

檢測報告 Test Report



報告編號 A2230013075101002E
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報告抬頭公司名稱 眾智光電科技股份有限公司
Company Name ORIENTAL SYSTEM TECHNOLOGY INC.
shown on Report

地址 新竹科學工業園區工業東九路25號
Address NO.25, INDUSTRY E. 9TH ROAD, HSINCHU SCIENCE PARK, HSINCHU 30075,
TAIWAN, ROC

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	Array Module
Sample Name	Array Module
樣品型號	OTPA SERIES
Part No.	OTPA SERIES
樣品顏色	金色, 銀色, 白色, 綠色
Color	金色, 銀色, 白色, 綠色
材料名稱	金屬, 塑膠, PCB板
Material	金屬, 塑膠, PCB板
樣品接收日期	2023.01.10
Sample Received Date	Jan. 10, 2023
樣品檢測日期	2023.01.10-2023.01.17
Testing Period	Jan. 10, 2023 to Jan. 17, 2023

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).



馮智聰

馮智聰

實驗室經理 Laboratory Manager

日期
Date

2023.01.17

No. R392331726

桃園市蘆竹區南崁路二段9號5樓之6

5F-6, No.9, Sec.2, Nankan Rd, Luzhu Dist., Taoyuan, Taiwan

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檢測依據 Test Method

測試項目 Test Item(s)	測試方法 Test Method	測試儀器 Measured Equipment(s)
鉛 Lead (Pb)	IEC 62321-5:2013	ICP-OES
鎘 Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
汞 Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
六價鉻 Hexavalent Chromium (Cr(VI))	IEC 62321-7-2:2017	UV-Vis
多溴聯苯 Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
氟 Fluorine (F)	參考EN 14582:2016 Refer to EN 14582:2016	IC
氯 Chlorine (Cl)	參考EN 14582:2016 Refer to EN 14582:2016	IC
溴 Bromine (Br)	參考EN 14582:2016 Refer to EN 14582:2016	IC
碘 Iodine (I)	參考EN 14582:2016 Refer to 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
	002	
鉛 Lead (Pb)	N.D.	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.	8 mg/kg

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	002	

多溴聯苯 Polybrominated Biphenyls (PBBs)		
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

測試項目 Tested Item(s)	結果 Result	方法檢出限 MDL
	002	

多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)		
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

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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
	002	
鄰苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)		
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
鄰苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2	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
	002	
氟 Fluorine (F)	318 mg/kg	50 mg/kg
氯 Chlorine (Cl)	164 mg/kg	50 mg/kg
溴 Bromine (Br)	22063 mg/kg	50 mg/kg
碘 Iodine (I)	N.D.	50 mg/kg

樣品/部位描述 Sample/Part Description

序號 No.	CTI樣品ID CTI Sample ID	描述 Description
1	002	混測,電子元器件 Mixed test, electronic components

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)
 -mg/kg = ppm = 百萬分之一
 -根據客戶要求, 對樣品進行整體混合測試, 測試結果不代表樣品中任何一種單一材質的含量。

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**
 -MDL = Method Detection Limit
 -N.D. = Not Detected (<MDL)
 -mg/kg = ppm = parts per million
 -As specified by client, the test was conducted by mixing all materials together.
 The result(s) shown on this report may be different from the content of any homogeneous material.

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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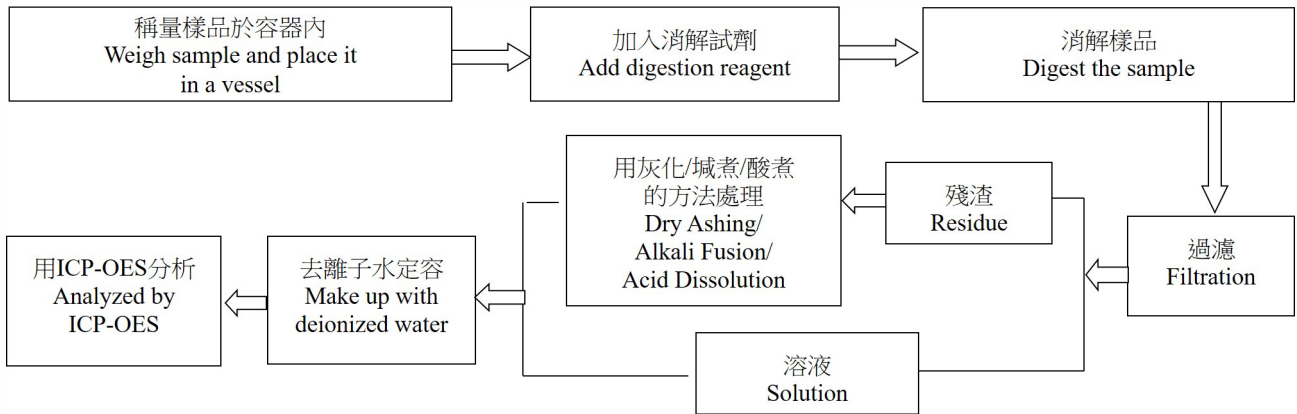
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檢測流程 Test Process

