



**Test Report**

Number : TWNC00202519

Applicant 申請商: Yellow Stone Corp.  
 早安股份有限公司  
 No 9 Lane 113 Chih-Yuan 2nd Rd  
 Taipei Taiwan ROC  
 台北市北投區致遠二路 113 巷 9 號  
 Safe Corp. (Shenzhen)  
 深圳市全安電子有限公司  
 3rd Building 4th Industrial Area  
 Heshuikuo Gongming Street  
 Guangming New District Shenzhen  
 Guangdong China  
 廣東省深圳市光明新區公明街道合水口第四  
 工業區第三棟

Date : May 26, 2011

Sample Description 樣品敘述:

One (1) group of submitted samples said to be :  
 以下測試樣品乃供應商所提供及確認:

Sample Description : OPTO-ELECTRONIC PRODUCTS  
 樣品名稱  
 Style / Item No. : Please See Page Two  
 產品型號  
 Buyer's Order No. : Please See page Two  
 買家型號  
 Country Of Origin : 台灣 & 中國  
 原產地  
 Goods Exported To : 全世界  
 外銷國家  
 Date Sample Received : May 18, 2011  
 收件日期  
 Date Test Started : May 20, 2011  
 開始測試日期

Test Conducted 測試執行 :

As requested by the applicant, for details please refer to attached pages.  
 依申請商之要求, 細節請參考附頁.

Authorized By:  
 On Behalf Of Intertek Testing Services  
 Taiwan Limited



K. Y. Liang  
 Director

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 approval of the laboratory.



**Test Report**

Number : TWNC00202519

Style / Item No. : SURFACE MOUNT CHIP LED LAMPS  
產品型號 SURFACE MOUNT DUAL COLOR LED LAMPS  
SURFACE MOUNT TRI COLOR LED LAMPS  
SURFACE MOUNT RESISTER CHIP LED LAMPS  
SURFACE MOUNT BLINKING CHIP LED LAMPS  
AXIAL LED LAMPS

Buyer's Order No. : SURFACE MOUNT CHIP LED LAMPS  
買家型號 SURFACE MOUNT DUAL COLOR LED LAMPS  
SURFACE MOUNT TRI COLOR LED LAMPS  
SURFACE MOUNT RESISTER CHIP LED LAMPS  
SURFACE MOUNT BLINKING CHIP LED LAMPS  
AXIAL LED LAMPS

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Taiwan Limited



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K. Y. Liang  
Director

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## Test Conducted

## ( I ) Test Result Summary 測試結果 :

Test Item 測試項目	Result 結果 (ppm)
	<u>Mixed All Electronic Components</u>
<b>Heavy Metal / 重金屬</b>	
Cadmium (Cd) content / 鎘含量	ND
Lead (Pb) content / 鉛含量	ND
Mercury (Hg) content / 汞含量	ND
Chromium VI (Cr <sup>6+</sup> ) content / 六價鉻含量	ND
<b>Polybrominated Biphenyls (PBBs) / 多溴聯苯</b>	
Monobrominated Biphenyls (MonoBB) / 單溴聯苯	ND
Dibrominated Biphenyls (DiBB) / 二溴聯苯	ND
Tribrominated Biphenyls (TriBB) / 三溴聯苯	ND
Tetrabrominated Biphenyls (TetraBB) / 四溴聯苯	ND
Pentabrominated Biphenyls (PentaBB) / 五溴聯苯	ND
Hexabrominated Biphenyls (HexaBB) / 六溴聯苯	ND
Heptabrominated Biphenyls (HeptaBB) / 七溴聯苯	ND
Octabrominated Biphenyls (OctaBB) / 八溴聯苯	ND
Nonabrominated Biphenyls (NonaBB) / 九溴聯苯	ND
Decabrominated Biphenyl (DecaBB) / 十溴聯苯	ND
<b>Polybrominated Diphenyl Ethers (PBDEs) / 多溴聯苯醚</b>	
Monobrominated Diphenyl Ethers (MonoBDE) / 單溴聯苯醚	ND
Dibrominated Diphenyl Ethers (DiBDE) / 二溴聯苯醚	ND
Tribrominated Diphenyl Ethers (TriBDE) / 三溴聯苯醚	ND
Tetrabrominated Diphenyl Ethers (TetraBDE) / 四溴聯苯醚	ND
Pentabrominated Diphenyl Ethers (PentaBDE) / 五溴聯苯醚	ND
Hexabrominated Diphenyl Ethers (HexaBDE) / 六溴聯苯醚	ND
Heptabrominated Diphenyl Ethers (HeptaBDE) / 七溴聯苯醚	ND
Octabrominated Diphenyl Ethers (OctaBDE) / 八溴聯苯醚	ND
Nonabrominated Diphenyl Ethers (NonaBDE) / 九溴聯苯醚	ND
Decabrominated Diphenyl Ether (DecaBDE) / 十溴聯苯醚	ND



