

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 1 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

以下測試樣品係由申請廠商所提供及確認 (The following sample(s) was/were submitted and identified by/on behalf of the applicant as):

樣品名稱(Sample Description) : THICK FILM CHIP RESISTOR  
樣品型號(Style/Item No.) : CR/CN/CNA/RS/RT/AS/HVR/PWR/SWR/CS/HMR/CR..A/AS..A/CS..A/CN..A/TR CHIP  
收件日期(Sample Receiving Date) : 2016/09/07  
測試期間(Testing Period) : 2016/09/07 TO 2016/09/12  
送樣廠商(Sample Submitted By) : 光頤科技股份有限公司高雄分公司  
(VIKING TECH CORPORATION KAOHSIUNG BRANCH)

### 測試需求(Test Requested)

- (1) 依據客戶指定，參考RoHS2011/65/EU Annex II及其修訂指令(EU) 2015/863測試鎘、鉛、汞、六價鉻、多溴聯苯、多溴聯苯醚、DBP, BBP, DEHP, DIBP. (As specified by client, with reference to RoHS 2011/65/EU Annex II and amending Directive (EU) 2015/863 to determine Cadmium, Lead, Mercury, Cr(VI), PBBs, PBDEs, DBP, BBP, DEHP, DIBP contents in the submitted sample.)
- (2) 其他測試項目請見下一頁。(Please refer to next pages for the other item(s).)

### 測試結果(Test Results)

: 請見下一頁 (Please refer to next pages).

  
Ray Chang, Ph.D. / Manager-Test  
Signed for and on behalf of  
SGS Taiwan Limited  
Chemical Laboratory-Kaohsiung



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 2 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 測試結果(Test Results)

測試部位(PART NAME)No.1 : 黑色/銀色/白色 THICK FILM CHIP RESISTOR  
(BLACK/SILVER/WHITE THICK FILM CHIP RESISTOR)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	n.d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-5: 2013 and performed by ICP-AES.	2	309
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4: 2013方法, 以感應耦合電漿原子發射光譜儀檢測. / With reference to IEC 62321-4: 2013 and performed by ICP-AES.	2	n.d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321: 2008方法, 以UV-VIS檢測. / With reference to IEC 62321: 2008 and performed by UV-VIS.	2	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明, 此報告結果僅對測試之樣品負責。本報告未經本公司書面許可, 不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /  
t + 886 (07)301 2121

f + 886 (07)3010867

高雄市楠梓加工出口區開發路61號  
[www.tw.sgs.com](http://www.tw.sgs.com)

Member of the SGS Group

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 3 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No. 1
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321-6: 2015方法, 以氣相層析/ 質譜儀檢測. / With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n.d.
一溴聯苯 / Monobromobiphenyl	mg/kg		5	n.d.
二溴聯苯 / Dibromobiphenyl	mg/kg		5	n.d.
三溴聯苯 / Tribromobiphenyl	mg/kg		5	n.d.
四溴聯苯 / Tetrabromobiphenyl	mg/kg		5	n.d.
五溴聯苯 / Pentabromobiphenyl	mg/kg		5	n.d.
六溴聯苯 / Hexabromobiphenyl	mg/kg		5	n.d.
七溴聯苯 / Heptabromobiphenyl	mg/kg		5	n.d.
八溴聯苯 / Octabromobiphenyl	mg/kg		5	n.d.
九溴聯苯 / Nonabromobiphenyl	mg/kg		5	n.d.
十溴聯苯 / Decabromobiphenyl	mg/kg		5	n.d.
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321-6: 2015方法, 以氣相層析/ 質譜儀檢測. / With reference to IEC 62321-6: 2015 and performed by GC/MS.	-	n.d.
一溴聯苯醚 / Monobromodiphenyl ether	mg/kg		5	n.d.
二溴聯苯醚 / Dibromodiphenyl ether	mg/kg		5	n.d.
三溴聯苯醚 / Tribromodiphenyl ether	mg/kg		5	n.d.
四溴聯苯醚 / Tetrabromodiphenyl ether	mg/kg		5	n.d.
五溴聯苯醚 / Pentabromodiphenyl ether	mg/kg		5	n.d.
六溴聯苯醚 / Hexabromodiphenyl ether	mg/kg		5	n.d.
七溴聯苯醚 / Heptabromodiphenyl ether	mg/kg		5	n.d.
八溴聯苯醚 / Octabromodiphenyl ether	mg/kg		5	n.d.
九溴聯苯醚 / Nonabromodiphenyl ether	mg/kg		5	n.d.
十溴聯苯醚 / Decabromodiphenyl ether	mg/kg		5	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明, 此報告結果僅對測試之樣品負責。本報告未經本公司書面許可, 不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /  
t + 886 (07)301 2121 f + 886 (07)3010867