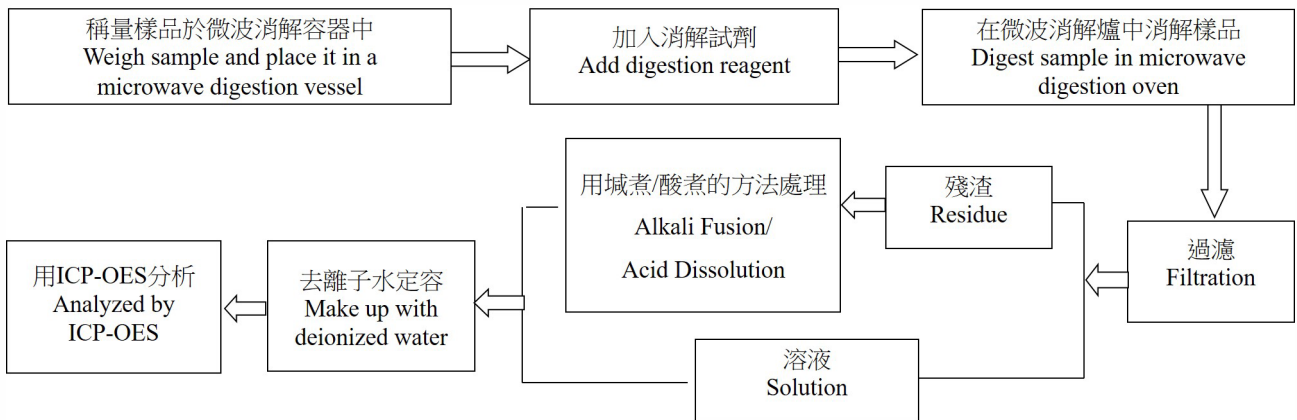
1. 鉛(Pb), 鎘(Cd)

Lead (Pb), Cadmium (Cd)



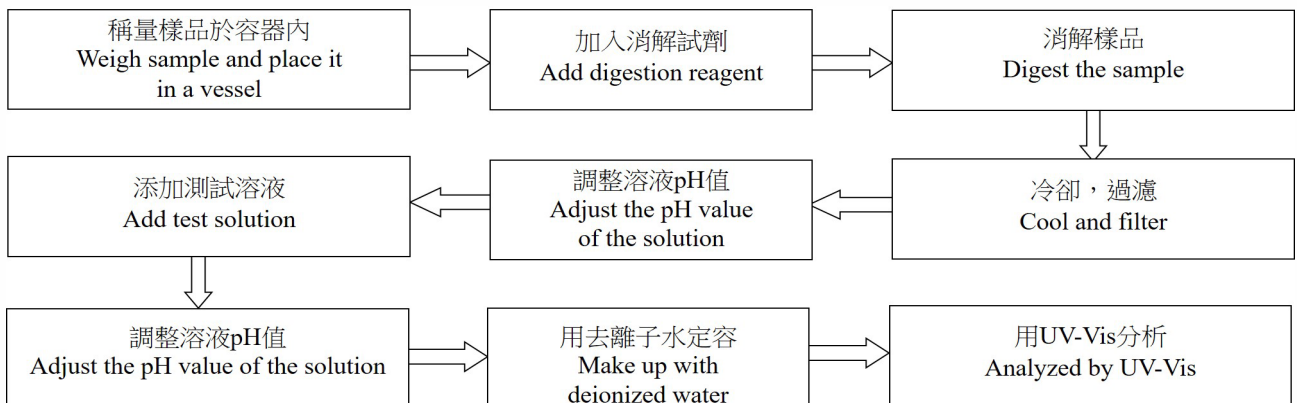
2. 汞(Hg)

