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AURO SOLUTION METALS REDUCTION TEST REPORT

Report # 15-154 (Auro Solution)
Customer Name: Auro, LLC.
Report Date: July 3, 2015

EXECUTIVE SUMMARY

A challenge water prepared with Arsenic III, Lead, and Mercury at a concentration of 50, 150, and 6 µg/L respectively. Auro Solution was added to the solution at a concentration of 2 mL of Auro per liter of challenge water. The solution was filtered through the Auro ceramic filter system, then tested for Arsenic, Lead and Mercury after 24, and 48 hours of adding the Auro Solution. The concentration of Lead and Mercury decreased to non-detectable levels, the concentration of Arsenic decreased to less than 50%.

INTRODUCTION

A challenge water prepared with Arsenic III, Lead, and Mercury at a concentration of 50, 150, and 6 µg/L respectively. Auro Solution was added to the solution at a concentration of 2 mL of Auro per liter of challenge water. The solution was filtered through the Auro ceramic filter system, then tested for Arsenic, Lead and Mercury after 24, and 48 hours of adding the Auro Solution. The concentration of Lead and Mercury decreased to non-detectable levels, the concentration of Arsenic decreased to just over 50%.

REAGENTS AND LAB EQUIPMENT

Perkin Elmer Spectrometer.
Arsenic, Lead, and Mercury Standard solutions.
Auro Solution.
Auro ceramic filter system.

PROCEDURE

A challenge water solution was prepared with DI water and Arsenic III, Lead, and Mercury standards at a concentration of about 50, 150, and 6 µg/L respectively; then added Auro Solution to the challenge water at a concentration of 2 mL of Auro per liter of challenge water, filtered the solution through the Auro ceramic filter system, then tested for Arsenic, Lead and Mercury after 24, and 48 hours of adding the Auro Solution, following the EPA method 200.9 for Arsenic and lead, and EPA method 245.1 for Mercury.

RESULTS

The Metals concentrations for the challenge water and filtered Auro Solution are summarized in the following table:

Parameter Tested	Water Solution	Auro 2 mL/L after 24 hrs.	Auro 2 mL/L after 48 hrs.
Arsenic III	55.2 µg/L	32.1 µg/L	27.22 µg/L
Lead	149.5 µg/L	<2 µg/L	<2 µg/L
Mercury	6.04 µg/L	<0.5 µg/L	<0.5 µg/L

CONCLUSION

The concentration of Lead and Mercury decreased to non-detectable levels, the concentration of Arsenic decreased to less than 50% when using the Auro Solution combined with the Auro ceramic filter system.

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