

## 測試報告

## Test Report

號碼(No.) : CE/2019/90761

日期(Date) : 2019/09/12

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台灣高週波電氣爐股份有限公司

TAIWAN HIGH FREQUENCY ELECTRICAL INDUSTRIAL CO., LTD.

台北市重慶北路四段79號2樓9室

2F-9, NO. 79, CHUNG KING N. RD., SEC. 4, TAIPEI, TAIWAN, R. O. C.

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):

送樣廠商(Sample Submitted By) : 台灣高週波電氣爐股份有限公司 (TAIWAN HIGH FREQUENCY ELECTRICAL INDUSTRIAL CO., LTD.)

樣品名稱(Sample Description) : VARNISH FOR COIL IMPREGNATION INSULATING VARNISH (線圈含浸用絕緣凡立水)

樣品型號(Style/Item No.) : TFV-236(W-236), TBE-188R(W-188R), THV-510, TBV-230, TBV-230N, TBV-2800, TBV-228, TBV-239, TEV-2023, TEV-223, TEV-208, N-239, W-23.

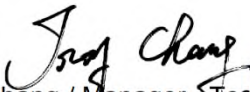
收件日期(Sample Receiving Date) : 2019/09/05

測試期間(Testing Period) : 2019/09/05 to 2019/09/12

### 測試需求(Test Requested):

- (1) 依據客戶指定，參考RoHS 2011/65/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(s).)
- (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) : 請參閱下一頁 (Please refer to following pages).

  
Troy Chang / Manager - Technical  
Signed for and behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory - Taipei



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## 測試結果(Test Results)

測試部位(PART NAME)No. 1 : 棕色液體 (BROWN LIQUID)

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
鎘 / Cadmium (Cd)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-OES.	2	n. d.
鉛 / Lead (Pb)	mg/kg	參考IEC 62321-5 (2013), 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-5 (2013) and performed by ICP-OES.	2	n. d.
汞 / Mercury (Hg)	mg/kg	參考IEC 62321-4:2013+ AMD1:2017, 以感應耦合電漿發射光譜儀檢測. / With reference to IEC 62321-4:2013+ AMD1:2017 and performed by ICP-OES.	2	n. d.
六價鉻 / Hexavalent Chromium Cr(VI)	mg/kg	參考IEC 62321-7-2 (2017), 以UV-VIS檢測. / With reference to IEC 62321-7-2 (2017) and performed by UV-VIS.	8	n. d.
多溴聯苯總和 / Sum of PBBs	mg/kg	參考IEC 62321-6 (2015), 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.	

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
多溴聯苯醚總和 / Sum of PBDEs	mg/kg	參考IEC 62321-6 (2015), 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.
鄰苯二甲酸丁苯甲酯 / BBP (Butyl Benzyl phthalate) (CAS No. : 85-68-7)	mg/kg	參考IEC 62321-8 (2017), 以氣相層析/質譜儀檢測. / With reference to IEC 62321-8 (2017). 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.
鄰苯二甲酸二異丁酯 / DIBP (Di-isobutyl phthalate) (CAS No. : 84-69-5)	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.
鄰苯二甲酸二正辛酯 / DNOP (Di-n-octyl phthalate) (CAS No. : 117-84-0)	mg/kg		50	n. d.

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2F-9, NO. 79, CHUNG KING N. RD., SEC. 4, TAIPEI, TAIWAN, R. O. C.