Mercury (Hg)



3. 六價鉻(Cr(VI))

Hexavalent Chromium (Cr(VI))



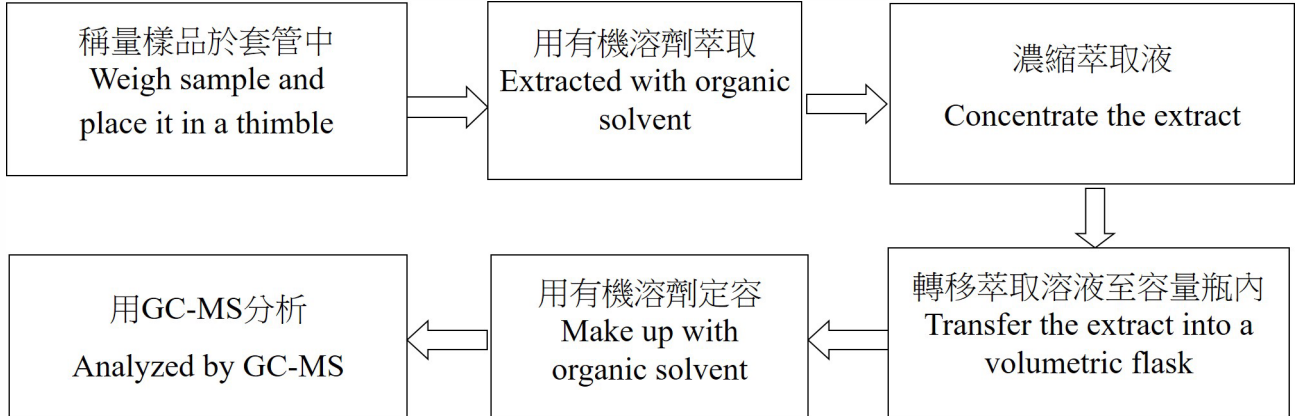
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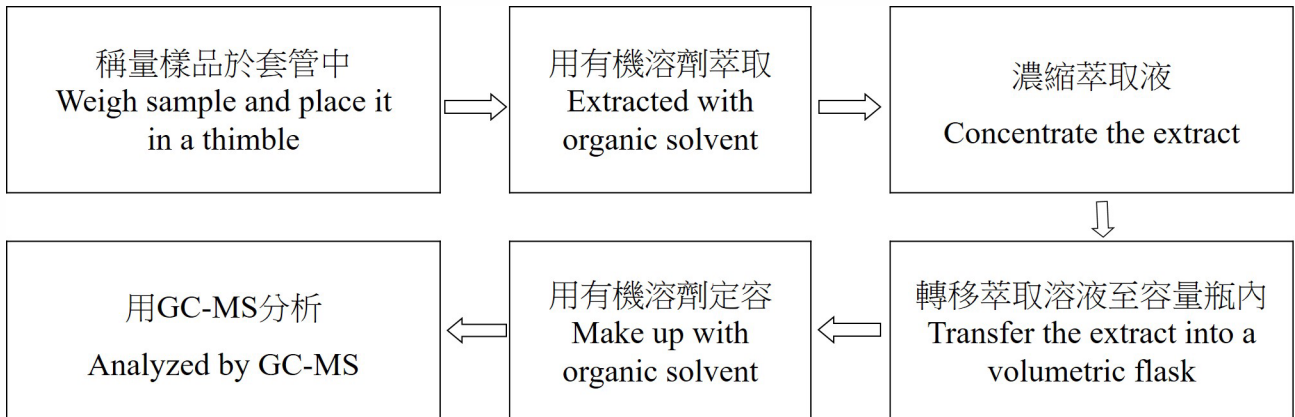
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4. 多溴聯苯(PBBs)，多溴二苯醚(PBDEs)

Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)

