



ENVIROTEK LABORATORIES, INC.

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EPA ID # NJ01298 NJ DEP ID # 08012

H₂O TECHNOLOGIES CHLORAMINE REDUCTION TEST REPORT

Report # 12-325-3-CINH2 (Purinize Mineral Solution)

Customer Name: H₂O Technologies, Inc.

Report Date: October 24, 2012

EXECUTIVE SUMMARY

A water solution prepared with Chloramine at a concentration of 2.75 mg/L of Chloramine was tested, Purinize was added to the solution at a concentration of 2 mL of Purinize per liter of Chloramine solution and the solution was tested after 1, 6, 12, 24, 36, and 48 hours of adding the Purinize 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, Purinize was added to the solution at a concentration of 2 mL, of Purinize per liter of Chloramine solution and the solution was tested after 1, 6, 12, 24, 36, and 48 hours of adding the Purinize 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

Purinize 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 Purinize 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 Purinize 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 Purinize are summarized in the following table:

Parameter Tested	Water Solution	Purinize 1 mL/L After 1 hr	Purinize 1 mL/L After 6 hrs	Purinize 1 mL/L After 12 hrs	Purinize 1 mL/L After 24 hrs	Purinize 1 mL/L After 36 hrs	Purinize 1 mL/L 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

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

Parameter Tested	Water Solution	Control After 1 hr	Control After 6 hrs	Control After 12 hrs	Control After 24 hrs	Control After 36 hrs	Control 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

CONCLUSION

The Purinize 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.

Jaime A. Young

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