

## LCD 控制器&驅動器

# REACH 測試報告

產品名稱 : RA8870、RA0086、RA8806、RA8835、RA8835A、  
RA6963、RA8802、RA8820、RA8803、RA8822

委託之檢測單位 : 台灣電子檢驗中心  
台灣桃園縣龜山鄉樂善村文明路29巷8號

檢測日期 : 西元 2010 年 3 月 4 日

製造公司名稱 : 瑞佑科技股份有限公司  
台灣新竹科學工業園區工業東四路 19-1 號 7 樓  
TEL : 886-3-5637888 FAX : 886-3-5637666





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## 測試報告/ Test Report

工服編號/ Application No 10-03-QAC-034

承辦日期/ Date of Receipt 2010/03/03

測試日期/ Date of Performance 2010/03/04

報告日期/ Date of Issue 2010/03/10

委託機構/ Manufacturer 瑞佑科技股份有限公司

RAIO TECHNOLOGY INC.

地址/ Address

新竹科學園區工業東四路 19-1 號 7F

7F, No.19-1, Industry East 4th Road, Hsinchu Science Park, Hsinchu, Taiwan, ROC

樣品名稱/ Sample Description LCD 控制器 & 驅動器/LCD Controller & Driver

樣品型號/ Model No.

RA8870L4N 、 RA0086L3N 、 RA8806L2N 、 RA8806T1N 、 RA8835P3N 、  
RA8835AP3N 、 RA8835P4N 、 RA8835AP4N 、 RA6963L2N 、 RA8802P1N  
RA8820P1N 、 RA8803P1N 、 RA8822P1N

測試內容/ Report Content

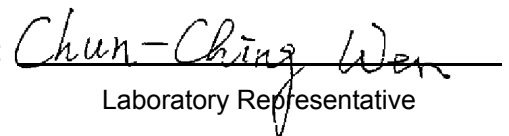
- A. 樣品敘述與測試結果/ Sample Information & Results
- B. 樣品圖片/ Sample Photo
- C. 流程圖/ Flow Chart

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Laboratory Representative

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## A 樣品敘述/ Sample Information

NO.1

樣品編號/ Sample No. 10-03-QAC-034

樣品名稱/ Sample Description LCD 控制器 &amp; 驅動器/LCD Controller &amp; Driver

樣品型號/ Model No. RA8870L4N 、 RA0086L3N 、 RA8806L2N 、 RA8806T1N 、 RA8835P3N 、  
RA8835AP3N 、 RA8835P4N 、 RA8835AP4N 、 RA6963L2N 、 RA8802P1N  
RA8820P1N 、 RA8803P1N 、 RA8822P1N

## 測試結果/ Test Results

測試項目 Test Item(s)	儀器設備 Instruments	參考測試方法 Method	測試結果/ Test Results (單位/ Unit :%)		
			NO.1	方法偵測極限 MDL	REACH 管制限值
鈷 / Co	ICP-OES	US EPA 3052 & 6010B	N.D.	0.0002	---
二氯化鈷 / CoCl <sub>2</sub> (CAS No.7646-79-9)	---	---	N.D. *	---	0.1
砷 / As	ICP-OES	US EPA 3052 & 6010B	N.D.	0.0002	---
五氧化二砷/ As <sub>2</sub> O <sub>5</sub> (CAS No.1303-28-2)	---	---	N.D. *	---	0.1
三氧化二砷/ As <sub>2</sub> O <sub>3</sub> (CAS No.1327-53-3)	---	---	N.D. *	---	0.1
三乙基砷酸酯/ (C <sub>2</sub> H <sub>5</sub> O) <sub>3</sub> AsO (CAS No.15606-95-8)	---	---	N.D. *	---	0.1
鉻 / Cr	ICP-OES	US EPA 3052 & 6010B	N.D.	0.0002	---
重鉻酸鈉/ Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub> (CAS No.7789-12-0)	---	---	N.D. *	---	0.1

