

## ENVIROTEK LABORATORIES, INC.

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#### ADYA CLARITY CHLORAMINE REDUCTION TEST REPORT

Report # 11-284-CINH2 Customer Name: Adya, Inc. Report Date: November 10, 2011

#### **EXECUTIVE SUMMARY**

A water solution prepared with Chloramine at a concentration of 2.75 mg/L of Chloramine was tested, Adya Clarity was added to the solution at a concentration of 2 mL of Adya per liter of Chloramine solution and the solution was tested after 1, 6, 12, 24, 36, and 48 hours of adding the Adya solution. The concentration of Chloramine decreased each time until it was not detected by the Standard Test Method 4500-Cl-G.

#### INTRODUCTION

A water solution prepared with Chloramine at a concentration of 2.75 mg/L of Chloramine as per NSF/ANSI Standard 42 was tested following the Standard Test Method 4500-Cl-G, Adya Clarity was added to the solution at a concentration of 2 mL, of Adya per liter of Chloramine solution and the solution was tested after 1, 6, 12, 24, 36, and 48 hours of adding the Adya solution. The concentration of Chloramine decreased each time until it was not detected by the Standard Test Method 4500-Cl-G.

#### REAGENTS AND LAB EQUIPMENT

Unico 2100 Spectrophotometer. Free Chlorine Standard 69.4 mg/L solution. Sodium Hypochlorite solution 7.5%. Ammonium Chloride, Reagent grade Adya Clarity solution. Hach DPD reagent indicator.

#### **PROCEDURE**

A water solution was prepared using DI water and Ammonium Chloride at a concentration of 6 mg/L. Added Sodium Hypochlorite to the solution to obtain a concentration of 2.75 mg/L of Chloramine (prepared as per NSF/ANSI standard 42) tested following the Standard Test Method 4500-Cl-G.

Two mL of Adya Clarity was added to one liter of the Chloramine solution, mixed well using a magnetic stirrer. The final solution was tested for Chloramine after 1, 6, 12, 24, 36, and 48 hours of adding the Adya Clarity solution. The results are summarized in the table below.

Control Solution: one liter of the Chloramine solution was mixed well using a magnetic stirrer and tested for Chloramine after 1, 6, 12, 24, 36, and 48 hours.

#### RESULTS

The Chloramine concentrations for Adya Clarity are summarized in the following table:

Parameter	Water	Adya 1 mL/L	Adya 1 mL/L	Adya 1 mL/L	Adya 1 mL/L	Adya 1 mL/L	Adya 1 mL/L
Tested	Solution	After 1 hr	After 6 hrs	After 12 hrs	After 24 hrs	After 36 hrs	After 48 hrs
Chloramine	2.75 mg/L	2.56 mg/L	1.58 mg/L	0.84 mg/L	0.62 mg/L	0.37 mg/L	<0.10 mg/L

The Chloramine concentrations for the Control Solution are summarized in the following table:

Parameter	Water	Control	Control	Control	Control	Control	Control
Tested	Solution	After 1 hr	After 6 hrs	After 12 hrs	After 24 hrs	After 36 hrs	After 48 hrs
Chloramine	2.75 mg/L	2.70 mg/L	2.55 mg/L	2.10 mg/L	1.44 mg/L	0.95 mg/L	0.55 mg/L

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### **CONCLUSION**

The Adya Clarity decreased the concentration of Chloramine in solution and after about 48 hours, the concentration of Chloramine was below the detection limit of the Standard Test Method 4500-Cl-G.

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