高雄市楠梓加工出口區開發路61號  
www.tw.sgs.com

Member of the SGS Group

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 4 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
銻 / Antimony (Sb)	mg/kg	參考US EPA 3052方法, 用感應耦合電漿原子發射光譜儀檢測銻含量. / With reference to US EPA Method 3052 for Antimony Content. Analysis was performed by ICP-AES.	2	n.d.
砷 / Arsenic (As)	mg/kg	參考US EPA 3052方法, 用感應耦合電漿原子發射光譜儀 (ICP-AES) 檢測砷含量. / With reference to US EPA Method 3052 for Arsenic Content. Analysis was performed by ICP-AES.	2	n.d.
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3052方法, 用感應耦合電漿原子發射光譜儀檢測鈹含量. / With reference to US EPA Method 3052 for Beryllium Content. Analysis was performed by ICP-AES.	2	n.d.
六溴環十二烷及所有主要被辨別出的異構物 / Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified ( $\alpha$ -HBCDD, $\beta$ -HBCDD, $\gamma$ -HBCDD) (CAS No.: 25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8))	mg/kg	參考IEC 62321: 2008方法, 以氣相層析/質譜儀檢測. / With reference to IEC 62321: 2008 method. Analysis was performed by GC/MS.	5	n.d.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS)	mg/kg	參考US EPA 3550C: 2007方法, 以液相層析/質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.
全氟辛酸(銨) / PFOA (CAS No.: 335-67-1)	mg/kg	參考US EPA 3550C: 2007方法, 以液相層析/質譜儀檢測. / With reference to US EPA 3550C: 2007. Analysis was performed by LC/MS.	10	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明, 此報告結果僅對測試之樣品負責。本報告未經本公司書面許可, 不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /  
t + 886 (07)301 2121

高雄市楠梓加工出口區開發路61號  
f + 886 (07)3010867

[www.tw.sgs.com](http://www.tw.sgs.com)

Member of the SGS Group

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 5 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

測試項目 (Test Items)		測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
鹵素 / Halogen				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	參考BS EN 14582:2007, 以離子層析儀分析. / With reference to BS EN 14582:2007. Analysis was performed by IC.	50	n.d.
鹵素 (氯) / Halogen-Chlorine (Cl) (CAS No.: 22537-15-1)	mg/kg		50	n.d.
鹵素 (溴) / Halogen-Bromine (Br) (CAS No.: 10097-32-2)	mg/kg		50	n.d.
鹵素 (碘) / Halogen-Iodine (I) (CAS No.: 14362-44-8)	mg/kg		50	n.d.
石棉 / Asbestos				
陽起石棉 / Actinolite (CAS No.: 77536-66-4)	%	參考EPA 600/R-93/116 / 立體顯微鏡 (SM), 分散染色式偏光顯微鏡 (DS-PLM)及X光繞射光譜分析法 (XRD) / With reference to EPA 600/R-93/116 method. Analysis was performed by Stereo Microscope (SM), Dispersion Staining Polarized Light Microscope (DS-PLM) and X-ray Diffraction Spectrometer (XRD).	-	Negative
斜方角閃石棉 / Anthophyllite (CAS No.: 77536-67-5)	%		-	Negative
鐵石棉(褐石棉) / Amosite (CAS No.: 12172-73-5)	%		-	Negative
溫石棉(白石棉) / Chrysotile (CAS No.: 12001-29-5)	%		-	Negative
青石棉 / Crocidolite (CAS No.: 12001-28-4)	%		-	Negative
透閃石棉 / Tremolite (CAS No.: 77536-68-6)	%		-	Negative

