

**Test Report**

Applicant: smartfiber AG

Number : TWNC00723130-S1

Date : Sep 14, 2018  
THIS IS TO SUPERSEDE REPORT  
NO. TWNC00723130 DATED  
Sep 12, 2018

Sample Description:

One (1) piece of submitted sample said to be :

Item Name : 71% Cotton 24% SeaCell 5% Spandex Fabric  
Quantity : 1 Piece  
Date Sample Received : Aug 22, 2018/Sep 03, 2018  
Date Test Started : Aug 23, 2018/Sep 03, 2018

Test Conducted:

As requested by the applicant, for details please refer to attached pages.

Authorized By:  
On behalf of Intertek Testing Services  
Taiwan Limited

\_\_\_\_\_  
Carol Peng  
General Manager



Signed by:

\_\_\_\_\_  
*Thomas Chou*

Thomas Chou  
Manager



Test Conducted :

1. 2,2-Diphenyl-1-picrylhydrazyl (DPPH) Free Radical Removing Test (Before Washing)

Test Procedure:

1. Prepared 0.2 mM of DPPH free radical with ethanol.
2. After adding 2 g of washing sample into 50 mL DPPH-Ethanol solution, shook away from light for 120 minutes, and stood in dark for 22 hours.
3. Used UV-Vis Spectrophotometer to detect absorbance at 517 nm and calculated the free radical removing rate.

<u>Tested Sample</u>	<u>Removing Rate (I%)</u>
White fabric	88

Remarks: Removing Rate (I%) =  $[1 - (A517(\text{submitted sample}) / A517(0.2 \text{ mM DPPH}))] \times 100\%$   
I% = DPPH free radical removing rate  
A517 (0.2 mM DPPH) : Absorbance at 517 nm of DPPH-Ethanol solution shook away from light for 120 minutes and stood in dark for 22 hours  
A517 (submitted sample) : Absorbance at 517 nm of DPPH-Ethanol solution reacting with submitted sample shook away from light for 120 minutes and stood in dark for 22 hours.

2. 2,2-Diphenyl-1-picrylhydrazyl (DPPH) Free Radical Removing Test (After 20 Washing)

Test Procedure:

1. Prewash for 20 cycles as per AATCC 135-2018, machine wash at 30°C, delicate cycle, line dry.
2. Prepared 0.2 mM of DPPH free radical with ethanol.
3. After adding 2 g of washing sample into 50 mL DPPH-Ethanol solution, shook away from light for 120 minutes, and stood in dark for 22 hours.
4. Used UV-Vis Spectrophotometer to detect absorbance at 517 nm and calculated the free radical removing rate.

<u>Tested Sample</u>	<u>Removing Rate (I%)</u>
White fabric	84

Remarks: Removing Rate (I%) =  $[1 - (A517(\text{submitted sample}) / A517(0.2 \text{ mM DPPH}))] \times 100\%$   
I% = DPPH free radical removing rate  
A517 (0.2 mM DPPH) : Absorbance at 517 nm of DPPH-Ethanol solution shook away from light for 120 minutes and stood in dark for 22 hours  
A517 (submitted sample) : Absorbance at 517 nm of DPPH-Ethanol solution reacting with submitted sample shook away from light for 120 minutes and stood in dark for 22 hours.



Test Conducted :

3. 2,2-Diphenyl-1-picrylhydrazyl (DPPH) Free Radical Removing Test (After 50 Washing)

Test Procedure:

1. Prewash for 50 cycles as per AATCC 135-2018, machine wash at 30°C, delicate cycle, line dry.
2. Prepared 0.2 mM of DPPH free radical with ethanol.
3. After adding 2 g of washing sample into 50 mL DPPH-Ethanol solution, shook away from light for 120 minutes, and stood in dark for 22 hours.
4. Used UV-Vis Spectrophotometer to detect absorbance at 517 nm and calculated the free radical removing rate.

<u>Tested Sample</u>	<u>Removing Rate (I%)</u>
White fabric	78

Remarks: Removing Rate (I%) =  $[1 - (A517(\text{submitted sample}) / A517(0.2 \text{ mM DPPH}))] \times 100\%$

I% = DPPH free radical removing rate

A517 (0.2 mM DPPH) : Absorbance at 517 nm of DPPH-Ethanol solution shook away from light for 120 minutes and stood in dark for 22 hours

A517 (submitted sample) : Absorbance at 517 nm of DPPH-Ethanol solution reacting with submitted sample shook away from light for 120 minutes and stood in dark for 22 hours.





End of Report

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