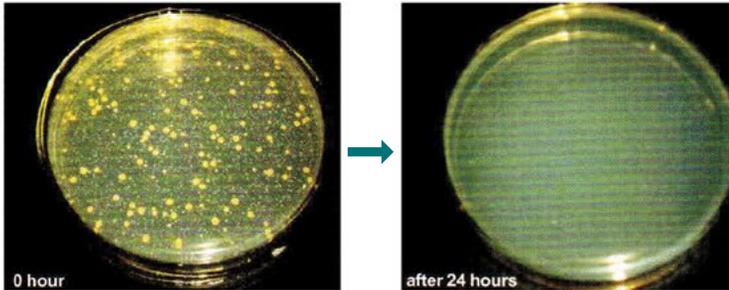


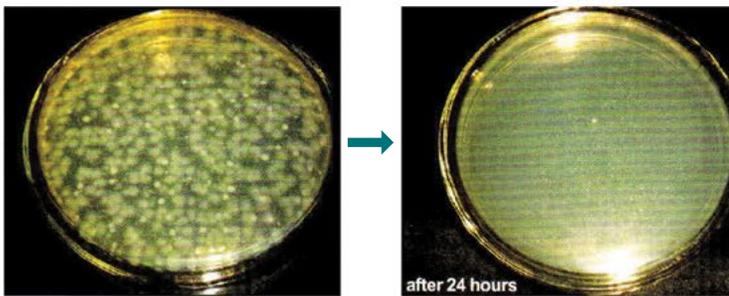
Simpurity™ Silver Alginate Dressing is a non-woven pad composed of calcium alginate and silver particles. The silver content is 50µg/100 cm<sup>2</sup>. The silver particles are in the form of encapsulated metallic silver, which is very stable and won't be oxidized even on exposure to light.

Simpurity™ Silver Alginate Dressing is proved to have broad spectrum antibacterial effect, based on in vitro laboratory testing.

## Antibacterial efficacy



0 hour  
*Staphylococcus aureus*



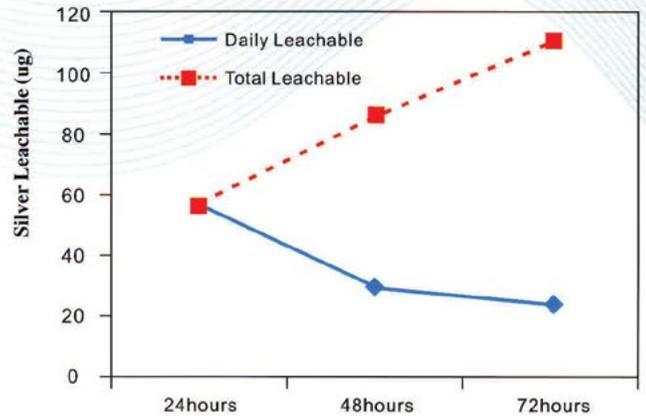
*Pseudomonas aeruginosa*

## 1. Silver Release

Figure 1 shows that Simpurity™ Silver Alginate Dressing leaches about 57% of the total silver during the first 24 hours, and 30% during 24-48 hours, and 24% of its total silver during 48-72 hours, respectively.

The release profiles indicates that the release of silver from the dressing is well controlled.

Figure 1 Silver Release Profiles



Note: Two pieces of the dressing in the size of 10x10 cm were used in this test. The test was performed by China National Analytical Center at Guangzhou.

## 2. Antibacterial Activity

### 2.1 Comparative Test

One representative Gram-positive bacteria (*Staphylococcus aureus*) and one representative Gram-negative bacteria (*Pseudomonas aeruginosa*) were tested under AATCC 100-2004.

Figure 2 and Figure 3 show Simpurity™ Silver Alginate Dressing has four log reduction (99.99%) for both organisms, the other two products only have three log reduction (99.9%).

Figure 2 Log Reduction - *Staphylococcus aureus*

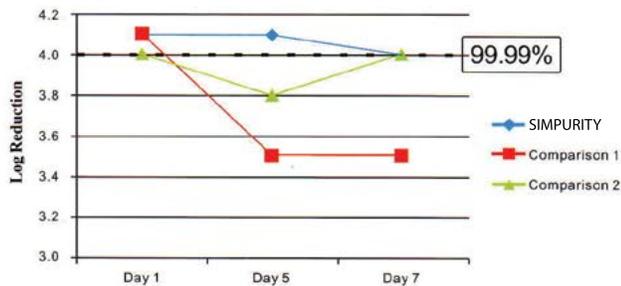
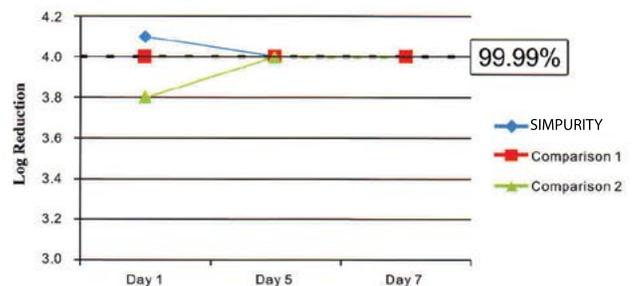


