



Mr. Russell Altman  
Beneficial Solutions, LLC  
2934 Shady Creek Court  
Reno, Nevada 89523

28 August 2007

Dear Russell,

Here is the final report for analytical work performed on the NutraSilver product delivered by Express Mail at 0930 16 July 2007. The analyses will be charged to the credit card number provided.

We will mail you this report and the complete results.

Original samples and all subcultures associated with this report will be retained for 9 days after today's date. To make arrangements to archive samples and subcultures longer than 9 days, please call.

As part of our dedication to continuous improvement, we encourage you to share any suggestions or feedback you might have that would enable us to serve you better. Please send your suggestions to [susan@microcheck.com](mailto:susan@microcheck.com) or call Susan Sinclair at 866-709-6600, ext. 23.

As always I encourage you to call me at (802) 485-6600, ext. 22 with any questions you may have.

Thanks for this opportunity to work with you Russell.

Sincerely,

Michael G. Sinclair, Ph.D.  
CEO/Laboratory Director

MGS/cll

## METHOD OF TEST FOR WATER-BORNE MICROORGANISMS

1. The test organisms used were:

*Escherichia coli* (ATCC 25922) Representatives of the bacterial genus *Escherichia* occur as part of the normal flora in the lower part of the intestine of warm-blooded animals. *Escherichia coli* strains that contain enterotoxins and/or other virulence factors, including invasiveness and colonization factors, cause diarrheal disease. *E. coli* is also a major cause of urinary tract infections and nosocomial infections, which are infections acquired while being in a hospital, including septicemia and meningitis.

*Pseudomonas aeruginosa* (ATCC 9027) Bacteria in the genus *Pseudomonas* are widely distributed in nature. Some species are pathogenic for humans, animals, or plants. *P. aeruginosa* is commonly isolated from clinical specimens (wound, burn, and urinary tract infections). This bacterium is the causative agent of "blue pus," which is the origin of the synonym *pyocyaneus* for the species name in place of *aeruginosa*, which means full of copper rust or verdigris, a green color.

*Shigella flexneri* (ATCC 9199) The genus *Shigella* consists of bacteria that are intestinal pathogens of humans and other primates, causing bacillary dysentery.

*Salmonella arizonae* (ATCC 13314) Bacteria in the genus *Salmonella* occur in humans, warm and cold blooded animals, foods, and the environment. Some species of *Salmonella* are pathogenic, which means that they cause a disruption in structure/function, for humans and many animal species. Some species of *Salmonella* are the causative agents of typhoid fever, enteric fevers, gastroenteritis, and septicemia.

2. The tests were conducted separately for each of the four test microorganisms.
3. The bacteria were grown in trypticase soy broth at 28°C on a rotary shaker operating at 150 RPM. Prior to the challenges the organisms were centrifuged, resuspended with phosphate-buffered water with Tween 80 (PBWT), and vortexed prior to the next centrifugation. This process was repeated three times to remove residual media prior to the turbidimetric adjustment of the cells.
4. The bacterial suspensions were adjusted to 10<sup>8</sup> colony-forming units (CFU) per milliliter of PBWT using a spectrophotometer. Ten milliliters of each of the bacterial suspensions were then inoculated into one liter of sterile high pressure liquid chromatography (HPLC) quality water containing three drops of the NutraSilver product, which is an ionized silver compound in a double colloidal solution. The inoculated water was allowed to stand at 25°C for 30 minutes.
5. After the specified time the microbial count was determined by the spread plate method, 9215C, in Standard Methods (Eaton, A.D., L.S. Clesceri, E.W. Rice, and A.E. Greenberg. 2005. Standard Methods for the Examination of Water and Wastewater. American Public Health Association, American Water Works Association, and Water Environment Federation. Port City Press, Baltimore, MD).
6. Control for each test microorganism was done using the inoculated HPLC quality water held for 30 minutes without the addition of the product.

## RESULTS

Company: Beneficial  
Solutions, LLC

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Product: "Ionized silver compound in a double colloidal solution"

Test Microorganism	Count of test microorganism recovered from the inoculated sample in colony-forming units per milliliter	Percentage Kill of Test Microorganism
<i>Escherichia coli</i> (ATCC 25922)		
Control	8,200,000	
30 minutes	<10	99.999
<i>Pseudomonas aeruginosa</i> (ATCC 9027)		
Control	4,100,000	
30 minutes	<10	99.999
<i>Shigella flexneri</i> (ATCC 9199)		
Control	8,800,000	
30 minutes	<10	99.999
<i>Salmonella arizonae</i> (ATCC 13314)		
Control	3,200,000	
30 minutes	<10	99.999

## CONCLUSIONS

The NutraSilver product at 3 drops in one liter of water is extremely effective against these water-borne bacterial pathogens killing 99.999% of the organisms after only 30 minutes of contact time.

Microcheck is registered with the Food and Drug Administration and is an ISO/IEC 17025:2005 compliant microbial identification laboratory that has been in business since 1988.

Results represent only the sample(s) as received. All analytical data and reports are client confidential and available only to the client. Authorization for publication of excerpts, statements, or conclusions regarding our reports is reserved pending written approval from Microcheck, Inc.