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ADYA CLARITY WITH FILTRATION SYSTEM CRYPTOSPORIDIUM PARVUM TEST REPORT

Report # 13-382 (Adya Clarity with filtration system)
Report Date: 12/02/2013
Customer Name: Adya, Inc.

EXECUTIVE SUMMARY

The Adya Clarity mineral solution with the Adya filtration system were tested for Cryptosporidium parvum oocyst reduction following the NSF Standard 53 section 7.3.2.1. The Adya filter system combined with the Adya Clarity solution reduced the Cryptosporidium parvum by 97.1%.

INTRODUCTION

Tap water adjusted and spiked with Cryptosporidium parvum oocyst was treated with Adya Clarity mineral solution for 24 hours then filtered through the Adya filtration system and tested using Standard Methods for the Examination of Water. The Adya filter system combined with the Adya Clarity solution reduced the Cryptosporidium parvum by 97.1%.

REAGENTS, MATERIALS, AND LAB EQUIPMENT

AmScope Microscope MD-600, Barnstead Lab-Line Incubator.
Cryptosporidium parvum oocyst.
Polyoxyethylene sorbitan mono-oleate.
Fluoroscein.
Sterile water, phosphate buffer.
Adya Filtration System.
Adya Clarity solution.

PROCEDURE

Flushed the filter system with approximately 1 gallon of sterile water. Prepared 2 liters of challenge water with Cryptosporidium parvum at 5 X 10^4 oocyst/L. Table 1 summarizes the Influent water properties. Added 4 mL of Adya Clarity and let it sit for 24 hours. Passed the 2 liters of influent water through the Adya filtration system. Collected the effluent water and analyzed the filtered water for Cryptosporidium parvum following the Standard Methods of Analysis of Water 21st Edition, method SM 9711-B. The results are summarized in Table 2 below.

RESULTS

Table 1
Influent Challenge Water Properties

Parameter	Influent Challenge Water	Target
pH	6.80	7.00 to 8.00
Temperature	18.5 °C	20 ± 2.5°C
TDS	450 mg/L	200 - 500 mg/L
Turbidity	0.58 NTU	<1 Nephelometric Turbidity Units
Cryptosporidium parvum	5.2 X 10^4 oocyst/L	5 X 10^4 oocyst/L

Table 2
Adya Clarity Filtration System Test Results

Micro-organism Tested	Influent Water Concentration	Adya Clarity Filtered Water Concentration	% Reduction
Cryptosporidium parvum	5.2 X 10^4 oocyst/L	1,500 oocyst/L	97.1

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