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測試項目 Test Item(s)	儀器設備 Instruments	參考測試方法 Method	測試結果/ Test Results (單位/ Unit :%)		
			NO.1	方法偵測極限 MDL	REACH 管制限值
鉛 / Pb	ICP-OES	US EPA 3052 & 6010B	N.D.	0.0002	---
砷酸鉛/ Pb <sub>3</sub> (AsO <sub>4</sub> ) <sub>2</sub> (CAS No.7784-40-9)	---	---	N.D. *	---	0.1
蒽 / Anthracene (CAS No.120-12-7)	GC-MS	ZEK 01.2-08	N.D.	0.0001	0.1
4,4'-二氨基二苯甲烷 4,4'-Diaminodiphenylmethane (CAS No.101-77-9)	GC-MS	DIN 53316	N.D.	0.0001	0.1
六溴環十二烷 Hexabromocyclododecane (HBCDD) (CAS No.25637-99-4)	GC-MS	US EPA 3540C & 8270D	N.D.	0.0001	0.1
氯化石蠟 Chlorinated Paraffins (C10~C13) (CAS No.85535-84-8)	GC-MS	US EPA 3540C & 8270D	N.D.	0.0001	0.1
二甲苯麝香 5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene) (CAS No.81-15-2)	GC-MS	US EPA 3550C & 8270D	N.D.	0.0001	0.1
鄰苯二甲酸二丁酯 Dibutyl Phthalate (DBP) (CAS No.84-74-2)	GC-MS	US EPA 3540C & 8270D	N.D.	0.0001	0.1
鄰苯二甲酸二(2-乙基己基)酯 Bis(2-ethylhexyl) phthalate (DEHP) (CAS No.117-81-7)	GC-MS	US EPA 3540C & 8270D	N.D.	0.0001	0.1
鄰苯二甲酸丁酯苯甲酯 Benzyl butyl phthalate (BBP) (CAS No.85-68-7)	GC-MS	US EPA 3540C & 8270D	N.D.	0.0001	0.1
氧化三丁錫 Bis(tributyltin) oxide (TBTO) (CAS No.56-35-9)	GC-MS	DIN 38407-13	N.D.	0.0001	0.1

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測試項目 Test Item(s)	儀器設備 Instrument	參考測試方法 Method	測試結果/ Test Result (單位/ Unit :%)		
			No.1	方法偵測極限 MDL	限值 LIMIT
蔥油 Anthracene oil (CAS No. 90640-80-5)	GC-MS	ZEK 01.2-08	N.D.	0.05	0.1
蔥油，蔥湖，輕油/ Anthracene oil, anthracene paste, distn. Lights(CAS No. 91995-17-4)	GC-MS	ZEK 01.2-08	N.D.	0.05	0.1
蔥油，蔥湖，蔥餾分/ Anthracene oil, anthracene paste, anthracene fraction (CAS No. 91995-15-2)	GC-MS	ZEK 01.2-08	N.D.	0.05	0.1
蔥油，含蔥量少/ Anthracene oil, anthracene-low (CAS No. 90640-82-7)	GC-MS	ZEK 01.2-08	N.D.	0.05	0.1
蔥油，蔥湖/ Anthracene oil, anthracene paste (CAS No. 90640-81-6)	GC-MS	ZEK 01.2-08	N.D.	0.05	0.1
鄰苯二甲酸二異丁酯 Diisobutyl phthalate (CAS No. 84-69-5)	GC-MS	US EPA 3540C & 8270D	N.D.	0.01	0.1
2,4-二硝基甲苯 2,4-Dinitrotoluene (CAS No. 121-14-2)	GC-MS	US EPA 3540C & 8270D	N.D.	0.01	0.1
煤壩青，高溫/ Coal tar pitch, high temperature (CAS No. 65995-93-2)	GC-MS	US EPA 3540C & 8270D	N.D.	0.05	0.1
三(2-氯乙基)磷酸酯 Tris(2-chloroethyl)phosphate (CAS No. 115-96-8)	GC-MS	US EPA 3540C & 8270D	N.D.	0.01	0.1

