



# 檢測報告

## Test Report

報告編號 A2250907423101001E  
Report No. A2250907423101001E

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報告抬頭公司名稱 德森興業有限公司  
Company Name DESEN ELECTROPLATE INDUSTRY CO., LTD.  
shown on Report  
地 址 桃園市龍潭區中興路九龍段 129 巷 175 弄 11 號  
Address NO. 11, ALY. 175, LN. 129, JIULONG SEC., ZHONGXING RD., JIULONG VILLAGE, LONGTAN DISTRICT, TAOYUAN CITY 325, TAIWAN (R. O. C.)

以下測試之樣品及樣品資訊由申請者提供並確認

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

樣品名稱 Sample Name	德森公司電子元件 DESEN OF ELECTRONIC COMPONENT PLATE
樣品型號 Model No.	錫金屬的電鍍層
樣品批號 Lot No.	W01-11-12 槽
樣品接收日期	2025.12.04
Sample Received Date	Dec. 4, 2025
樣品檢測日期	2025.12.04-2025.12.10
Testing Period	Dec. 4, 2025 to Dec. 10, 2025

檢測要求 根據客戶要求，對所提交樣品中的鉛(Pb)，鎘(Cd)，汞(Hg)，六價鉻(Cr(VI))，多溴聯苯(PBBs)，多溴二苯醚(PBDEs)，鄰苯二甲酸酯(DBP, BBP, DEHP, DIBP)，氟(F)，氯(Cl)，溴(Br)，碘(I)進行測試。

Test Requested As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP), Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I) in the submitted sample(s).

檢測依據/檢測結果 請參見下頁。

Test Method/Test Result(s) Please refer to the following page(s).

批准  
Approved by

馮智聰

日期  
Date

2025.12.18

馮智聰

實驗室經理 Laboratory Manager

No. R844631380

台灣華測檢測技術有限公司檢測中心

桃園市蘆竹區南崁路二段 9 號 5 樓之 13

Testing Center, Centre Testing International (Taiwan) Co., Ltd.

5F.-13, No. 9, Sec. 2, Nankan Rd., Luzhu Dist., Taoyuan, Taiwan

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### 檢測依據 Test Method

測試項目 Tested Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
鉛 Lead (Pb)	自訂方法(文件編號:QW-I-005) 參考 IEC 62321-5:2013 In-house method (Doc. No.: QW-I-005) refer to IEC 62321-5:2013	ICP-OES
鎘 Cadmium (Cd)	自訂方法(文件編號:QW-I-005) 參考 IEC 62321-5:2013 In-house method (Doc. No.: QW-I-005) refer to IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	自訂方法(文件編號:QW-I-005) 參考 IEC 62321-4:2013+AMD1:2017 CSV In-house method (Doc. No.: QW-I-005) refer to IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六價鉻 Hexavalent Chromium (Cr(VI))	自訂方法 (文件編號: QW-I-007) 參考 IEC 62321-7-1 In-house method (Doc. No.: QW-I-007) refer to IEC 62321-7-1:2015	UV-Vis
多溴聯苯 Polybrominated Biphenyls (PBBs)	自訂方法 (文件編號: QW-O-002) 參考 IEC 62321-6:2015 In-house method (Doc. No.: QW-O-002) refer to IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	自訂方法 (文件編號: QW-O-002) 參考 IEC 62321-6:2015 In-house method (Doc. No.: QW-O-002) refer to IEC 62321-6:2015	GC-MS
鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	自訂方法 (文件編號:QW-O-001) 參考 IEC 62321-8:2017 In-house method (Doc. No.: QW-O-001) refer to IEC 62321-8:2017	GC-MS
氟 Fluorine (F)	自訂方法(文件編號 QW-O-003) 參考 BS EN 14582:2016 In house method (Doc. No.: QW-O-003) refer to BS EN 14582:2016	IC
氯 Chlorine (Cl)	自訂方法(文件編號 QW-O-003) 參考 BS EN 14582:2016 In house method (Doc. No.: QW-O-003) refer to BS EN 14582:2016	IC
溴 Bromine (Br)	自訂方法(文件編號 QW-O-003) 參考 BS EN 14582:2016 In house method (Doc. No.: QW-O-003) refer to BS EN 14582:2016	IC