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
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), 以氣相層析/質譜儀檢測. / With reference to IEC 62321 (2008). Analysis was performed by GC/MS.	5	n. d.
<b>鹵素 / Halogen</b>				
鹵素 (氟) / Halogen-Fluorine (F) (CAS No.: 14762-94-8)	mg/kg	參考BS EN 14582 (2016), 以離子層析儀分析. / With reference to BS EN 14582 (2016). 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.
全氟辛烷磺酸 / Perfluorooctane sulfonates (PFOS-Acid, Metal Salt, Amide)	mg/kg	參考CEN/TS 15968 (2010), 以液相層析/質譜儀檢測. / With reference to CEN/TS 15968 (2010). Analysis was performed by LC/MS.	0.01	n. d.
全氟辛酸 / PFOA (CAS No.: 335-67-1)	mg/kg		0.01	n. d.
四溴雙酚-A / Tetrabromobisphenol A (TBBP-A) (CAS No.: 79-94-7)	mg/kg	參考Global SOP RSTS-E&E-121 (2012), 以液相層析/質譜儀分析. / With reference to Global SOP RSTS-E&E-121 (2012). Analysis was performed by LC/MS.	10	n. d.
四溴雙酚-A-雙 / TBBP-A-bis (CAS No.: 21850-44-2)	mg/kg	參考US EPA 3550C (2007), 以氣相層析/質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by GC/MS.	5	n. d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
<b>多環芳香烴 / Polycyclic Aromatic Hydrocarbons (PAHs)</b>				
芘 / Acenaphthene (CAS No. : 83-32-9)	mg/kg	參考AfPS GS 2014:01 PAK, 以氣相層析/質譜儀檢測. / With reference to AfPS GS 2014:01 PAK. Analysis was performed by GC/MS.	0.2	n. d.
芘烯 / Acenaphthylene (CAS No. : 208-96-8)	mg/kg		0.2	n. d.
蔥 / Anthracene (CAS No. : 120-12-7)	mg/kg		0.2	n. d.
苯駢蔥 / Benzo[a]anthracene (CAS No. : 56-55-3)	mg/kg		0.2	n. d.
苯駢(a)芘 / Benzo[a]pyrene (CAS No. : 50-32-8)	mg/kg		0.2	n. d.
苯(b)苯駢芘 / Benzo[b]fluoranthene (CAS No. : 205-99-2)	mg/kg		0.2	n. d.
苯駢芘 / Benzo[g, h, i]perylene (CAS No. : 191-24-2)	mg/kg		0.2	n. d.
苯駢(k)螢蔥 / Benzo[k]fluoranthene (CAS No. : 207-08-9)	mg/kg		0.2	n. d.
Chrysene (CAS No. : 218-01-9)	mg/kg		0.2	n. d.
二苯駢蔥 / Dibenzo[a, h]anthracene (CAS No. : 53-70-3)	mg/kg		0.2	n. d.
苯駢芘 / Fluoranthene (CAS No. : 206-44-0)	mg/kg		0.2	n. d.
芴 / Fluorene (CAS No. : 86-73-7)	mg/kg		0.2	n. d.
茚酮芘 / Indeno[1, 2, 3-c, d] pyrene (CAS No. : 193-39-5)	mg/kg		0.2	n. d.
萘 / Naphthalene (CAS No. : 91-20-3)	mg/kg		0.2	4260
菲 / Phenanthrene (CAS No. : 85-01-8)	mg/kg		0.2	n. d.
芘 / Pyrene (CAS No. : 129-00-0)	mg/kg		0.2	n. d.
苯(j)苯駢芘 / Benzo[j]fluoranthene (CAS No. : 205-82-3)	mg/kg		0.2	n. d.
苯駢(e)芘 / Benzo[e]pyrene (CAS No. : 192-97-2)	mg/kg		0.2	n. d.
多環芳香烴18項總和 / Sum of 18 PAHs	mg/kg	-	4260	

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
富馬酸二甲酯 / Dimethyl Fumarate (CAS No. : 624-49-7)	mg/kg	參考US EPA 3550C (2007), 以氣相層析/ 質譜儀檢測. / With reference to US EPA 3550C (2007). Analysis was performed by GC/MS.	0.1	n. d.
三苯基錫 / Triphenyl Tin (TphT)	mg/kg	參考ISO 17353 (2004), 以氣相層析儀/ 火焰光度偵測器檢測. / With reference to ISO 17353 (2004). Analysis was performed by GC/FPD.	0.03	n. d.
二丁基錫 / Dibutyl Tin (DBT)	mg/kg		0.03	n. d.
二辛基錫 / Dioctyl Tin (DOT)	mg/kg		0.03	n. d.
三丁基錫 / Tributyl Tin (TBT)	mg/kg		0.03	n. d.
氧化雙三丁基錫 / Bis(tributyltin)oxide (TBTO) (CAS No. : 56-35-9)	mg/kg	參考ISO 17353 (2004), 以氣相層析儀/ 火焰光度偵測器檢測; 由三丁基錫測試結 果計算得之. / With reference to ISO 17353 (2004). Analysis was performed by GC/FPD. Calculated from the result of Tributyl Tin (TBT).	0.03 (▲)	n. d.
<b>偶氮 (AZO)</b>				
1): 4-氨基二苯 / 4-AMINODIPHENYL (CAS No. : 92-67-1)	mg/kg	參考LFGB 82.02-2 (2013), 以氣相層析/ 質譜儀檢測. / With reference to LFGB 82.02-2 (2013). Analysis was performed by GC/MS.	3	n. d.
2): 聯苯胺 / BENZIDINE (CAS No. : 92- 87-5)	mg/kg		3	n. d.
3): 4-氯鄰甲苯胺 / 4-CHLORO-O- TOLUIDINE (CAS No. : 95-69-2)	mg/kg		3	n. d.
4): 2-萘胺 / 2-NAPHTHYLAMINE (CAS No. : 91-59-8)	mg/kg		3	n. d.
5): 鄰氨基二甲基偶氮 / O- AMINOAZOTOLUENE (CAS No. : 97-56-3)	mg/kg		3	n. d.
6): 對硝基鄰甲苯胺 / 2-AMINO-4- NITROTOLUENE (CAS No. : 99-55-8)	mg/kg		3	n. d.
7): 對氯苯胺 / P-CHLOROANILINE (CAS No. : 106-47-8)	mg/kg		3	n. d.

