



TEST REPORT

NUMBER : THJ0072032

APPLICANT 申請商: YELLOW STONE CORP.
早安股份有限公司
 SHENZHEN QUAN-AN ELECTRONICS CO., LTD.
深圳市全安電子有限公司
 KUNSHAN QUAN-AN ELECTRONICS CO., LTD.
崑山全安電子有限公司

DATE : MAR 17, 2008

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

XINSHIYI INDUSTRIAL, HESHUIKOU
 COMMUNITY, GONGMING TOWN, BAOAN
 ZONE, SHENZHEN CITY, GUANGDONG
 PROVINCE, CHINA
 中國廣東省深圳市寶安區公明街道合水社區
 新時藝工業村

ROOM 902, NO.111, ZHEN-CHUAN-
 ROAD, YUSHAN TOWN, KUNSHAN CITY,
 JIANGSU PROVINCE, CHINA
 江蘇省昆山市玉山鎮震川西路 111 號 902 室

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 樣品名稱 : WHITE/BLACK ALUMINUM ELECTROLYTIC CAPACITOR
 (A) BODY PART
 (B) PIN PART
- STYLE / ITEM NO. 產品型號 : GR, HR, MR, SM, SS, NP, LL, SL, SN, SSN, XE, XG, XR, XL, GA, NA, LP, HP
- BUYER'S NAME 買家名稱 : NETTECH TECHNOLOGY (SUZHOU) CO., LTD.
 PANASONIC TAIWAN CO., LTD.
 RUNTOP (SHANGHAI) CO., LTD.
 WUS PRINTED CIRCUIT CO., LTD.
- BUYER'S ORDER NO. 買家型號 : GR, HR, MR, SM, SS, NP, LL, SL, SN, SSN, XE, XG, XR, XL, GA, NA, LP, HP
- COUNTRY OF ORIGIN 原產地 : TAIWAM & CHINA
- DATE SAMPLE RECEIVED 收件日期 : MAR 11, 2008
- DATE TEST STARTED 開始測試日期 : MAR 12, 2008

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

THIS REPORT SHALL NOT BE REPRODUCED
 EXCEPT IN FULL, WITHOUT THE WRITTEN
 APPROVAL OF THE LABORATORY.



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TEST CONDUCTED

(I) TEST RESULT SUMMARY 測試結果:

TESTING ITEM 測試項目	RESULT 結果 (ppm)	
	(A)	(B)
HEAVY METAL / 重金屬		
CADMIUM (Cd) CONTENT / 鎘含量	ND	ND
LEAD (Pb) CONTENT / 鉛含量	ND	67
MERCURY (Hg) CONTENT / 汞含量	ND	ND
CHROMIUM VI (Cr ⁶⁺) CONTENT / 六價鉻含量 (FOR MATERIAL OTHER THAN METAL 針對非金屬材質)	ND	--
CHROMIUM VI (Cr ⁶⁺) CONTENT / 六價鉻含量 (QUALITATIVE METHOD FOR METAL 針對金屬之定性法)	--	NEGATIVE
POLYBROMINATED BIPHENYLS (PBBs) / 多溴聯苯		
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	--
POLYBROMINATED DIPHENYL ETHERS (PBDEs) / 多溴聯苯醚		
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	--

CHEMIST: INORGANIC (WILLIAN CHEN/ING KUO)
分析人員 ORGANIC (YIAN LEE)

REMARKS 備註: ppm = PARTS PER MILLION BASED ON WEIGHT OF TESTED SAMPLE
= 百萬分之一，依據測試樣品重量計算
ND = NOT DETECTED = 未檢測出

DATE SAMPLE RECEIVED : MAR 11, 2008
樣品收件日期
TESTING PERIOD : MAR 12, 2008 TO MAR 17, 2008
樣品測試期間



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(II) RoHS REQUIREMENT 限質:

RESTRICTED SUBSTANCES 限用物質	LIMITS 限值
CADMIUM (Cd) / 鎘	0.01% (100 ppm)
LEAD (Pb) / 鉛	0.1% (1000 ppm)
MERCURY (Hg) / 汞	0.1% (1000 ppm)
CHROMIUM (VI) (Cr ⁶⁺) / 六價鉻	0.1% (1000 ppm)
POLYBROMINATED BIPHENYLS (PBBs) / 多溴聯苯	0.1% (1000 ppm)
POLYBROMINATED DIPHENYL EHTERS (PBDEs) / 多溴聯苯醚	0.1% (1000 ppm)

(III) TEST METHOD 測試方法:

TESTING ITEM 測試項目	TESTING METHOD 測試方法	REPORTING LIMIT 報告極限
CADMIUM (Cd) CONTENT 鎘含量	WITH REFERENCE TO IEC 62321-111/95/CDV IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES 參考IEC 62321-111/95/CDV 第8/9/10章, 以微波消化法消化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 62321-111/95/CDV IN CLAUSE 8/9/10, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES 參考IEC 62321-111/95/CDV 第 8/9/10章, 以微波消化法消化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 62321-111/95/CDV IN CLAUSE 7, BY MICROWAVE DIGESTION UNTIL THE TESTED SAMPLES ARE TOTALLY DISSOLVED AND DETERMINED BY ICP-OES 參考IEC 62321-111/95/CDV 第 7 章, 以微波消化法消化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 ⁶⁺) CONTENT (FOR MATERIAL OTHER THAN METAL) 六價鉻含量 (針對非金屬材質)	WITH REFERENCE TO IEC 62321-111/95/CDV IN ANNEX C, BY ALKALINE DIGESTION AND DETERMINED BY UV-VIS SPECTROPHOTOMETER 參考IEC 62321-111/95/CDV 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

REMARK 備註: REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE
報告極限 = 測試樣品之定量偵測極限



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(III) TEST METHOD 測試方法:

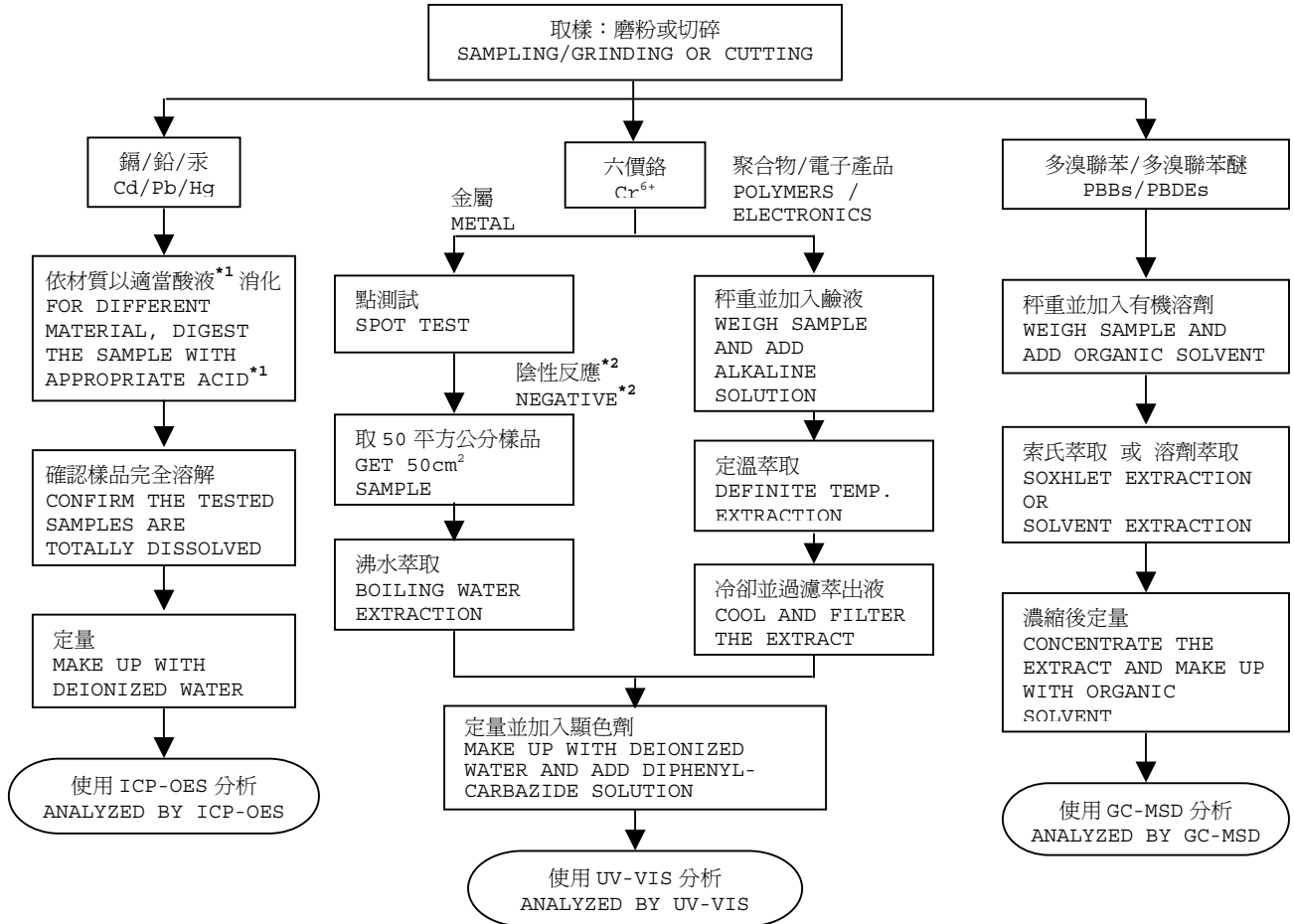
TESTING ITEM 測試項目	TESTING METHOD 測試方法	REPORTING LIMIT 報告極限
CHROMIUM VI (Cr ⁶⁺) CONTENT (QUALITATIVE METHOD FOR METAL) 六價鉻含量 (針對金屬之定性法)	WITH REFERENCE TO IEC 62321-111/95/CDV IN ANNEX B, BY BOILING WATER EXTRACTION AND DETERMINED BY UV-VIS SPECTROPHOTO METER (SEE NOTE) . 參考 IEC 62321-111/95/CDV 附錄 B, 以沸水萃取並用紫外光-可見分光光度計分析。	0.02 mg/kg WITH 50 cm ²
POLYBROMINATED BIPHENYLS (PBBs) 多溴聯苯	WITH REFERENCE TO IEC 62321-111/95/CDV IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY 參考 IEC 62321-111/95/CDV 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儀-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 62321-111/95/CDV IN ANNEX A, BY SOLVENT EXTRACTION AND DETERMINED BY GC-MSD AND FURTHER HPLC CONFIRMATION WHEN NECESSARY 參考 IEC 62321-111/95/CDV 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儀-二極體陣列偵檢器進行確認。	5 ppm

REMARKS 備註: REPORTING LIMIT = QUANTITATION LIMIT OF ANALYTE IN SAMPLE
 報告極限 = 測試樣品之定量偵測極限
 mg/kg WITH 50cm² = MILLIGRAM PER KILOGRAM WITH 50 SQUARE CENTIMETER
 =公斤分之毫克, 依據樣品面積的50平方公分計算
 TESTS WERE CONDUCTED WITH REFERENCE TO 111/95/CDV VERSION 2007-10-12 WHICH IS STILL A DRAFT METHOD AND SUBJECT TO FUTURE CHANGES PRIOR TO PUBLICATION.
 參考111/95/CDV VERSION 2007-10-12進行測試, 此測試方法目前仍是草案, 發行前仍有修正之可能

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(III) 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 (111/95/CDV)



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 ₃ , HCl, HF, H ₂ O ₂ , H ₃ BO ₃ 硝酸、鹽酸、氫氟酸、雙氧水、硼酸
METALS / 金屬	HNO ₃ , HCl, HF 硝酸、鹽酸、氫氟酸
ELECTRONICS / 電子產品	HNO ₃ , HCl, H ₂ O ₂ , HBF ₄ 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。

END OF REPORT

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PHOTO