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碘 Iodine (I)	自訂方法(文件編號 QW-O-003) 參考 BS EN 14582:2016 In house method (Doc. No.: QW-O-003) refer to BS EN 14582:2016	IC
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### 檢測結果 Test Result(s)

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	001	
鉛 Lead (Pb)	24 mg/kg	2 mg/kg
鎘 Cadmium (Cd)	N.D.	2 mg/kg
汞 Mercury (Hg)	N.D.	2 mg/kg
六價鉻 Hexavalent Chromium (Cr(VI))	N.D.▼	0.10 µg/cm <sup>2</sup> (LOQ)

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	001	
<b>多溴聯苯 Polybrominated Biphenyls (PBBs)</b>		
一溴聯苯 Monobromobiphenyl	N.D.	5 mg/kg
二溴聯苯 Dibromobiphenyl	N.D.	5 mg/kg
三溴聯苯 Tribromobiphenyl	N.D.	5 mg/kg
四溴聯苯 Tetrabromobiphenyl	N.D.	5 mg/kg
五溴聯苯 Pentabromobiphenyl	N.D.	5 mg/kg
六溴聯苯 Hexabromobiphenyl	N.D.	5 mg/kg
七溴聯苯 Heptabromobiphenyl	N.D.	5 mg/kg
八溴聯苯 Octabromobiphenyl	N.D.	5 mg/kg
九溴聯苯 Nonabromobiphenyl	N.D.	5 mg/kg
十溴聯苯 Decabromobiphenyl	N.D.	5 mg/kg

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測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	001	
<b>多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)</b>		
一溴二苯醚 Monobromodiphenyl ether	N.D.	5 mg/kg
二溴二苯醚 Dibromodiphenyl ether	N.D.	5 mg/kg
三溴二苯醚 Tribromodiphenyl ether	N.D.	5 mg/kg
四溴二苯醚 Tetrabromodiphenyl ether	N.D.	5 mg/kg
五溴二苯醚 Pentabromodiphenyl ether	N.D.	5 mg/kg
六溴二苯醚 Hexabromodiphenyl ether	N.D.	5 mg/kg
七溴二苯醚 Heptabromodiphenyl ether	N.D.	5 mg/kg
八溴二苯醚 Octabromodiphenyl ether	N.D.	5 mg/kg
九溴二苯醚 Nonabromodiphenyl ether	N.D.	5 mg/kg
十溴二苯醚 Decabromodiphenyl ether	N.D.	5 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	001	
<b>鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)</b>		
鄰苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg
鄰苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg
鄰苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg
鄰苯二甲酸二異丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	001	
氟 Fluorine (F)	N.D.	50 mg/kg
氯 Chlorine (Cl)	N.D.	50 mg/kg
溴 Bromine (Br)	N.D.	50 mg/kg
碘 Iodine (I)	N.D.	50 mg/kg

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## 樣品/部位描述 Sample/Part Description

序號	CTI 樣品 ID	描述
No.	CTI Sample ID	Description
1	001	有銀色鍍層的金屬 Metal with silvery plating

備註: 對於檢測鉛, 鎘, 汞之樣品已消解完全。

-N.D. = 未檢出 (小於方法檢出限或定量限)

-mg/kg = ppm = 百萬分之一

-LOQ = 定量限, 六價鉻的定量限為 0.10  $\mu\text{g}/\text{cm}^2$

-▼六價鉻濃度小於 0.10  $\mu\text{g}/\text{cm}^2$ , 樣品未檢出六價鉻。由於未獲知樣品的存儲條件和生產日期, 樣品的六價鉻測試結果僅能代表測試時樣品含六價鉻的狀態。