Figure 3 Log Reduction - *Pseudomonas aeruginosa*

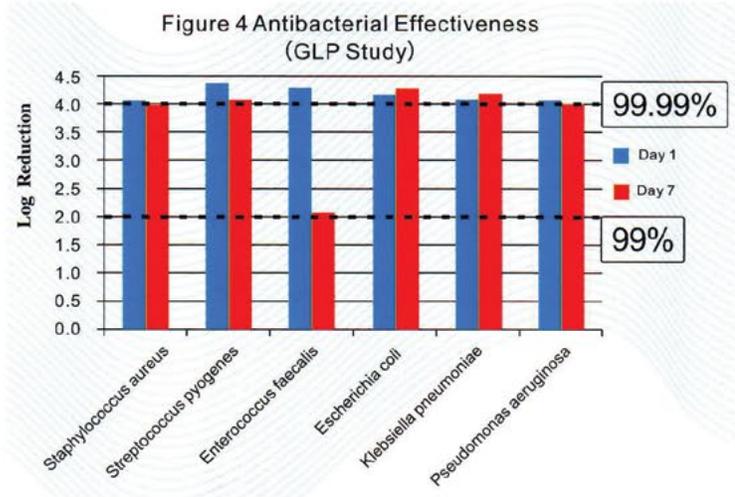


Note: Comparison 1 and 2 are other silver alginate dressings in the market. The test was performed by our own laboratory.

### 2.2 Antibacterial Effectiveness Test

AATCC 100-2004 only specifies the use of one Gram-positive and one Gram-negative bacteria. However, we tested six clinical-relevant bacteria (3 Gram-positive and 3 Gram-negative bacteria) for the evaluation of antibacterial effectiveness.

Test Organism	ATCC	Test Method
<i>Enterococcus faecalis</i>	ATCC 29219	Dressing specimens and controls were tested under simulated use conditions for seven days. During this time, test articles were kept moistened daily with phosphate buffered water containing 10% Fetal Bovine Serum to simulate daily use.  The antibacterial activity testing was performed with an inoculum challenge of more than 10 <sup>6</sup> CFU total.
<i>Escherichia coli</i>	ATCC 8739	
<i>Klebsiella pneumoniae</i>	ATCC 4352	
<i>Pseudomonas aeruginosa</i>	ATCC 9027	
<i>Staphylococcus aureus</i>	ATCC 6538	
<i>Streptococcus pyogenes</i>	ATCC 19615	



At day-1, results show Simpurity™ Silver Alginate Dressing has bacteria reduction of at least four log reduction for all six test organisms;

At day-7, bacteria reduction for all the organisms is at least two log reduction (data in table 1 and table 2).

Note: The test was performed under Good Laboratory Practice regulations, by WuXi AppTec, Inc. (Address: 1265 Kennestone Circle, Marietta, GA 30066).

Based on the test results, Simpurity™ Silver Alginate Dressing has broad spectrum antibacterial effect for Gram-positive and Gram-negative bacteria.

Table 1: 1 Day Antibacterial Effectiveness

	1 Day		
	Replicate 1	Replicate 2	Replicate 3
<i>Staphylococcus aureus</i>	>4.0	>4.1	>4.1
<i>Streptococcus pyogenes</i>	>4.4	>4.4	>4.3
<i>Enterococcus faecalis</i>	>4.3	>4.2	>4.3
<i>Escherichia coli</i>	>4.2	>4.2	>4.13
<i>Klebsiella pneumoniae</i>	>4.1	>4.0	>4.1
<i>Pseudomonas aeruginosa</i>	>4.1	>4.1	>4.1

Table 2: 7 Days Antibacterial Effectiveness

	7 Days		
	Replicate 1	Replicate 2	Replicate 3
<i>Staphylococcus aureus</i>	>4.0	>4.0	>4.0
<i>Streptococcus pyogenes</i>	>4.1	>4.1	>4.1
<i>Enterococcus faecalis</i>	2.1	1.6	2.6
<i>Escherichia coli</i>	>4.3	>4.3	>4.3
<i>Klebsiella pneumoniae</i>	>4.2	>4.2	>4.2
<i>Pseudomonas aeruginosa</i>	>4.0	>4.0	>4.0

### 2.3 Additional Study

Besides the six clinical-relevant bacteria above, we made an additional study for one drug-resistant bacteria (MRSA) and one fungus (*Candida albicans*).

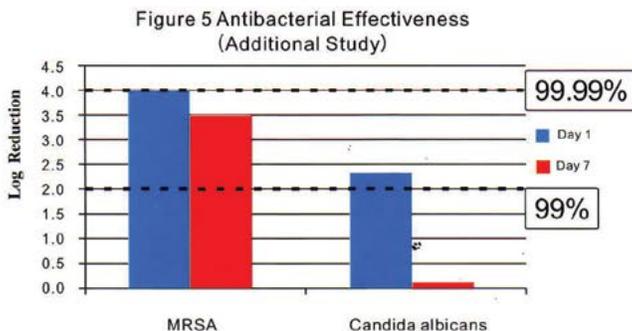


Figure 5 shows Simpurity™ Silver Alginate Dressing has at least two log reduction for both MRSA and *Candida albicans*, during the first 24 hours.

Note: The test was performed by Guangdong Detection Center of Microbiology at Guangzhou.