Number : TWNC00202519

Test Conducted

( I ) Test Result Summary 測試結果 :

<u>Test Item 測試項目</u>	<u>Result 結果 (ppm)</u>
	<u>Mixed All Electronic Components</u>
<b>Others 其他</b>	
Perfluorooctane Sulfonates (PFOS) / 全氟辛磺酸	ND
Perfluorooctanoic Acid (PFOA) / 全氟辛酸	ND

Remarks: ppm = parts per million based on weight of tested sample = mg/kg  
 備註 = 百萬分之一，依據測試樣品重量計算  
 ND = Not Detected = 未檢測出

Responsibility Of Chemist 分析人員 : Irene Chiou / Kevin Liu / Cathy Chen

Date Sample Received 樣品收件日期 : May 18, 2011

Test Period 樣品測試期間 : May 20, 2011 To May 25, 2011

( II ) RoHS Requirement 限值:

<u>Restricted Substances 限用物質</u>	<u>Limits 限值</u>
Cadmium (Cd) content / 鎘含量	0.01% (100ppm)
Lead (Pb) content / 鉛含量	0.1% (1000ppm)
Mercury (Hg) content / 汞含量	0.1% (1000ppm)
Chromium VI (Cr <sup>6+</sup> ) content / 六價鉻含量	0.1% (1000ppm)
Polybrominated Biphenyls (PBBs) / 多溴聯苯	0.1% (1000ppm)
Polybrominated Diphenyl Ehters (PBDEs) / 多溴聯苯醚	0.1% (1000ppm)

The above limits were quoted from 2002/95/EC and amendment 2005/618/EC for homogeneous material.

本限值是依據歐盟指令 2002/95/EC 與其更新指令 2005/618/EC 針對均質材質所訂定。

## Test Conducted

## (III) Test Method 測試方法:

<u>Test Item</u> 測試項目	<u>Test Method</u> 測試方法	<u>Reporting Limit</u> 報告極限
Cadmium (Cd) content 鎘含量	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES. 參考IEC 62321, 2008年第一版第8/9/10章, 以微波消化法測試樣品直到樣品完全溶解並用感應耦合電漿原子放射光譜儀分析。	2 ppm
Lead (Pb) content 鉛含量	With reference to IEC 62321 edition 1.0:2008 in clause 8/9/10, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES. 參考IEC 62321, 2008年第一版第8/9/10章, 以微波消化法測試樣品直到樣品完全溶解並用感應耦合電漿原子放射光譜儀分析。	2 ppm
Mercury (Hg) content 汞含量	With reference to IEC 62321 edition 1.0:2008 in clause 7, by microwave digestion until the tested samples are totally dissolved and determined by ICP-OES. 參考IEC 62321, 2008年第一版第7章, 以微波消化法測試樣品直到樣品完全溶解並用感應耦合電漿原子放射光譜儀分析。	2 ppm
Chromium VI (Cr <sup>6+</sup> ) content 六價鉻含量	With reference to IEC 62321 edition 1.0:2008 in annex C, by alkaline digestion and determined by UV-Vis spectrophotometer. 參考IEC 62321, 2008年第一版附錄C, 以鹼液消化並用紫外光-可見光分光光度計分析。	1 ppm