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明, 此報告結果僅對測試之樣品負責。本報告未經本公司書面許可, 不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 6 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	方法偵測 極限值 (MDL)	結果 (Result)
				No.1
可塑劑定量分析 / Phthalates				
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No.: 84-69-5)	mg/kg	參考IEC 62321-8 (111/321/CD)，以氣相層析儀/質譜儀檢測之。 / With reference to IEC 62321-8 (111/321/CD). Analysis was performed by GC/MS.	50	n.d.
鄰苯二甲酸二丁酯 / DBP (Dibutyl phthalate) (CAS No.: 84-74-2)	mg/kg		50	n.d.
鄰苯二甲酸丁苄甲酯 / BBP (Butyl Benzyl phthalate) (CAS No.: 85-68-7)	mg/kg		50	n.d.
鄰苯二甲酸二 (2-乙基己基)酯 / DEHP (Di- (2-ethylhexyl) phthalate) (CAS No.: 117-81-7)	mg/kg		50	n.d.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No.: 117-84-0)	mg/kg		50	n.d.
鄰苯二甲酸二異壬酯 / DINP (Di-isononyl phthalate) (CAS No.: 28553-12-0; 68515-48-0)	mg/kg		50	n.d.
鄰苯二甲酸二異癸酯 / DIDP (Di-isodecyl phthalate) (CAS No.: 26761-40-0; 68515-49-1)	mg/kg		50	n.d.
鄰苯二甲酸二乙酯 / DEP (Di-ethyl phthalate) (CAS No.: 84-66-2)	mg/kg		50	n.d.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /  
t + 886 (07)301 2121

高雄市楠梓加工出口區開發路61號  
www.tw.sgs.com

Member of the SGS Group

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 7 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected (未檢出)
3. MDL = Method Detection Limit (方法偵測極限值)
4. "-" = Not Regulated (無規格值)
5. 石棉定性分析試驗範圍：<0.1%~100%，石棉鑑定的判定基準是以檢出含有石棉纖維為『Positive』，未檢出石棉纖維為『Negative』。/ Testing range of asbestos qualitative analysis is from less than 0.1% to 100%. The judgment criterion: asbestos fibers being found is shown as "Positive"; asbestos fibers not being found is shown as "Negative".
6. 石棉測試由SGS其他實驗室執行 (The Asbestos test was subcontracted to other SGS Laboratory. )

### PFOS參考資訊(Reference Information) : 持久性有機污染物 POPs - (EU) 757/2010

PFOS濃度在物質或製備中不得超過0.001%(10ppm)，在半成品、成品或零部件中不得超過0.1%(1000ppm)，在紡織品或塗層材料中不得超過1µg/m<sup>2</sup>。(Outlawing PFOS as substances or preparations in concentrations above 0.001% (10ppm), in semi-finished products or articles or parts at a level above 0.1%(1000ppm), in textiles or other coated materials above 1µg/m<sup>2</sup>.)

全氟辛烷磺酸指全氟辛烷磺酸和它的衍生物包括全氟辛烷磺酸，全氟辛基磺醯胺，N-甲基全氟辛烷磺醯胺，N-乙基全氟辛烷磺醯胺，N-甲基全氟辛基磺醯基氨基乙醇，N-乙基全氟辛基磺醯基氨基乙醇。(PFOS refer to Perfluorooctanesulfonic acid and its derivatives including Perfluorooctanesulfonic acid, Perfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamide, N-Ethylperfluorooctane sulfonamide, N-Methylperfluorooctane sulfonamidoethanol and N-Ethylperfluorooctane sulfonamidoethanol.)



