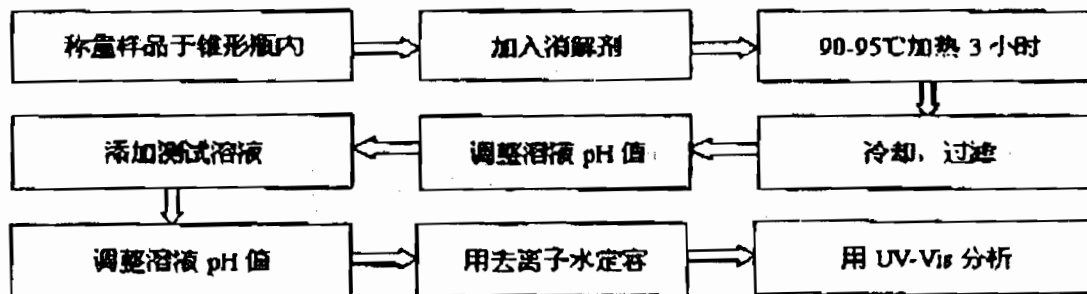
1. 铅(Pb), 镉(Cd)



2. 汞(Hg)



3. 六价铬(Cr(VI))





检测报告

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样品图片



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