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測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
8): 4-甲氧基-間苯二胺 / 2,4-DIAMINOANISOLE (CAS No. : 615-05-4)	mg/kg	參考LFGB 82.02-2 (2013), 以氣相層析/質譜儀檢測. / With reference to LFGB 82.02-2 (2013). Analysis was performed by GC/MS.	3	n. d.
9): 4,4'-二氨基二苯甲烷 / 4,4'-DIAMINODIPHENYLMETHANE (CAS No. : 101-77-9)	mg/kg		3	n. d.
10): 3,3'-二氯聯苯胺 / 3,3'-DICHLOROBENZIDINE (CAS No. : 91-94-1)	mg/kg		3	n. d.
11): 3,3'-二甲氧基聯苯胺 / 3,3'-DIMETHOXYBENZIDINE (CAS No. : 119-90-4)	mg/kg		3	n. d.
12): 3,3'-二甲基聯苯胺 / 3,3'-DIMETHYLBENZIDINE (CAS No. : 119-93-7)	mg/kg		3	n. d.
13): 3,3'-二甲基-4,4'-二氨基二苯甲烷 / 3,3'-DIMETHYL-4,4'-DIAMINODIPHENYLMETHANE (CAS No. : 838-88-0)	mg/kg		3	n. d.
14): 2-甲氧基-5-甲基聯苯 / P-CRESIDINE (2-METHOXY-5-METHYLANILINE) (CAS No. : 120-71-8)	mg/kg		3	n. d.
15): 4,4'-亞甲基雙(氯苯胺) / 4,4'-METHYLENE-BIS-(2-CHLOROANILINE) (CAS No. : 101-14-4)	mg/kg		3	n. d.
16): 4,4'-氧化雙苯胺 / 4,4'-OXYDIANILINE (CAS No. : 101-80-4)	mg/kg		3	n. d.
17): 4,4'-硫代雙苯胺 / 4,4'-THIODIANILINE (CAS No. : 139-65-1)	mg/kg		3	n. d.
18): 鄰甲苯胺 / O-TOLUIDINE (CAS No. : 95-53-4)	mg/kg	3	n. d.	
19): 2,4-二氨基甲苯 / 2,4-TOLUYLENEDIAMINE (CAS No. : 95-80-7)	mg/kg	3	n. d.	

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# 測試報告

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TAIWAN HIGH FREQUENCY ELECTRICAL INDUSTRIAL CO., LTD.

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2F-9, NO. 79, CHUNG KING N. RD., SEC. 4, TAIPEI, TAIWAN, R. O. C.

測試項目 (Test Items)	單位 (Unit)	測試方法 (Method)	MDL	結果 (Result)
				No. 1
20): 2, 4, 5-三甲基苯胺 / 2, 4, 5-TRIMETHYLANILINE (CAS No. : 137-17-7)	mg/kg	參考LFGB 82.02-2 (2013), 以氣相層析/質譜儀檢測. / With reference to LFGB 82.02-2 (2013). Analysis was performed by GC/MS.	3	n. d.
21): 鄰位甲氧基苯胺 / O-ANISIDINE (CAS No. : 90-04-0)	mg/kg		3	n. d.
22): 對氨基偶氮苯 / 4-AMINOAZOBENZENE (CAS No. : 60-09-3)	mg/kg		3	n. d.
23): 2, 4-二甲基苯胺 / 2, 4-XYLIDINE (CAS No. : 95-68-1)	mg/kg		3	n. d.
24): 2, 6-二甲基苯胺 / 2, 6-XYLIDINE (CAS No. : 87-62-7)	mg/kg		3	n. d.
雙酚 A / Bisphenol A (CAS No. : 80-05-7)	mg/kg	參考RSTS-CHEM-239-1 (2016), 以超高效能液相層析串聯質譜儀檢測. / With reference to RSTS-CHEM-239-1 (2016). Analysis was performed by UPLC-MSMS.	1	n. d.
銻 / Antimony (Sb)	mg/kg	參考US EPA 3052 (1996), 以感應耦合電漿發射光譜儀檢測. / With reference to US EPA 3052 (1996). Analysis was performed by ICP-OES.	2	n. d.
砷 / Arsenic (As)	mg/kg	參考US EPA 3052 (1996), 以感應耦合電漿發射光譜儀檢測. / With reference to US EPA 3052 (1996). Analysis was performed by ICP-OES.	2	n. d.
鈹 / Beryllium (Be)	mg/kg	參考US EPA 3052 (1996), 以感應耦合電漿發射光譜儀檢測. / With reference to US EPA 3052 (1996). Analysis was performed by ICP-OES.	2	n. d.
紅磷 / Red phosphorus	**	以熱裂解-氣相層析/質譜儀分析. / Analysis was performed by Pyrolyzer-GC/MS.	-	Negative

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### 備註(Note) :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. MDL = Method Detection Limit (方法偵測極限值)
3. n. d. = Not Detected (未檢出)
4. "-" = Not Regulated (無規格值)
5. \*\*= Qualitative analysis (No Unit) 定性分析(無單位)
6. Negative = Undetectable 陰性(未偵測到); Positive = Detectable 陽性(已偵測到)
7. (▲) : MDL是針對元素/測試化合物之評估。 / The MDL was evaluated for element / tested substance.  
換算公式 (Conversion Formula) :  $AX = A \times F$

AX	A	F
氧化雙三丁基錫 / Bis(tributyltin)oxide (TBTO)	三丁基錫 / Tributyl Tin (TBT)	1.024

8. 參數換算表 / Parameter Conversion Table : [http://twap.sgs.com/sgsrsts/chn/download-REACH\\_tw.asp](http://twap.sgs.com/sgsrsts/chn/download-REACH_tw.asp)

### PFOS參考資訊(Reference Information) : 持久性有機污染物 POPs - (EU) 2019/1021

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>.)