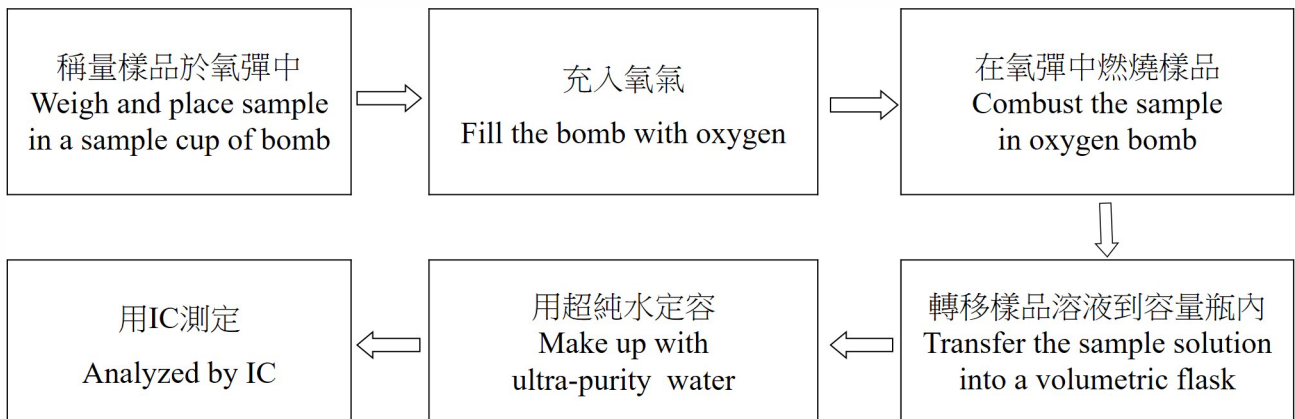


5. 鄰苯二甲酸酯(DBP, BBP, DEHP, DIBP) Phthalates (DBP, BBP, DEHP, DIBP)



6. 氟(F)，氯(Cl)，溴(Br)，碘(I)

Fluorine (F), Chlorine (Cl), Bromine (Br), Iodine (I)

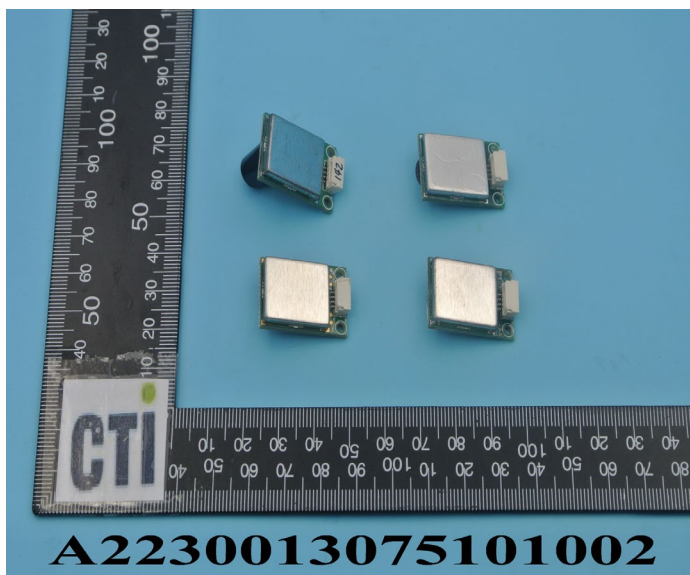
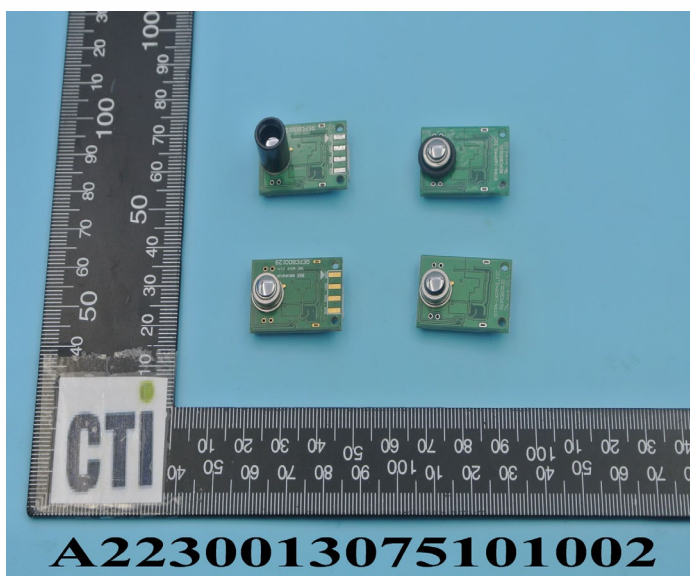


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樣品圖片 Photo(s) of the sample(s)



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