**Remark: The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10  $\mu\text{g}/\text{cm}^2$

-▼The sample is negative for Cr(VI) - The Cr(VI) concentration is below 0.10  $\mu\text{g}/\text{cm}^2$ . The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

注釋: 本報告中的資料結果供科研、教學、企業內部品質控制、企業產品研發等目的用。

**Note: The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.**

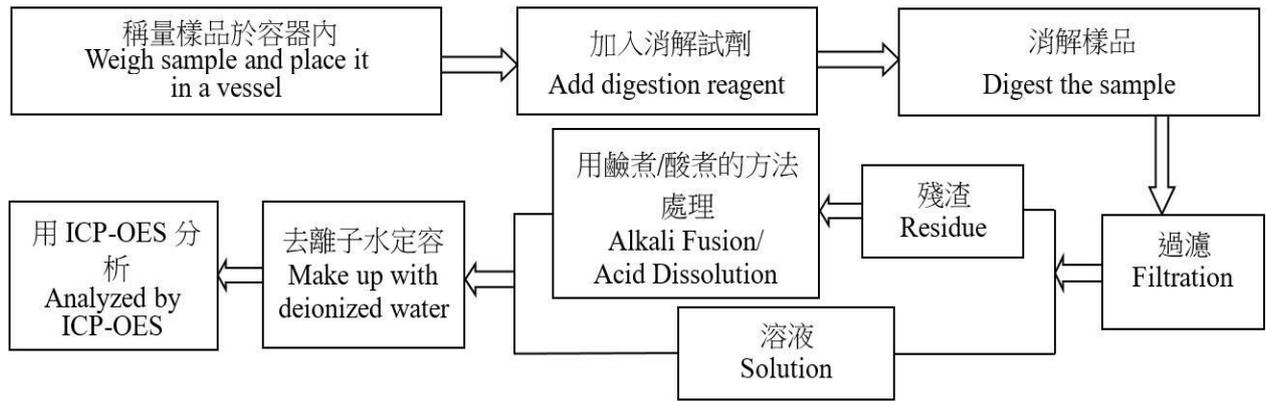
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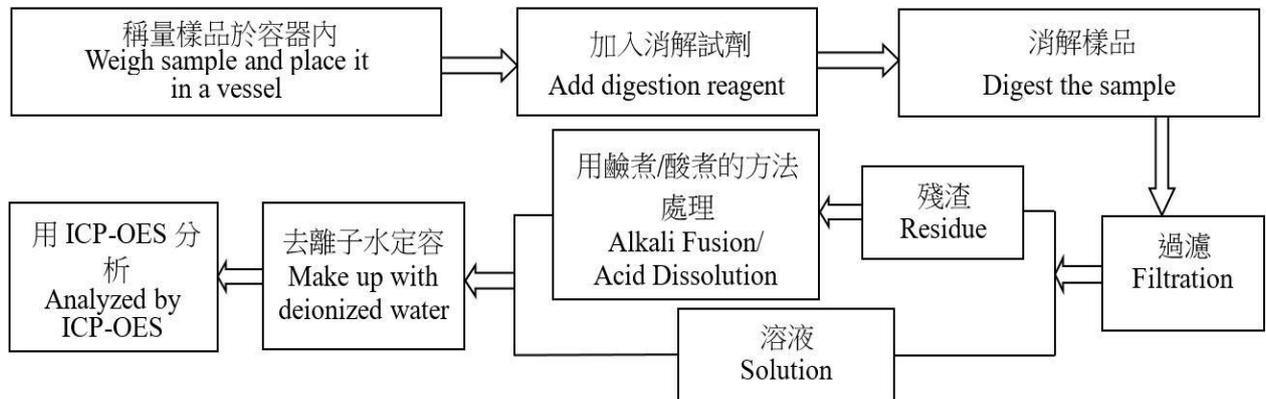
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## 檢測流程 Test Process