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### △ 德國產品安全委員會(AfPS) GS PAHs 要求 /

#### AfPS (German commission for Product Safety): GS PAHs requirements

項目 (Parameter)	第1類(Category 1)	第2類(Category 2)		第3類(Category 3)	
	意圖放入嘴內的材料或玩具會與皮膚有所接觸(超過30秒). (Material indented to be put in the mouth or toys with intended skin contact (longer than 30 s).)	不屬於第1類的材料並可預見與皮膚接觸逾30秒(長期或經常與皮膚接觸). (Materials not falling under category 1 with foreseeable contact to skin for longer than 30 seconds (long-term skin or frequent contact).)		可預見與皮膚接觸短於30秒(短期與皮膚接觸), 以及不屬於第1類或第2類的材料. (Materials not falling under category 1 or 2 with foreseeable contact to skin for less than 30 seconds (short-term skin contact).)	
		列於2009/48/EC之玩具 (Toy under 2009/48/EC)	列於德國產品安全法之其他產品 (Other products under ProdSG)	列於2009/48/EC之玩具 (Toy under 2009/48/EC)	列於德國產品安全法之其他產品 (Other products under ProdSG)
Naphthalene	< 1	< 2		< 10	
Acenaphthylene	< 1 Sum	< 5 Sum	< 10 Sum	< 20 Sum	< 50 Sum
Acenaphthene					
Fluorene					
Phenanthrene					
Anthracene					
Fluoranthene					
Pyrene					
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1, 2, 3-c, d] pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a, h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g, h, i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
18項PAH總濃度 (Sum of 18 PAH)	< 1	< 5	< 10	< 20	< 50

單位(Unit) : mg/kg

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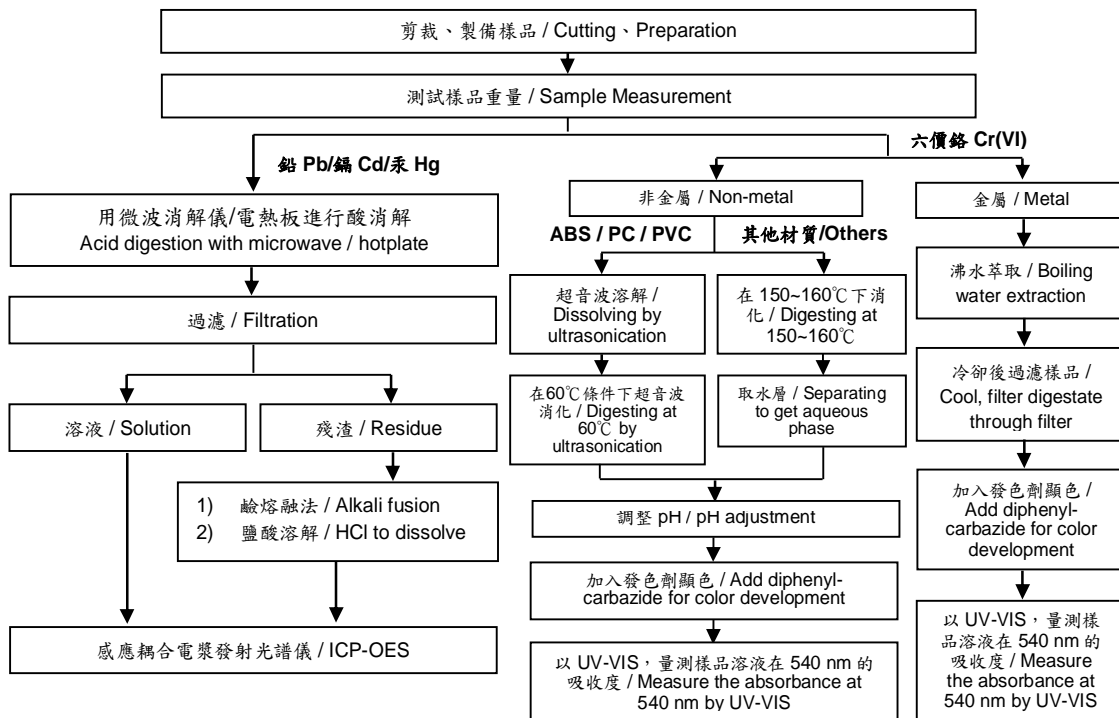
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### 重金屬流程圖 / Analytical flow chart of Heavy Metal

