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BIOTITE MINERAL SOLUTION LEAD REDUCTION TEST REPORT

Report # 14-206-Pb (Biotite Mineral Solution)
Customer Name: Biotite, Co.
Report Date: August 26, 2014

EXECUTIVE SUMMARY

A challenge water prepared with a Lead concentration of 150 µg/L. Biotite Mineral Solution was added to the solution at a concentration of 2 mL of Biotite per liter of challenge water. The solution was filtered through the Biotite Ceramic Filter System, and then tested for Lead after 24, and 48 hours of adding the Biotite solution. The concentration of Lead decreased to non-detectable levels.

INTRODUCTION

A challenge water prepared with a Lead concentration of 150 µg/L. Biotite Mineral Solution was added to the solution at a concentration of 2 mL of Biotite per liter of challenge water. The solution was filtered through the Biotite Ceramic Filter System, and then tested for Lead after 24, and 48 hours of adding the Biotite solution. The concentration of Lead decreased to non-detectable levels.

REAGENTS AND LAB EQUIPMENT

Perkin Elmer Spectrometer.
Lead Standard Solution.
Biotite Mineral Solution.
Biotite Ceramic Filter System.

PROCEDURE

A challenge water solution was prepared with DI water and Lead standards at a concentration of about 150 µg/L; then added Biotite Mineral Solution to the challenge water at a concentration of 2 mL of Biotite per liter of challenge water, and then filtered the solution through the Biotite Ceramic Filter System, then tested for Lead after 24, and 48 hours of adding the Biotite solution, following the EPA method 200.9.

RESULTS

The Lead concentrations for the challenge water and filtered Biotite Mineral Solution are summarized in the following table:

Parameter Tested	Water Solution	Biotite 2 mL/L after 24 hrs.	Biotite 2 mL/L after 48 hrs.
Lead	149.5 µg/L	<2 µg/L	<2 µg/L

CONCLUSION

The concentration of Lead decreased to non-detectable levels when using the Biotite mineral solution combined with the Biotite Ceramic Filter System.

Jaime A. Young

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Lab Director