



GENEVA LABORATORIES, INC.

LABORATORIES FOR THE MEDICAL INDUSTRY WORLDWIDE

JN07B1529
ZONE (KZ)

TEST ARTICLE: Ozone Generator

P.O. NO.: Verbal

DATE RECEIVED/INITIATED/COMPLETED: 2-27-07 | 2-27-07 | 3-12-07

TEST PROCEDURE: San Jamar's Ozone Generator Immersion Followed by Hand Washing Protocol and Zone of Inhibition Procedure

METHODOLOGY:

1.) Vegetable Cleaning by Immersion Followed by Hand Washing

The microorganism in the test was Escherichia coli (ATCC 8739).

Three romaine lettuce leaves were inoculated with approximately 1×10^7 CFU of E. coli. The inoculum remained on the lettuce leaves for 30 minutes. After the 30 minutes, the romaine lettuce leaves were immersed in ozonated water for three minutes followed by gentle hand washing of the romaine lettuce leaves for 30 seconds.

The E. coli was recovered from the romaine lettuce leaves by placing each leaf into 50 mLs of Tryptic Soy Broth and stomaching for 1 minute. The broth was diluted to obtain a recovery count.

This procedure was then repeated using carrots instead of romaine lettuce.

ANALYST: Sharon Suckano

DATE: 3-15-07

ACCEPTED BY: [Signature]
Technical Reviewer

DATE: 3-15-07

Q.A. SIGNATURE: Alex Bomer

DATE: 3-15-07

METHODOLOGY:

2.) Zone of Inhibition

The microorganism used in the test was Escherichia coli (ATCC 8739).

One flask of moltened, tempered Tryptic Soy Agar was seeded with a stock culture of Escherichia coli so that each 20 mL plate poured had a concentration of 1.8×10^8 CFU/plate.

After the plates solidified, two stainless steel penicylinders were placed on top of the agar. Then, 240 μ L of the ozonated water was inoculated into the penicylinders. The plates were incubated at 30-35°C for overnight. The penicylinders were removed from the agar and the zone of inhibitions were measured.

RESULTS: 1.) Vegetable Cleaning by Immersion Followed by Hand Washing

Ozonated Water
Temperature: 9°C, Ozone: 0.24 ppm

	Romaine Lettuce			Carrots	
	CFU Recovered	Log Reduction from Inoculum		CFU Recovered	Log Reduction from Inoculum
Inoculum	7,800,000 CFU		Inoculum	7,800,000 CFU	
A	55 CFU	5.15	A	2000 CFU	3.59
B	55 CFU	5.15	B	<1000 CFU	3.89
C	40 CFU	5.29	C	<1000 CFU	3.89

2.) Zone of Inhibition (Figure 1)

Ozone: 0.23 ppm