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)

- 測試人員：陳思臻 / Technician : Rita Chen
- 測試負責人：張啟興 / Supervisor: Troy Chang



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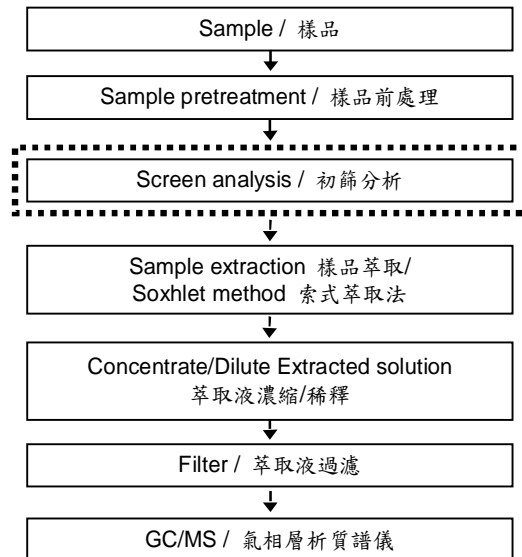
### 多溴聯苯/多溴聯苯醚分析流程圖 / Analytical flow chart - PBB/PBDE

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang

初次測試程序 / First testing process —————>

選擇性篩檢程序 / Optional screen process .....>

確認程序 / Confirmation process - - ->



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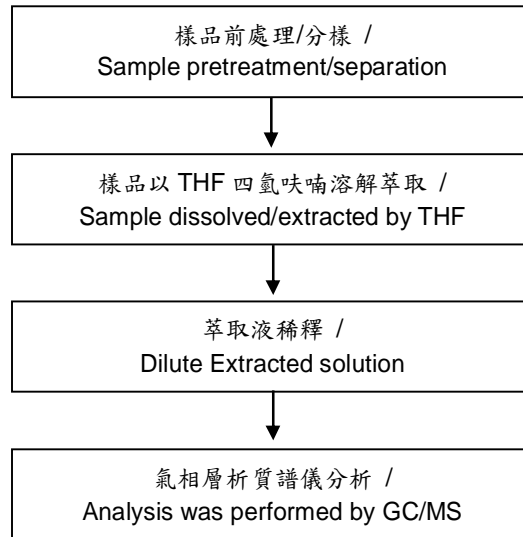
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### 可塑劑分析流程圖 / Analytical flow chart - Phthalate

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor : Troy Chang

#### 【測試方法/Test method: IEC 62321-8】



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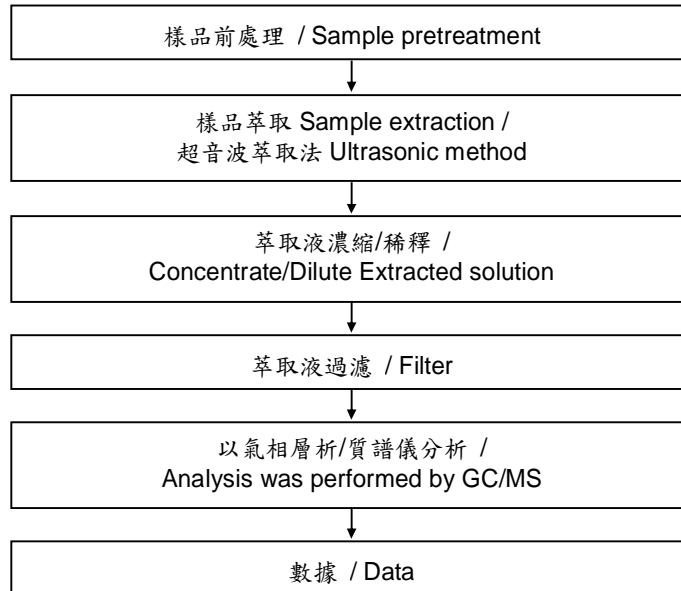
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### 六溴環十二烷分析流程圖 / Analytical flow chart - HBCDD

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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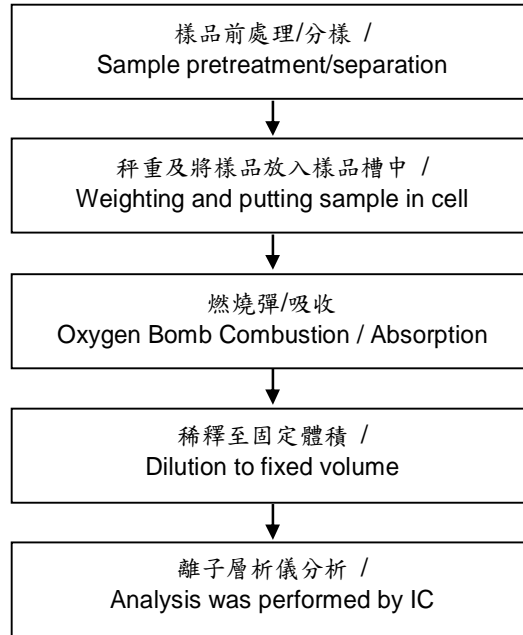
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### 鹵素分析流程圖 / Analytical flow chart - Halogen

