

**TEST REPORT**

Report Number : 15-0826-045-05  
Applicant : You Yuan Technology Co., LTD

Date Received : 2015/08/26  
Sample Name : Nano-Silver Yarns (Ag+) Active  
Antimicrobial Laundry Ball  
Sample Info : Nano-Silver Yarns (Ag+) Active  
Antimicrobial Laundry Ball

Test Period : 2015/08/26 ~ 2015/09/04

Date Issued : 2015/09/04

Applicant Address : No.116, Zhongshan Rd., Toufen Township, Miaoli County 351, Taiwan (R.O.C.)

| Item(s)  | Result(s)                 | Remark(s) |
|--|---------------------------|-----------|
| Antimicrobial test of <i>Escherichia coli</i>      |                           |           |
| Antimicrobial test of <i>Staphylococcus aureus</i> | <b>Shown as the table</b> |           |
| Silver (Ag)  |                           |           |

~~~~ The End ~~~~

Method :

Reference customer's specific testing method.

Test procedure :

Black : Measured culture strain (*E. coli*: BCRC 11634, *S. aureus*: BCRC 12154) with 25 L water into the washing machine, then add 1 spoon full of detergent, start the stirring for 40 min., then take this liquid to test.

Control : Measured culture strain (*E. coli*: BCRC 11634, *S. aureus*: BCRC 12154) and place 3 laundry balls with 25 L water into the washing machine, start the stirring for 20 and 40 min., then take this liquid to test.

Test : Measured culture strain (*E. coli*: BCRC 11634, *S. aureus*: BCRC 12154) and place 3 laundry balls with 25 L water into the washing machine, then add 1 spoon full of detergent, start the stirring for 20 and 40 min., take this liquid to test.

Calculate antibacterial rate : Antibacterial rate = (control bacterial count-final bacterial count)/control bacterial count x 100%



Authorized Representative:

1. Samples and names were provided by the client. The lab was responsible for analysis only.
2. The analysis results are only effective for the samples in this report.
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5. This report will be rendered invalid if altered.
6. N.D. means Non Detected.
7. Positive means Detected. Negative means Non Detected.
8. Not all items in the report were accredited by TFDA other than the specified items.

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**Result :**

***E. coli*: BCRC 11634**

| type                                | Black<br>(detergent) | Control<br>(water+ball) |                     | Test<br>(detergent+ball) |                     |
|-------------------------------------|----------------------|-------------------------|---------------------|--------------------------|---------------------|
|                                     |                      | 20 min.                 | 40 min.             | 20 min.                  | 40 min.             |
| time                                | 40 min.              | 20 min.                 | 40 min.             | 20 min.                  | 40 min.             |
| control bacterial count<br>(CFU/mL) | 2.0*10 <sup>5</sup>  | 2.0*10 <sup>5</sup>     | 2.0*10 <sup>5</sup> | 4.0*10 <sup>5</sup>      | 4.0*10 <sup>5</sup> |
| final bacterial count<br>(CFU/mL)   | 1.9*10 <sup>5</sup>  | 5.6*10 <sup>3</sup>     | 1.2*10 <sup>3</sup> | 1.1*10 <sup>5</sup>      | 9.7*10 <sup>4</sup> |
| <b>antibacterial rate (%)</b>       | <b>5.0%</b>          | <b>97.2%</b>            | <b>99.4%</b>        | <b>72.5%</b>             | <b>75.8%</b>        |

***S. aureus*: BCRC 12154**

| type                                | Black<br>(detergent) | Control<br>(water+ball) |                     | Test<br>(detergent+ball) |                     |
|-------------------------------------|----------------------|-------------------------|---------------------|--------------------------|---------------------|
|                                     |                      | 20 min.                 | 40 min.             | 20 min.                  | 40 min.             |
| time                                | 40 min.              | 20 min.                 | 40 min.             | 20 min.                  | 40 min.             |
| control bacterial count<br>(CFU/mL) | 1.5*10 <sup>5</sup>  | 1.5*10 <sup>5</sup>     | 1.5*10 <sup>5</sup> | 3.0*10 <sup>5</sup>      | 3.0*10 <sup>5</sup> |
| final bacterial count<br>(CFU/mL)   | 1.5*10 <sup>5</sup>  | 3.5*10 <sup>4</sup>     | 1.1*10 <sup>4</sup> | 2.0*10 <sup>4</sup>      | 4.0*10 <sup>3</sup> |
| <b>antibacterial rate (%)</b>       | <b>0.0%</b>          | <b>76.7%</b>            | <b>92.7%</b>        | <b>93.3%</b>             | <b>98.7%</b>        |

**Silver (Ag)**

| type             | Black<br>(detergent) | Control<br>(water+ball) |                | Test<br>(detergent+ball) |                             |
|------------------|----------------------|-------------------------|----------------|--------------------------|-----------------------------|
|                  |                      | 20 min.                 | 40 min.        | 20 min.                  | 40 min.                     |
| time             | 40 min.              | 20 min.                 | 40 min.        | 20 min.                  | 40 min.                     |
| <b>Ag (mg/L)</b> | -                    | <b>0.00096</b>          | <b>0.00077</b> | <b>0.00056</b>           | <b>N.D.<br/>&lt;0.00056</b> |



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Sample photo :



**15 - 0826 - 045 - 05**

  


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