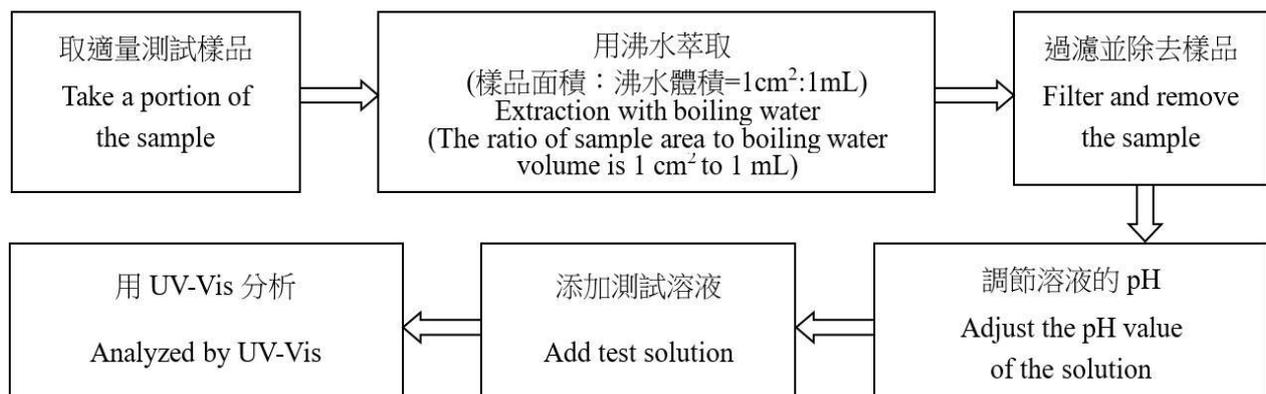
### 1. 鉛 Lead (Pb), 鎘 Cadmium (Cd)