- 測試人員：陳恩臻 / Technician: Rita Chen
- 測試負責人：張啟興 / Supervisor: Troy Chang



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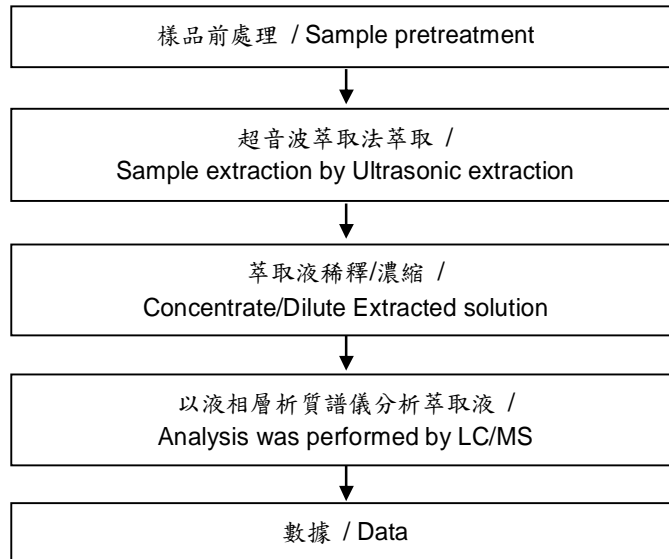
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### 全氟辛酸/全氟辛烷磺酸分析流程圖 / Analytical flow chart - PFOA/PFOA

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang





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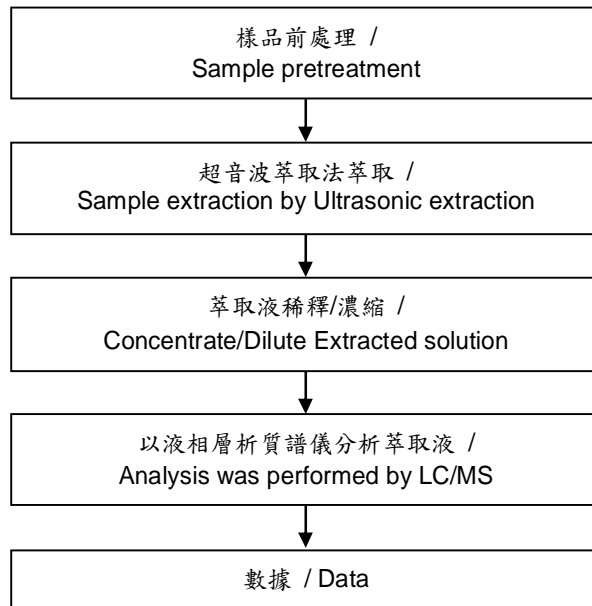
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### 四溴雙酚-A 分析流程圖 / Analytical flow chart - TBBP-A

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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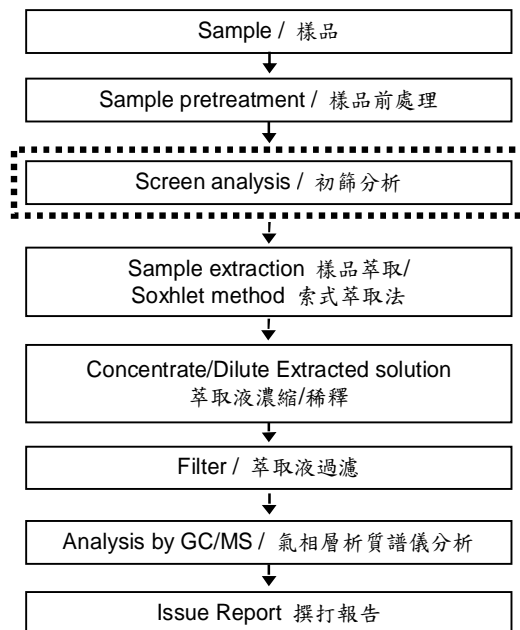
### 四溴雙酚-A-雙分析流程圖 / Analytical flow chart - TBBP-A-bis

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang

初次測試程序 / First testing process —————>

選擇性篩檢程序 / Optional screen process .....>

確認程序 / Confirmation process - - ->



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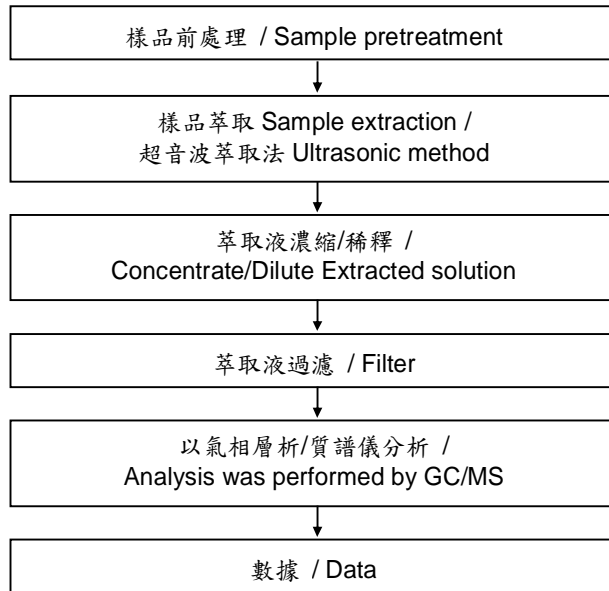
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### 富馬酸二甲酯分析流程圖 / Analytical flow chart - Dimethyl Fumarate