## 測試報告

## Test Report

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

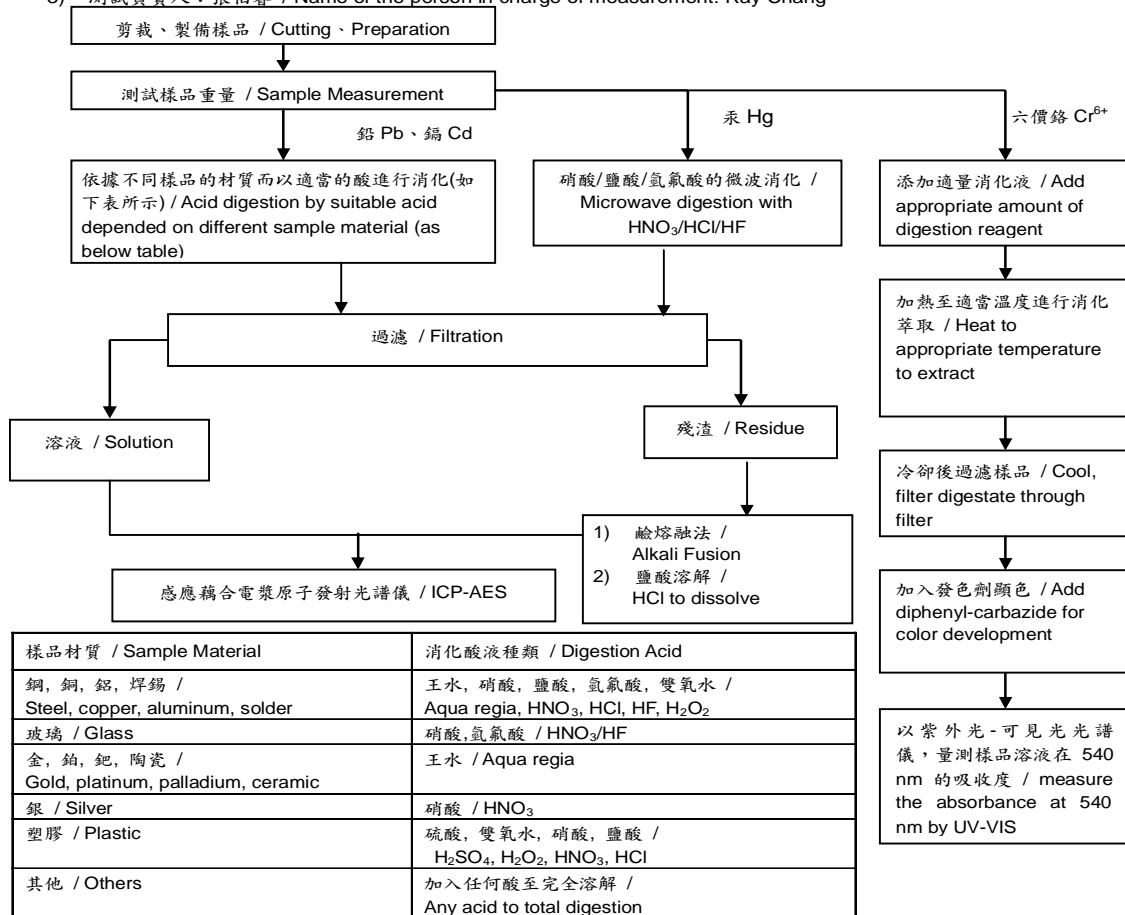
80672 高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 8 of 16

- 1) 根據以下的流程圖之條件，樣品已完全溶解。(六價鉻測試方法除外) / These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) 測試人員：劉俊宏 / Name of the person who made measurement: Jony Liu
- 3) 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang



**Note\*\* :** (1) 針對非金屬材料加入鹼性消化液，加熱至 90~95℃ 萃取。 / For non-metallic material, add alkaline digestion reagent and heat to 90~95℃.  
 (2) 針對金屬材料加入純水，加熱至沸騰萃取。 / For metallic material, add pure water and heat to boiling.



## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 9 of 16

光頤科技股份有限公司高雄分公司

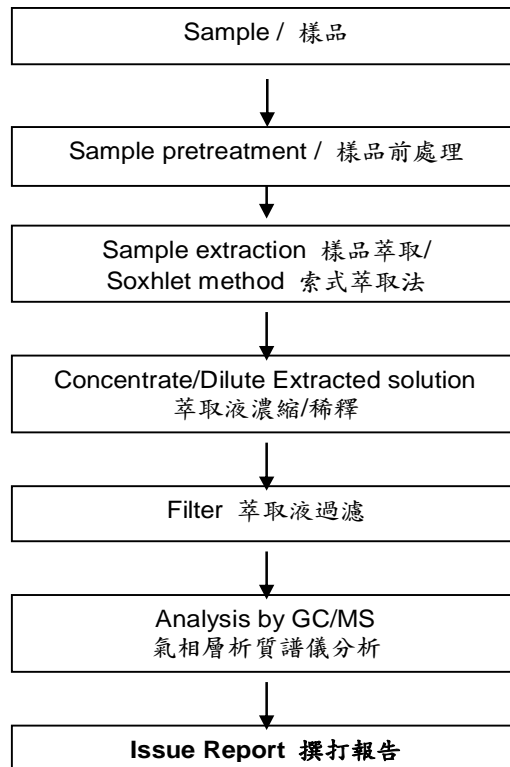
VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 多溴聯苯/多溴聯苯醚 分析流程圖 / PBB/PBDE analytical FLOW CHART

- 1) 測試人員：陳威錚 / Name of the person who made measurement: Dorothy Chen  
2) 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 10 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

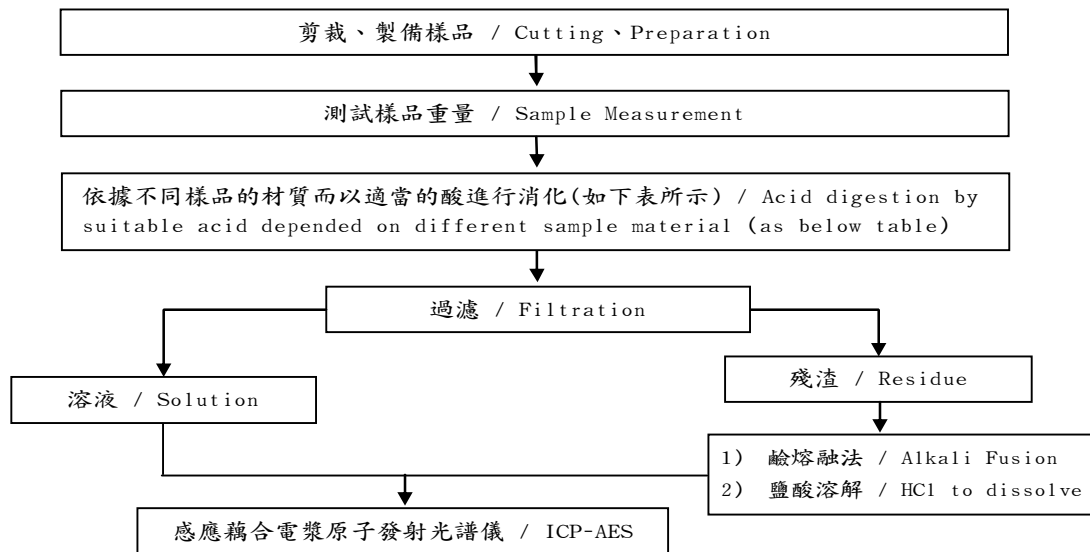
80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

- 1) 根據以下的流程圖之條件，樣品已完全溶解。 / These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) 測試人員：劉俊宏 / Name of the person who made measurement: Jony Liu
- 3) 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang

### 元素以 ICP-AES 分析的消化流程圖

(Flow Chart of digestion for the elements analysis performed by ICP-AES)



鋼, 銅, 鋁, 焊錫 / Steel, copper, aluminum, solder	王水, 硝酸, 鹽酸, 氫氟酸, 雙氧水 / Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
玻璃 / Glass	硝酸, 氫氟酸 / HNO <sub>3</sub> /HF
金, 鉑, 鈱, 陶瓷 / Gold, platinum, palladium, ceramic	王水 / Aqua regia
銀 / Silver	硝酸 / HNO <sub>3</sub>
塑膠 / Plastic	硫酸, 雙氧水, 硝酸, 鹽酸 / H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
其他 / Others	加入任何酸至完全溶解 / Any acid to total digestion