## Test Conducted

## (III) Test Method 測試方法:

<u>Test Item</u> 測試項目	<u>Test Method</u> 測試方法	<u>Reporting Limit</u> 報告極限
Polybrominated Biphenyls (PBBs) 多溴聯苯	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary 參考IEC 62321, 2008年第一版附錄A, 以溶劑萃取並用氣相層析質譜儀分析, 必要時會以高效能液相層析-二極體陣列偵檢器進行確認。	5 ppm
Polybrominated Diphenyl Ethers (PBDEs) 多溴聯苯醚	With reference to IEC 62321 edition 1.0:2008 in annex A, by solvent extraction and determined by GC-MSD and further HPLC confirmation when necessary 參考IEC 62321, 2008年第一版附錄A, 以溶劑萃取並用氣相層析質譜儀分析, 必要時會以高效能液相層析-二極體陣列偵檢器進行確認。	5 ppm
Perfluorooctane Sulfonates (PFOS) 全氟辛磺酸	By solvent extraction and determined by LC-MS 以溶劑萃取並用液相層析質譜儀分析。	10 ppm
Perfluorooctanoic Acid (PFOA) 全氟辛酸	By solvent extraction and determined by LC-MS 以溶劑萃取並用液相層析質譜儀分析。	10 ppm

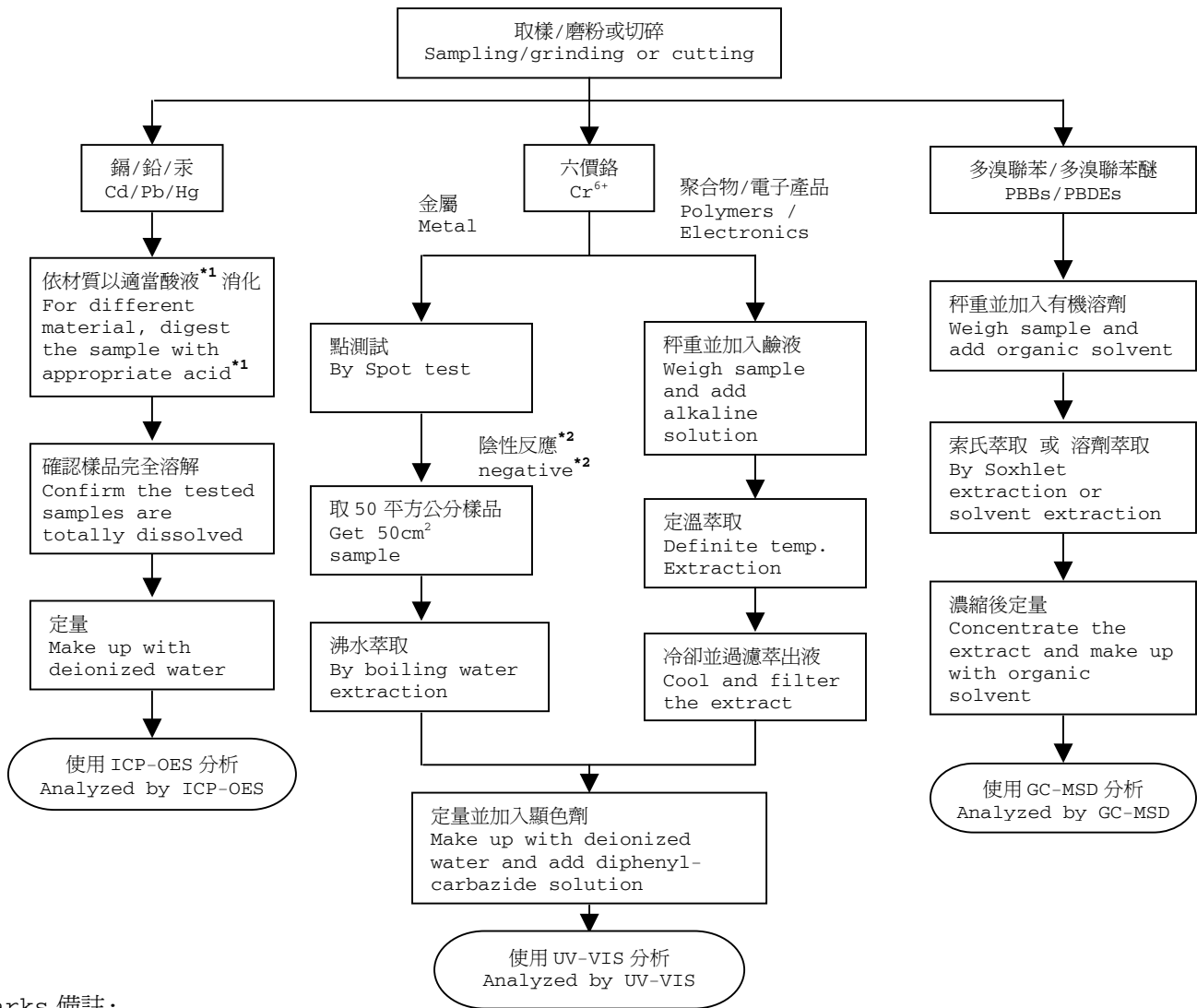
Remark: Reporting Limit = Quantitation limit of analyte in sample  
 備註 報告極限 = 測試樣品之定量偵測極限