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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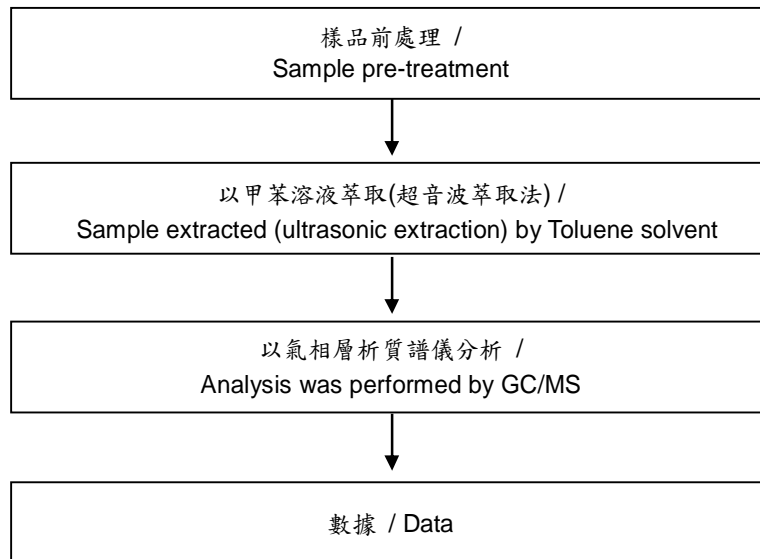
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### 多環芳香烴分析流程圖 /

### Analytical flow chart - PAHs (Polycyclic Aromatic Hydrocarbons)

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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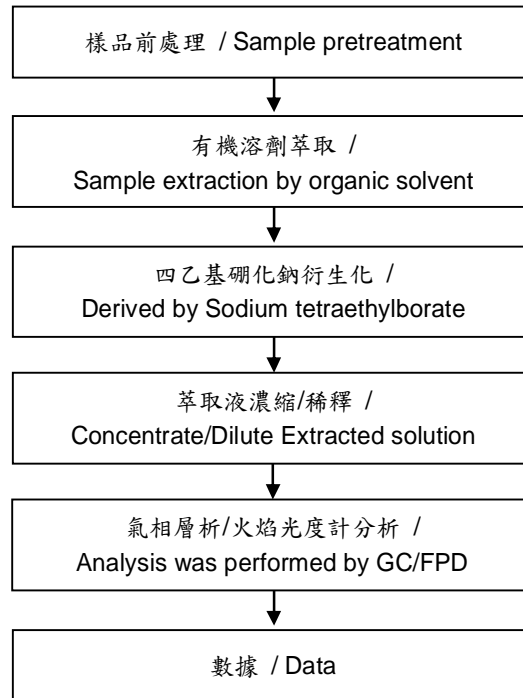
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### 有機錫分析流程圖 / Analytical flow chart - Organic-Tin

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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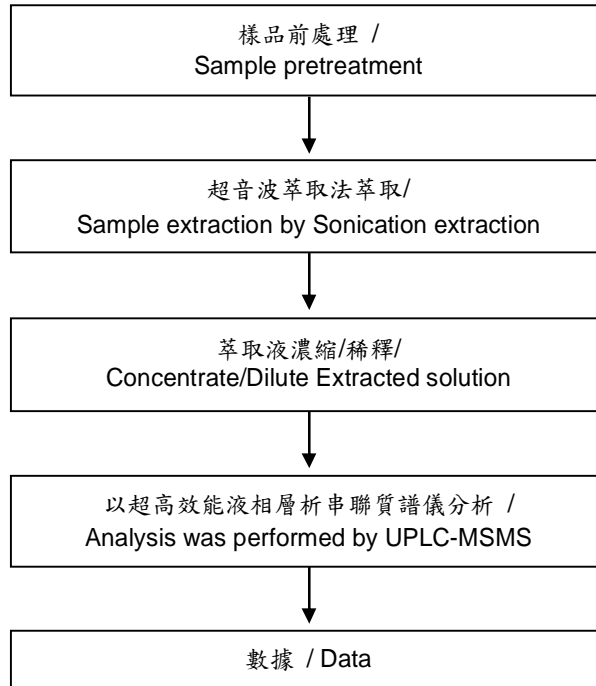
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### 雙酚A分析流程圖 / Analytical flow chart - Bisphenol A

- 測試人員：涂雅苓 / Technician: Yaling Tu
- 測試負責人：張啟興 / Supervisor: Troy Chang



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# 測試報告

# Test Report

號碼(No.) : CE/2019/90761

日期(Date) : 2019/09/12

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台灣高週波電氣爐股份有限公司

TAIWAN HIGH FREQUENCY ELECTRICAL INDUSTRIAL CO., LTD.