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 11 of 16

光頤科技股份有限公司高雄分公司

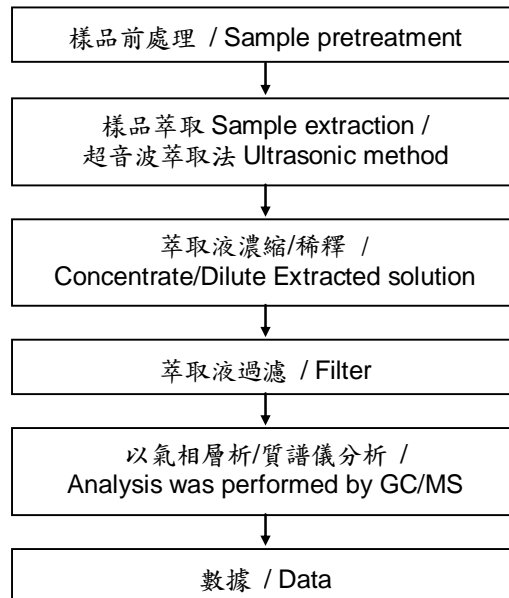
VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 六溴環十二烷分析流程圖 / HBCDD analytical flow chart

- 1) 測試人員：陳威錚/ Name of the person who made measurement: Dorothy Chen
- 2) 測試負責人：張伯睿/ Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 12 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

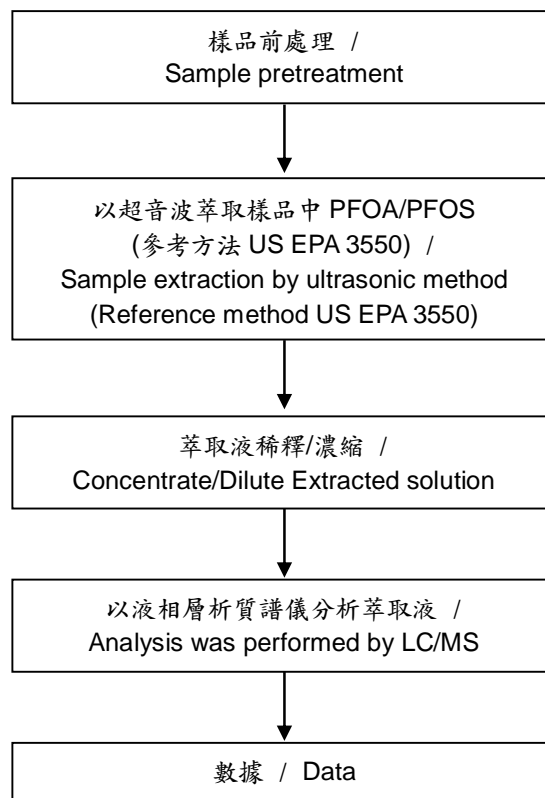
80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 全氟辛酸(銨)/ 全氟辛烷磺酸分析流程圖 / Analytical flow chart of PFOA/PFOS content

1)測試人員：黃璟璵 / Name of the person who made measurement: Ginny Huang

2)測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 13 of 16

光頤科技股份有限公司高雄分公司

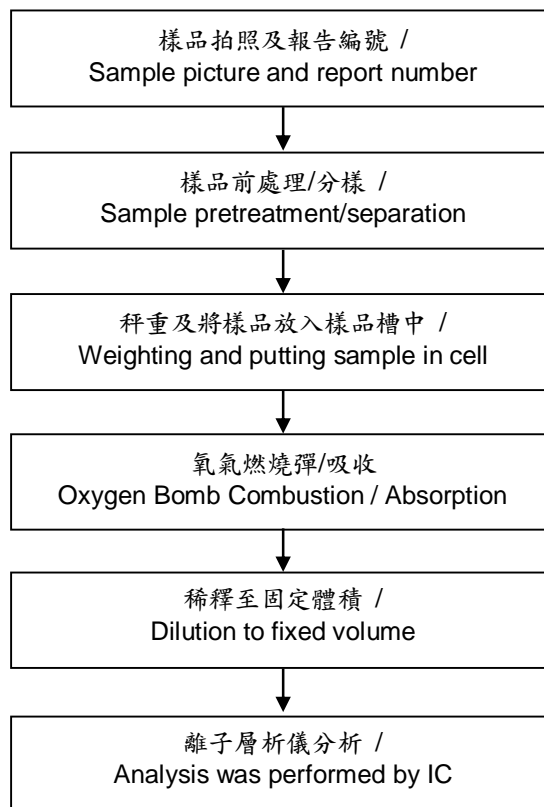
VIKING TECH CORPORATION KAOHSIUNG BRANCH

