

## Test Report

Report No : PT R1708010E

Date : 06/09/2017

**Applicant :** Cashido Corporation  
**Address :** No. 8, Kexi 1 st Rd., Zhunan Science Park, Zhunan Township, Miaoli County  
**Test Item :** Sterilization Efficacy Test of 10 Second Machine 100 mg/hr  
**Test Method :** The bacterial strains for sterilization efficacy test are *Escherichia coli* (provided by Cashido Corporation), *Acinetobacter venetianus* (BCRC 14357) and *Staphylococcus cohnii* subsp. *Cohnii* (BSRC12155). The bacteria suspension are mixed with ozonized water of 10 Second Machine 100 mg/hr, and colony-forming unit (CFU) is calculated by spiral plater. Please refer to the appendix for detailed process.

### Test Result :

Non-processed bacteria suspension

Tested Bacteria	CFU/ml	Remarks
<i>Escherichia coli</i>	$2.54 \times 10^5$	--
<i>Acinetobacter venetianus</i> (BCRC14357)	$4.24 \times 10^5$	--
<i>Staphylococcus cohnii</i> subsp. <i>Cohnii</i> (BCRC12155)	$2.31 \times 10^5$	--

Bacteria suspension treated with tap water

Tested Bacteria	CFU/ml	Remarks
<i>Escherichia coli</i>	$1.67 \times 10^5$	34.25%
<i>Acinetobacter venetianus</i> (BCRC14357)	$3.15 \times 10^5$	25.71%
<i>Staphylococcus cohnii</i> subsp. <i>Cohnii</i> (BCRC12155)	$2.31 \times 10^5$	36.36%

Bacteria suspension treated with Ozonized water of 10 Second Machine 100 mg/hr

Tested Bacteria	CFU/ml	Remarks: Sterilization efficacy
<i>Escherichia coli</i>	<20	99.99%
<i>Acinetobacter venetianus</i> (BCRC14357)	$2.51 \times 10^3$	99.41%
<i>Staphylococcus cohnii</i> subsp. <i>Cohnii</i> (BCRC12155)	$2.60 \times 10^2$	99.89%

Authorized Signature: : Shang Shu Yang

The testing operations for sample analysis are carried out by Agriculture Technology Research Institute. The tested product is offered by the customer. The analysis result is in the light of the tested samples in the laboratories.

The analysis report should not be used in advertisements.

The analysis report is only used for providing the results of the matter entrusted to the customer, is **NOT** for validating the legality of the product.



## I. Bacterial Strains and Testing Method

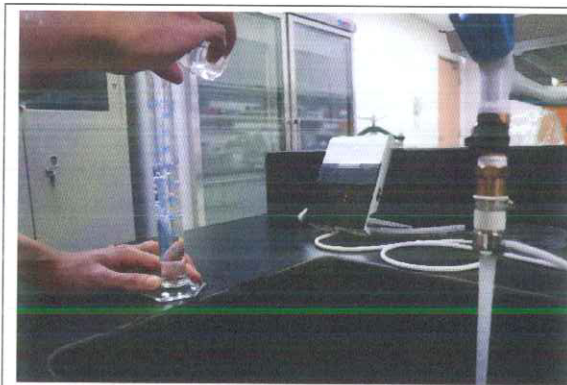
Bacterial strains: *Escherichia coli* was provided by Cashido Corporation, *Acinetobacter venetianus* (BCRC14357) and *Staphylococcus cohnii* subsp. *Cohnii* (BSRC12155) were purchased from Bioresource Collection and Research Center

Culture medium: LA (Lysogeny agar) for *Escherichia coli*, NA (Nutrient agar) for *Acinetobacter venetianus* (BCRC14357), and MSA (Mannitol Salt Agar) for *Staphylococcus cohnii* subsp. *Cohnii* (BSRC12155).

Preparation of bacterial suspension: *E. coli* was grown on LA, *A.venetianus* and *S. cohnii* were grown on NA respectively. The medium were incubated for 24 hours at 30°C. The target bacterial cells were collected and suspended in sterile water at a concentration of  $0.3 \pm 0.05$  OD at 600 nm. The cell suspension was used for further testing.

## II. Method for Testing the Sterilization Efficacy of Ozone Machine

1. Carefully transferred 100  $\mu$ l of cell suspension into 100 ml ozonized water produced by 10 Second Machine 100mg/hr and mixed immediately. After 10 seconds, quickly transferred 5 ml cell suspension into falcon tube.
2. The 50  $\mu$ l of bacterial suspension was streaked on proper medium mentioned above by spiral plater and incubated at 30°C for 24 hours.



100 ml of ozonized water was collected from 10 Second Machine 100mg/hr.



Carefully transferred 100  $\mu$ l of cell suspension into 100 ml ozonized water produced by 10 Second Machine 100mg/hr and mixed immediately, and streaked on medium by spiral plater.

### III. Test Result

#### Non-processed bacteria suspension

Tested Bacteria	CFU/ml	Remarks
<i>Escherichia coli</i>	$2.54 \times 10^5$	--
<i>Acinetobacter venetianus</i> (BCRC14357)	$4.24 \times 10^5$	--
<i>Staphylococcus cohnii subsp. Cohnii</i> (BCRC12155)	$2.31 \times 10^5$	--

#### Bacteria suspension treated with tap water

Tested Bacteria	CFU/ml	Sterilization efficacy
<i>Escherichia coli</i>	$1.67 \times 10^5$	34.25%
<i>Acinetobacter venetianus</i> (BCRC14357)	$3.15 \times 10^5$	25.71%
<i>Staphylococcus cohnii subsp. Cohnii</i> (BCRC12155)	$1.47 \times 10^5$	36.36%

#### Bacteria suspension treated with Ozonized water of 10 Second Machine 100 mg/hr

Tested Bacteria	CFU/ml	Sterilization efficacy
<i>Escherichia coli</i>	<20	99.99%
<i>Acinetobacter venetianus</i> (BCRC14357)	$2.51 \times 10^3$	99.41%
<i>Staphylococcus cohnii subsp. Cohnii</i> (BCRC12155)	$2.60 \times 10^2$	99.89%

