

## 測試報告 Test Report

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矽卡有限公司

SICAN CO., LTD.

桃園縣蘆竹鄉坑口村17鄰大有街9巷12號

NO. 12, LANE 9, TA YU ST., KUN KO TSUN, LU CHU HSIANG, TAOYUAN, 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) :

送樣廠商(Sample Submitted By) : 矽卡有限公司 (SICAN CO., LTD.)  
樣品名稱(Sample Description) : SOLAR WINDOW FILM  
樣品型號(Style/Item No.) : BK05  
收件日期(Sample Receiving Date) : 2013/4/22  
測試期間(Testing Period) : 2013/4/22 TO 2013/4/25

=====  
測試需求(Test Requested) : 檢測多苯環芳香族化合物含量. (To determine Polynuclear Aromatic Hydrocarbons (PAHs).)

測試結果(Test Results) : 請見下一頁 (Please refer to next pages).

結論(Conclusion) : 根據客戶所提供的樣品, 其多苯環芳香族化合物的測試結果符合德國ZLS的ZEK 01.4-08及其相關修訂文件中的第1類PAHs要求 (Base upon the performed tests by submitted samples, the test results of PAHs comply with the PAHs requirement according to (Category 1) of ZEK 01.4-08 of German ZLS and its amendments.)

  
Edison Chang / Sr. Supervisor  
Signed for and on 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 : 透明黑色薄膜及其上膠 (不含離型膜) (TRANSPARENT-BLACK FILM WITH ADHESIVE (EXCLUDING THE RELEASE FILM))

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
多苯環芳香族化合物 / Polynuclear Aromatic Hydrocarbons (PAHs)				
芴 / Acenaphthene (CAS No.: 83-32-9)	mg/kg	參考ZLS standard ZEK 01.4-08 方法, 以氣相層析/質譜儀檢測。 / With reference to ZLS standard ZEK 01.4-08 method. Analysis was performed by GC/MS.	0.2	n.d.
芴烯 / Acenaphthylene (CAS No.: 208-96-8)			0.2	n.d.
蔥 / Anthracene (CAS No.: 120-12-7)			0.2	n.d.
苯駢蔥 / Benzo[a]anthracene (CAS No.: 56-55-3)			0.2	n.d.
苯駢(a)芘 / Benzo[a]pyrene (CAS No.: 50-32-8)			0.2	n.d.
苯(b)苯駢芴 / Benzo[b]fluoranthene (CAS No.: 205-99-2)			0.2	n.d.
苯駢芘 / Benzo[g,h,i]perylene (CAS No.: 191-24-2)			0.2	n.d.
苯(k)苯駢芴 / Benzo[k]fluoranthene (CAS No.: 207-08-9)			0.2	n.d.
Chrysene (CAS No.: 218-01-9)			0.2	n.d.
二苯駢蔥 / Dibenzo[a,h]anthracene (CAS No.: 53-70-3)			0.2	n.d.
苯駢芴 / Fluoranthene (CAS No.: 206-44-0)			0.2	n.d.
芴 / Fluorene (CAS No.: 86-73-7)			0.2	n.d.
茚酮芘 / Indeno[1,2,3-c,d] pyrene (CAS No.: 193-39-5)			0.2	n.d.
萘 / Naphthalene (CAS No.: 91-20-3)			0.2	n.d.
菲 / Phenanthrene (CAS No.: 85-01-8)			0.2	n.d.
芘 / Pyrene (CAS No.: 129-00-0)			0.2	n.d.
苯(j)苯駢芴 / Benzo[j]fluoranthene (CAS No.: 205-82-3)			0.2	n.d.
苯駢(e)芘 / Benzo[e]pyrene (CAS No.: 192-97-2)			0.2	n.d.
多苯環芳香族化合物18項總和 / Sum of 18 PAHs			-	n.d.

## 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)

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**參考資料(Reference information) :**

**依據ZEK 01.4-08之要求：產品中最大值為**

**(Requirement of ZEK 01.4-08 : Restraining maximum values for products)**

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與36個月以下的幼兒皮膚有所接觸的玩具。 (Material intended to be put in the mouth or toys for children aged < 36 months with intended skin contact.)	可預見與皮膚接觸逾30秒(長期與皮膚接觸), 以及不屬於第1類的材料。 (Materials not falling under category 1 with foreseeable contact to skin for longer than 30 seconds (long-term skin 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).)
苯駢(a)芘 Benzo(a)pyrene (mg/kg)	<MDL (<0.2)**	1	20
18項PAH總濃度 (Sum of 18 PAH) (mg/kg)*	<MDL (<0.2)**	10	200

**注意(Remark):**

\* = PAH濃度大於0.2mg/kg時, 則須計算PAH總濃度值

(Only PAH substances >0.2 mg/kg are taken into account while calculating the sum of PAHs)

\*\* = 最大濃度值超出等級一的限制, 但在等級二的濃度限制值內時, 可能需要確認測試材質是否適用於與食品或與口腔黏膜接觸, 並依照EN 1186 ff. and § 64 LFBG 80.30-1方法, 針對特定PAH的遷移測試進行測試。遷移測試的結論需依照食品規範評估。

(If the limits of category 1 are surpassed but the limits of category 2 still met, the confirmation of suitability of contact with foodstuff or the oral mucosa can be verified by an additional specific migration test of the PAH components according to EN 1186 ff. and § 64 LFBG 80.30-1. The results of the migration test shall be evaluated according to law criteria for foodstuff.)

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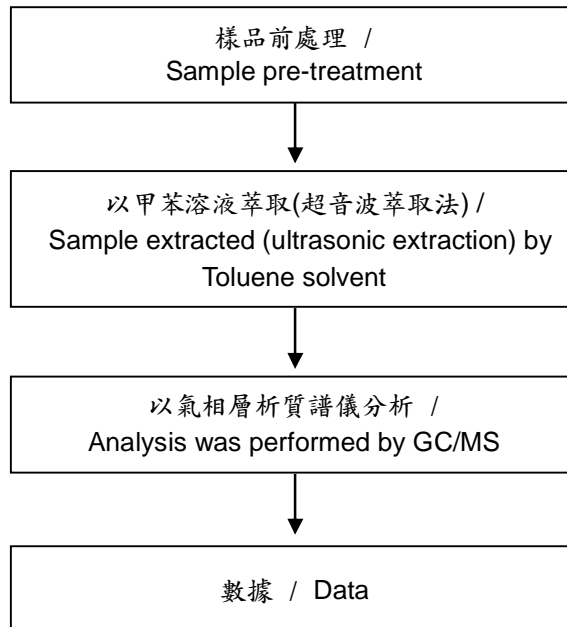
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### 多苯環芳香族化合物分析流程圖 / PAHs (Polynuclear Aromatic Hydrocarbons) analytical flow chart

- 測試人員：翁賜彬 / Name of the person who made measurement: Roman Wong
- 測試負責人：張啓興 / Name of the person in charge of measurement: Troy Chang



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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/2013/44412



SGSE13444120101

\*\* 報告結尾(End of Report) \*\*