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測試項目 Test Item(s)	儀器設備 Instrument	參考測試方法 Method	測試結果/ Test Result (單位/ Unit :%)		
			No.1	方法偵測極限 MDL	限值 LIMIT
鋁 / Al	ICP-OES	US EPA 3052 & 6010B	0.0067	0.005	---
矽酸鋁,陶瓷耐火纖維 Aluminosilicate, Refractory	---	---	N.D. *	---	0.1
矽酸鋁氧化鋯,陶瓷耐火纖維 Zirconia Aluminosilicate, Refractory Ceramic Fibres	---	---	N.D. *	---	0.1
鉻 / Cr	ICP-OES	US EPA 3052 & 6010B	N.D.	0.0002	---
鉻酸鉛(C.I.顏料黃 34) Lead sulfochromate yellow (C.I. Pigment Yellow 34) (CAS No. 1344-37-2)	---	---	N.D. *	---	0.1
鉬鉻紅(C.I.顏料紅 104) Lead chromate molybdate sulphate red (C.I. Pigment Red 104) (CAS No. 12656-85-8)	---	---	N.D. *	---	0.1
鉻酸鉛(鉻黃)Lead chromate (CAS No. 7758-97-6)	---	---	N.D. *	---	0.1

備註/ Note :

1. N.D. : 即為偵測不到 / Not Detected.
2. MDL : 方法偵測極限 / Method Detection Limitation.
3. --- : 即為不適用 / Not Applicable.
4. ppm : = mg/kg (0.1% = 1000 ppm)
5. 測試儀器中英文對照/ Chinese-English Terminology of the instrument.
  - a. ICP-OES 感應耦合電漿原子發射光譜儀
  - b. GC-MS 氣相層析質譜儀
6. 測試人員/ Tested by engineer : Ellen、ZIV、Wang、Wei、Jung
7. 檢閱人員/ Reviewed by supervisor : sujane
8. \* : 測試結果是由換算得知 / the test result is converted from reading.
9. 參照 Guidance for the implementation of REACH (May 2008)要求. / In accordance with the Guidance for the implementation of REACH (May 2008).

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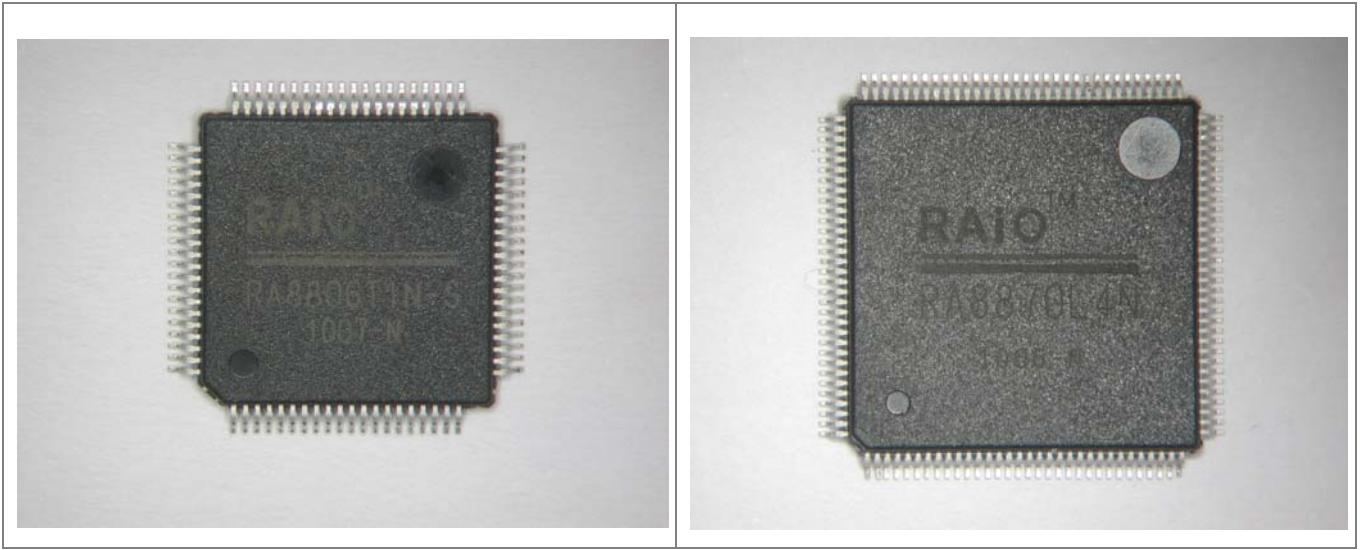
## B. 樣品照片 / Sample Photo