### 2. 汞 Mercury (Hg)



### 3. 六價鉻 Hexavalent Chromium (Cr(VI))

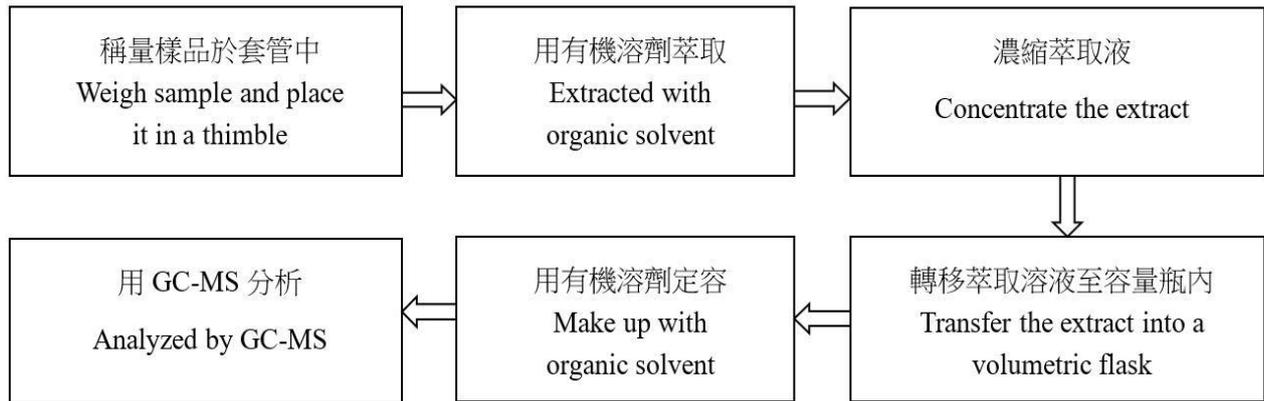


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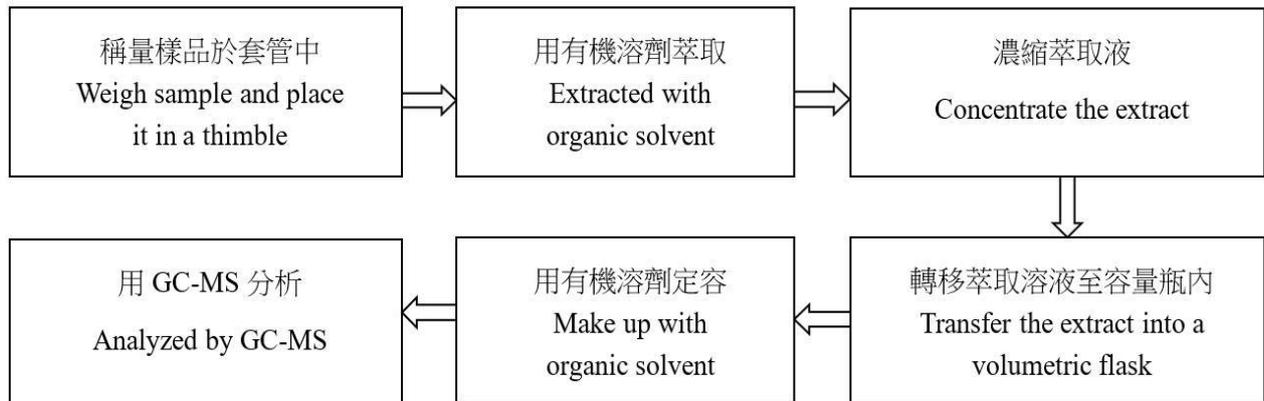
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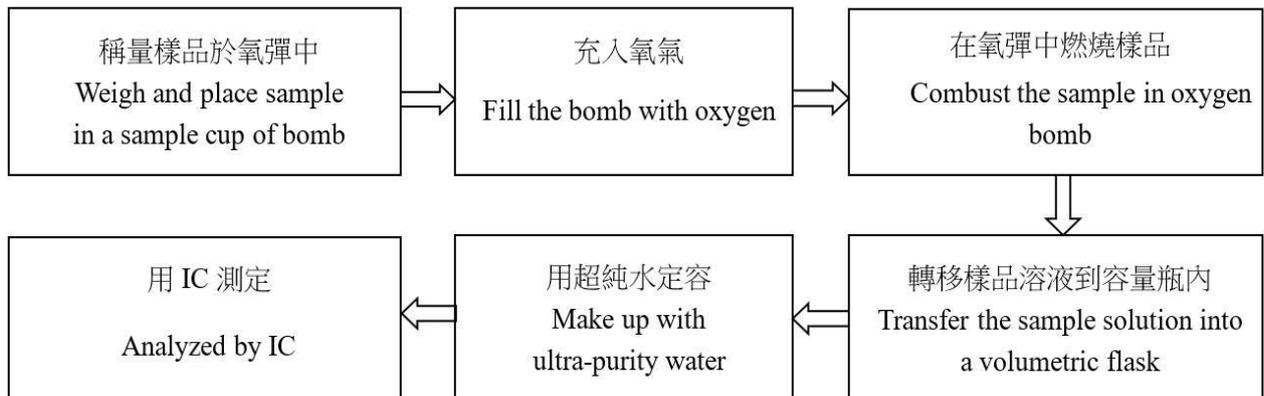
## 4. 多溴聯苯 Polybrominated Biphenyls (PBBs), 多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)



## 5. 鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)



## 6. 氟 Fluorine (F), 氯 Chlorine (Cl), 溴 Bromine (Br), 碘 Iodine (I)



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## 樣品圖片

### Photo(s) of the sample(s)



#### 聲明 Statement :

1. 本報告無批准人簽字、“專用章”及報告騎縫章無效；  
This report is considered invalid without approved signature, special seal and the seal on the perforation;
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The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. 本報告檢測結果僅對受測樣品負責；  
The result(s) shown in this report refer(s) only to the sample(s) tested;
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\*\*\* End of Report \*\*\*