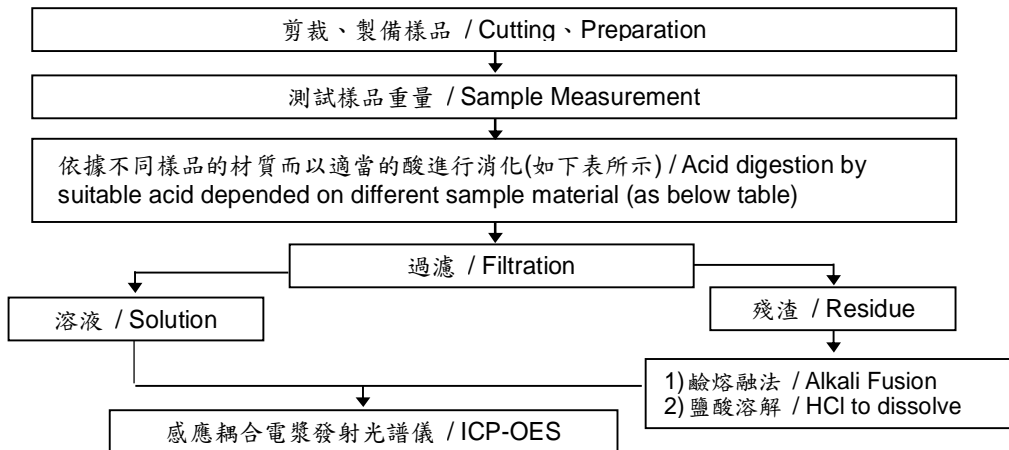
台北市重慶北路四段79號2樓9室

2F-9, NO. 79, CHUNG KING N. RD., SEC. 4, TAIPEI, TAIWAN, R. O. C.

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.

- 測試人員：陳恩臻 / Technician: Rita Chen
- 測試負責人：張啟興 / Supervisor: Troy Chang

**元素以 ICP-OES 分析的消化流程圖**  
(Flow Chart of digestion for the elements analysis performed by ICP-OES)



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,鈀,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	加入適當的試劑至完全溶解 / Added appropriate reagent to total digestion

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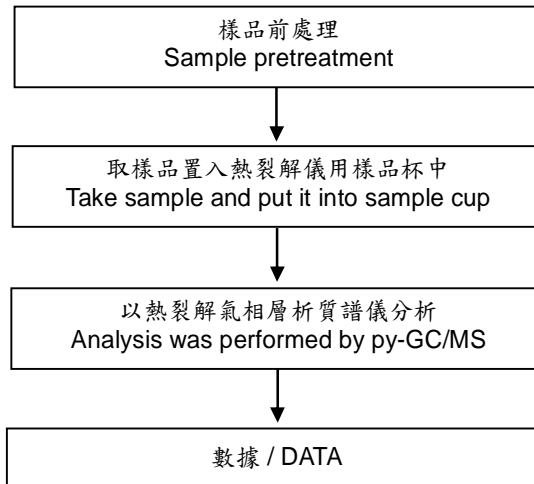
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### 紅磷分析流程 / Analytical flow chart - Red phosphorus

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- 測試負責人：張啟興 / Supervisor: Troy Chang





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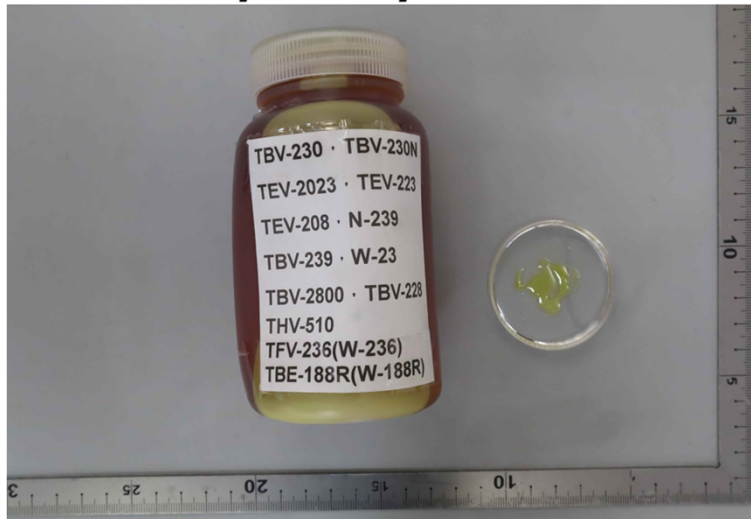
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\* 照片中如有箭頭標示，則表示為實際檢測之樣品/部位。 \*

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

### CE/2019/90761



\*\* 報告結尾 (End of Report) \*\*