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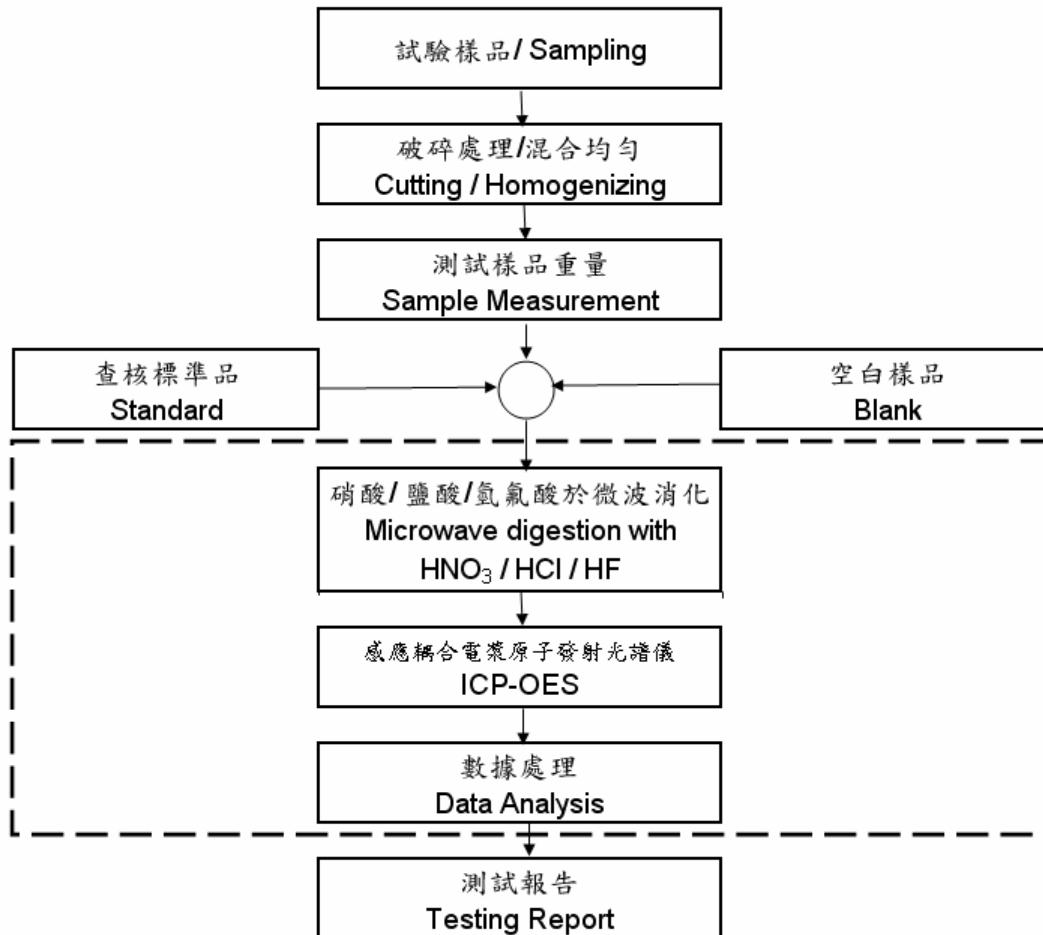
測試部位：八個樣品混合測試

