



# ENVIROTEK LABORATORIES, INC.

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EPA ID # NJ01298 NJ DEP ID # 08012

## H<sub>2</sub>O TECHNOLOGIES FLUORIDE REDUCTION TEST REPORT

Report # 12-325-4-NaF (Purinize Mineral Solution)

Customer Name: H<sub>2</sub>O Technologies, Inc.

Report Date: July 31, 2012

### EXECUTIVE SUMMARY

Challenge water prepared with Sodium Fluoride at a concentration of 8 mg/L of Fluoride was tested, Purinize was added to the solution at a concentration of 1 mL, 2 mL, 3 mL, and 4 mL of Purinize per liter of Sodium Fluoride solution and the final solution was tested each time after about 15 minutes of adding Purinize. The concentration of Fluoride decreased each time until it was not detected by the EPA method 3.40.2.

### INTRODUCTION

Challenge water solution prepared with Sodium Fluoride at a concentration of 8 mg/L of Fluoride as per NSF/ANSI Standard 53 was tested following the EPA method 340.2. Purinize was added to the solution at a concentration of 1 mL, 2 mL, 3 mL, and 4 mL of Purinize per liter of Sodium Fluoride solution and the solution was tested after about 15 minutes of adding Purinize. The concentration of Fluoride decreased each time until it was not detected by the EPA Test Method 340.2.

### REAGENTS AND LAB EQUIPMENT

Orion Dual Star ISE meter with Oakton Fluoride probe.

Oakton Sodium Fluoride standard 1,000 mg/L solution.

Hach Sodium Fluoride standard 100 mg/L.

Oakton Ion Strength Adjuster solution.

Purinize Mineral Solution.

### PROCEDURE

The challenge water solution was prepared using DI water and the Oakton Sodium Fluoride solution to obtain a concentration of 8 mg/L of Fluoride tested following the EPA method 340.2.

One mL of Purinize was added to one liter of the Sodium Fluoride solution, mixed well and let it stand for about 15 minutes. The final solution was tested for Fluoride ions; the procedure was repeated after adding a total of two mL, three mL and four mL of Purinize. The results are summarized in the table below.

### RESULTS

The Fluoride concentrations are summarized in the following table:

Parameter Tested	Challenge Water	Purinize 1 mL/L	Purinize 2 mL/L	Purinize 3 mL/L	Purinize 4 mL/L
Fluoride	7.94 mg/L	3.73 mg/L	2.98 mg/L	1.51 mg/L	<0.5 mg/L

### CONCLUSION

Purinize decreased the Fluoride concentration until it was below the detection limit of the EPA Test Method 340.2.

**Jaime A. Young**

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