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EPA ID # NJ01298 NJ DEP ID # 03048

AURO FLUORIDE REDUCTION TEST REPORT

Report # 15-159-NaF (Auro Solution)
Customer Name: Samoe, LLC
Report Date: July 3, 2015

EXECUTIVE SUMMARY

A water solution prepared with a Sodium Fluoride concentration of 8 mg/L of Fluoride was tested. Auro Solution was added to the solution at a concentration of 1 mL, 2 mL, 3 mL, and 4 mL of Auro Solution per liter of Sodium Fluoride and the solution was tested each time after about 15 minutes of adding the Auro Solution. The concentration of Fluoride decreased each time until it was not detected by the EPA method 340.2.

INTRODUCTION

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

PROCEDURE

A 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 Auro Solution 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 Auro Solution. The results are summarized in the table below.

RESULTS

The Fluoride concentrations are summarized in the following table:

Parameter Tested	Water Solution	Auro 1 mL/L	Auro 2 mL/L	Auro 3 mL/L	Auro 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

The Auro Solution decreased the Fluoride concentration until it was below the detection limit of the EPA method 340.2.

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