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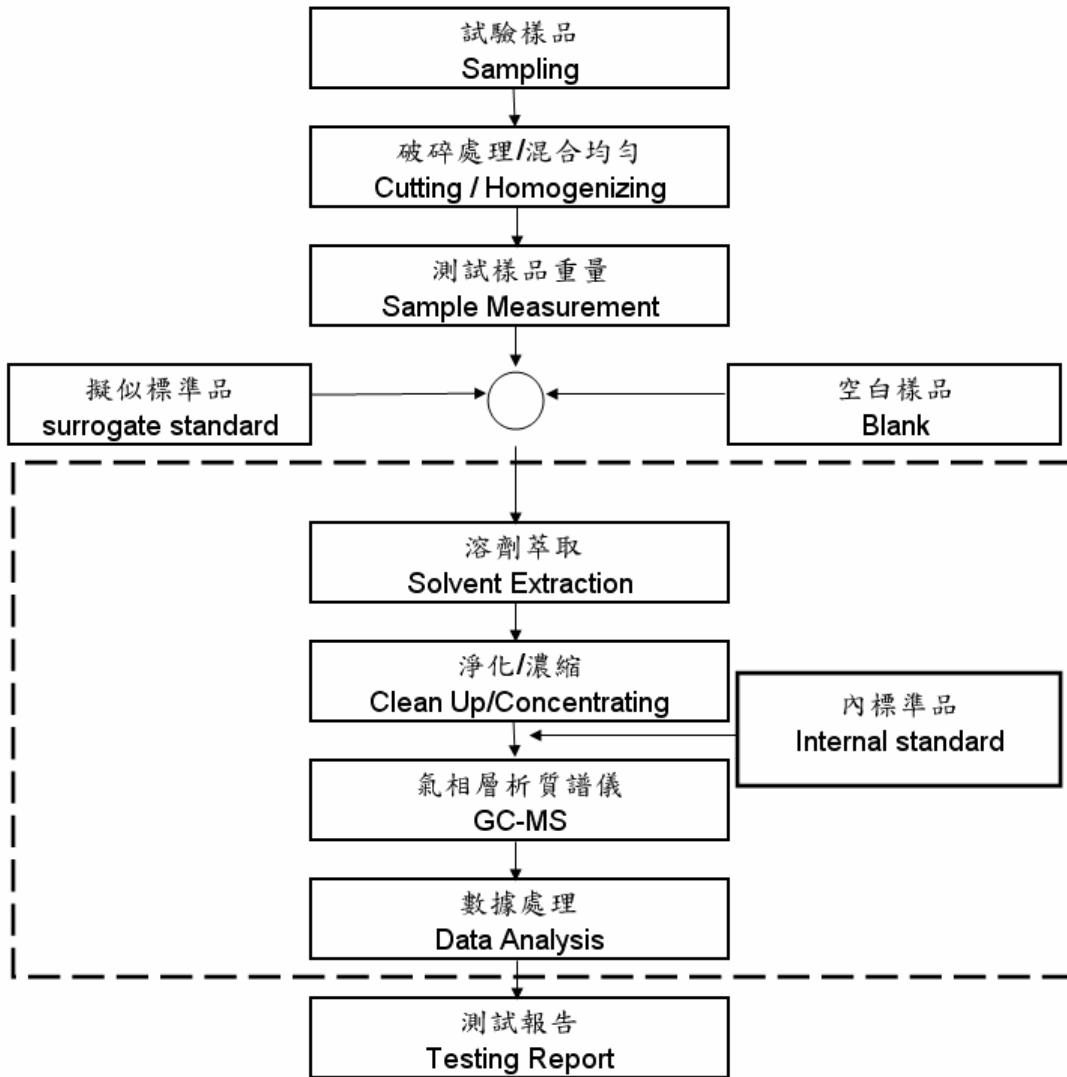
## C. 流程圖/ Flow Chart



Flow Chart of Digestion for Co、As、Pb、Al、Cr (Totally Dissolved)