80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 鹵素分析流程圖 / Analytical flow chart of halogen content

- 1) 測試人員：洪秀真 / Name of the person who made measurement: Jean Hung
- 2) 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 14 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

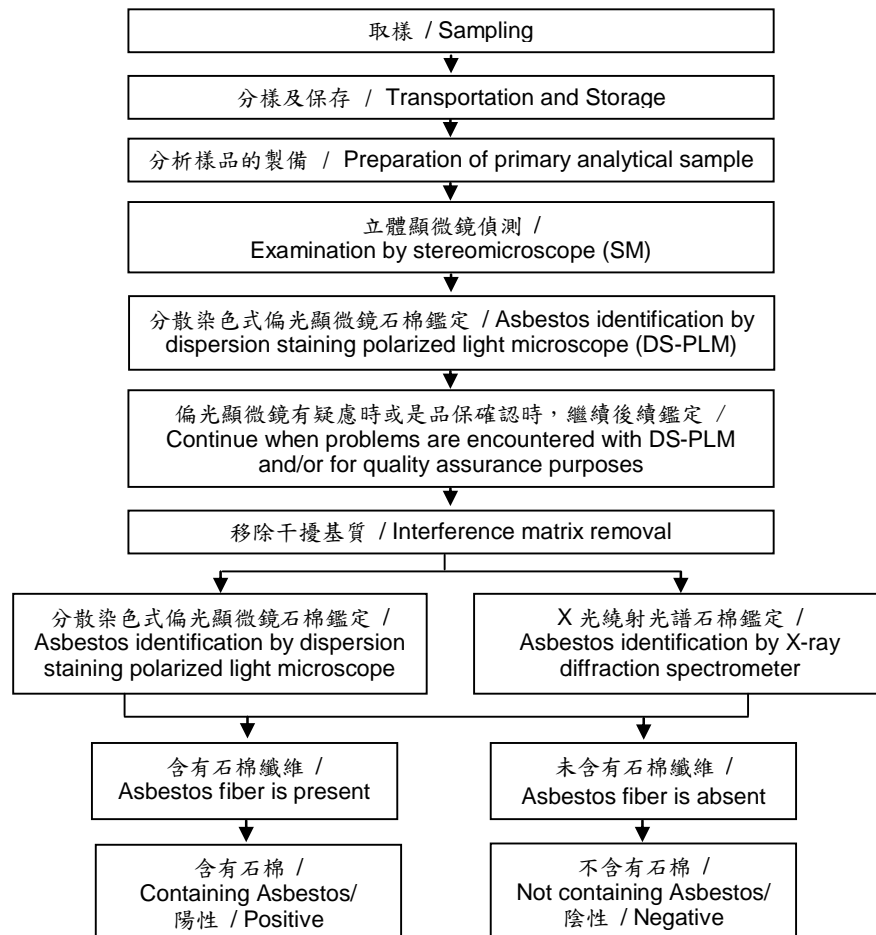
80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 石棉鑑定分析流程圖 / Analysis flow chart for determination of Asbestos

- 測試人員：高鍵忠 / Name of the person who made measurement: Victor Kao
- 測試負責人：魏明芬 / Name of the person in charge of measurement: Wendy Wei