## Test Conducted

## (IV) Measurement Flowchart 測試流程圖:

Test For Cd/Pb/Hg/Chromium (VI)/PBBs/PBDEs Contents RoHS六項測試流程圖

Reference Standard 參考方法: IEC 62321 edition 1.0:2008



## Remarks 備註:

\*1: List Of Appropriate Acid 各材質添加酸液如下表:

Material 樣品材質	Acid Added For Digestion 添加酸液種類
Polymers / 聚合物	HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub> , H <sub>3</sub> BO <sub>3</sub> 硝酸、鹽酸、氫氟酸、雙氧水、硼酸
Metals / 金屬	HNO <sub>3</sub> , HCl, HF 硝酸、鹽酸、氫氟酸
Electronics / 電子產品	HNO <sub>3</sub> , HCl, H <sub>2</sub> O <sub>2</sub> , HBF <sub>4</sub> 硝酸、鹽酸、雙氧水、氟硼酸

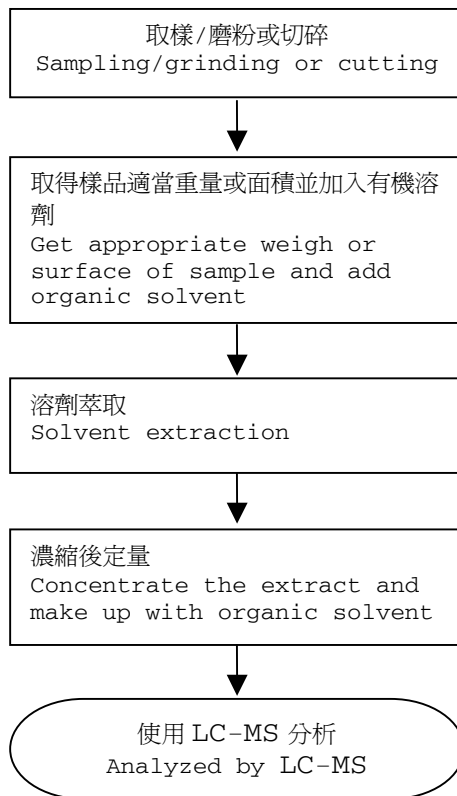
 \*2: If the result of spot test is positive, Chromium VI would be determined as detected.  
 若點測試的結果為陽性反應，則直接判定為測試樣品含有六價鉻。

Test Conducted

(IV) Measurement Flowchart 測試流程圖:

Test For Perfluorooctane Sulfonates (PFOS) / Perfluorooctanoic Acid (PFOA)  
Contents 全氟辛磺酸 / 全氟辛酸測試流程圖

Reference Method 參考方法: Solvent Extraction 溶劑萃取法



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End Of Report

Test Conducted

Photo