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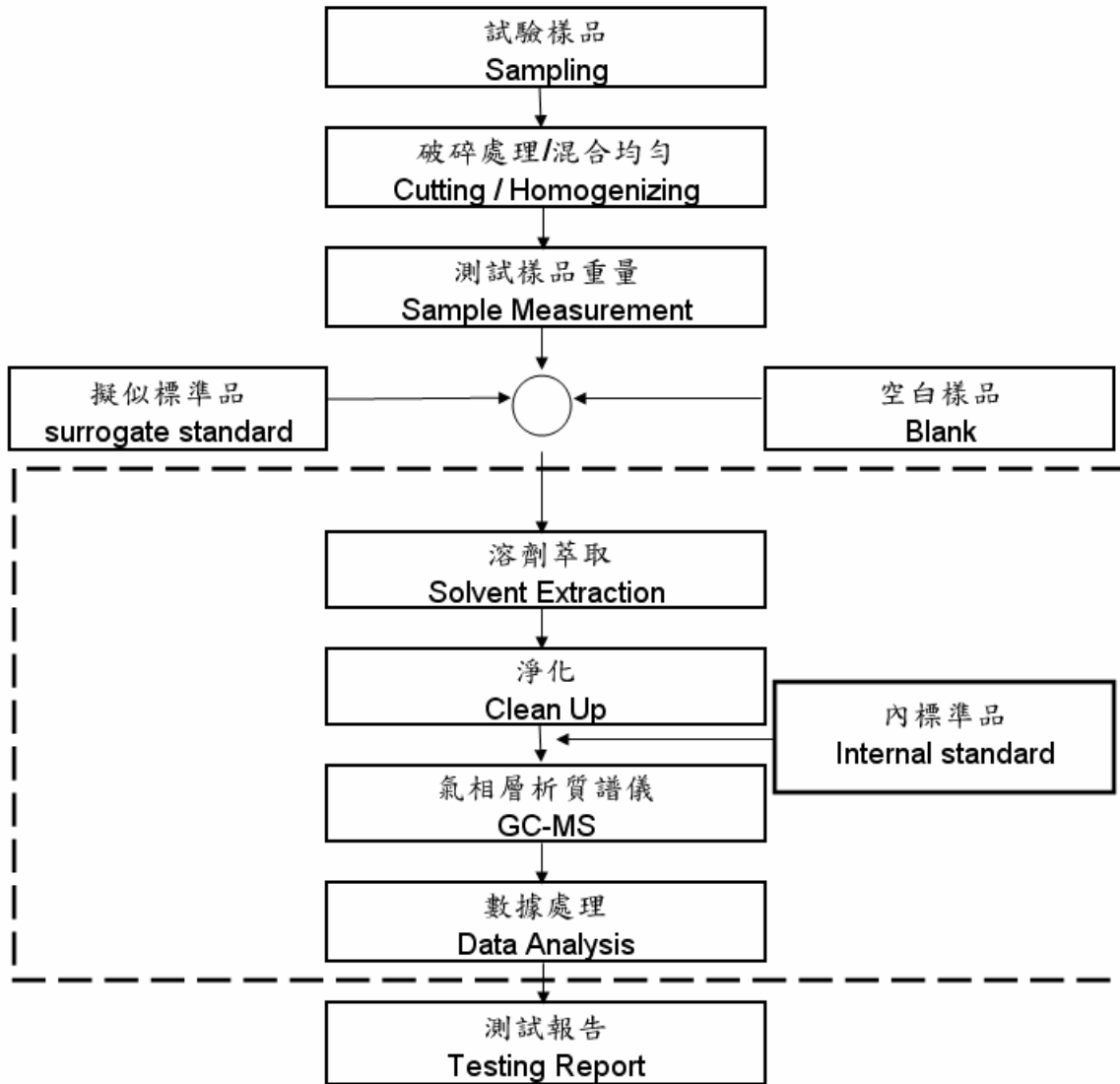
Flow Chart of Extraction for Cyclododecane、HBCDD、CP、  
musk sylene、DBP、DEHP、BBP、TBTO

Diisobutyl phthalate、2,4-Dinitrotoluene、Coal tar pitch, high  
temperature、Tris(2-chloroethyl)phosphate

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Flow Chart of Extraction for Anthracene

---報告結尾/ End of Report ---