#### 【參考方法(Reference method): EPA 600/R-93/116】



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

# 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 15 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

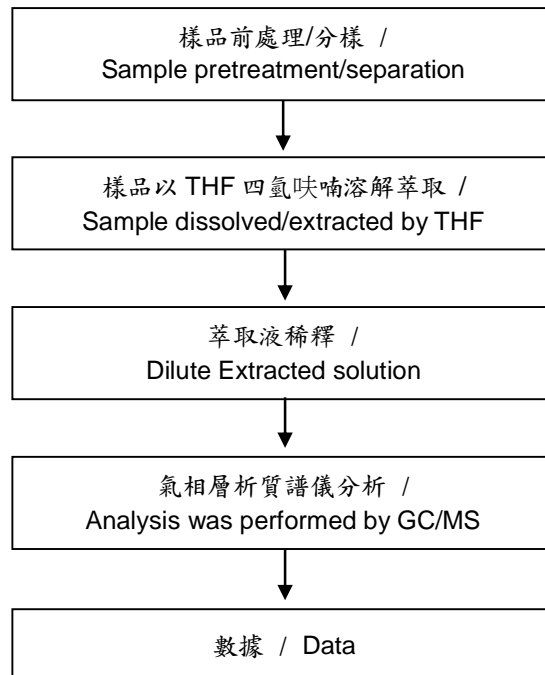
80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

### 可塑劑分析流程圖 / Analytical flow chart of phthalate content

- 測試人員：陳威錚 / Name of the person who made measurement: Dorothy Chen
- 測試負責人：張伯睿 / Name of the person in charge of measurement: Ray Chang

#### 【測試方法/Test method: IEC 62321-8】



Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.



## 測試報告

## Test Report

號碼(No.) : KA/2016/90491 日期(Date) : 2016/09/12

頁數 (Page) : 16 of 16

光頤科技股份有限公司高雄分公司

VIKING TECH CORPORATION KAOHSIUNG BRANCH

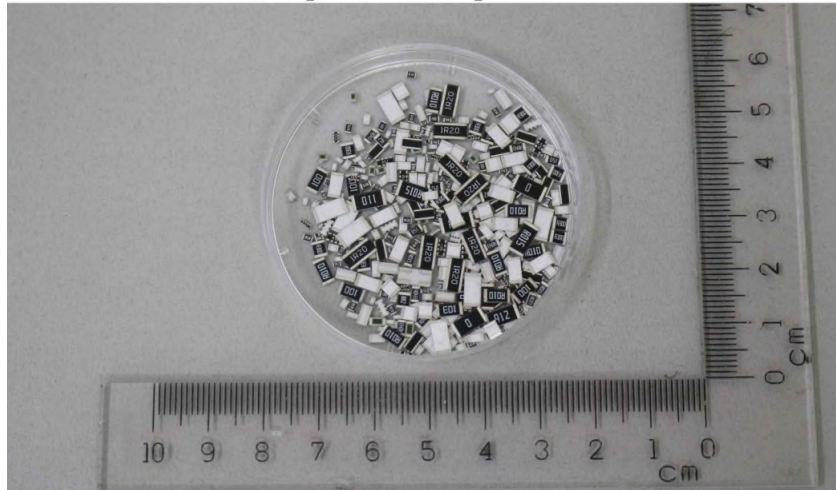
80672高雄市前鎮區新生路248-3號

NO. 284-3, SIN-SHENG RD., CIAN-JHEN DIST., KAOHSIUNG, 806, TAIWAN

\* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。\*

(The tested sample / part is marked by an arrow if it's shown on the photo.)

### KA/2016/90491



\*\* 報告結尾 (End of Report) \*\*

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明，此報告結果僅對測試之樣品負責。本報告未經本公司書面許可，不可部分複製。  
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at [www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm) and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at [www.sgs.com/terms\\_e-document.htm](http://www.sgs.com/terms_e-document.htm). Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS Taiwan Ltd.  
台灣檢驗科技股份有限公司

No. 61, Kai-Fa Road, Nanzih Export Processing Zone, Kaohsiung, Taiwan /  
t + 886 (07)301 2121

f + 886 (07)3010867

高雄市楠梓加工出口區開發路61號  
[www.tw.sgs.com](http://www.tw.sgs.com)

Member of the SGS Group