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EPA ID # NJ01298 NJ DEP ID # 03048 NY ELAP ID # 12044

PROPUR PROMAX FULL SPECTRUM FILTER MICRO-ORGANISMS TEST REPORT

Report # 17-3-Micro-Organisms ((Propur ProMax Full Spectrum Filter)
Report Date: 03/15/2017
Customer Name: Propur

EXECUTIVE SUMMARY

One hundred gallons of tap water was spiked with micro-organisms to have a final concentration of 10^7 Colony Forming Units/L; the spiked tap water was filtered through the filter element and tested; the Micro-Organisms in the tap water were reduced by 99.9999 % after 100 gallons.

INTRODUCTION

One hundred gallons of tap water was spiked with micro-organisms (bacteria and viruses) to have a final concentration of 10^7CFU/L (CFU = Colony Forming Units); the spiked tap water was filtered through the filter element and tested following the Standard Methods of Analysis of Water 21st Edition methods SM 9222-D (bacteria); method SM 9510-B (Virus); method SM 9711-B (Cryptosporidium parvum) the micro-organisms in the tap water were reduced by 99.9999% for up to 100 gallons.

REAGENTS, MATERIALS, AND LAB EQUIPMENT

Escherichia coli NSI Lab Solutions Catalog # 9001H, Lot # 052215.
Klebsiella pneumoniae NSI Lab Solutions Catalog # 8167, Lot # 092215.
Pseudomona aeruginosa NSI Solutions Catalog 10662, Lot 022316. Enterococcus faecalis NSI Solutions Catalog .
Rotavirus Zepto Metrix Corp. Catalog # Natrota-GP, Lot # 495671.-5
Polystyrene Microsphere 3 µm (Cryptosporidium parvum, Giardia lamblia) Polysciences, Inc. Catalog # 17143-5
Amscope EPI Fluorescence Microscope FM-320TA-3M. Barnstead Lab-Line Incubator.
Propur ProMax Full Spectrum Filter.

PROCEDURE

One hundred gallons of tap water was spiked with micro-organisms in a tank and mixed well; this solution was tested and adjusted to have a final concentration of 10^7 CFU/L; the influent water properties are summarized in Table 1 below. The solution was filtered through the In-line Filter using a 0.5 GPM electric pump at 20 minutes on/20 minutes off cycle, tested every 20 gallons following the Standard Methods of Analysis of Water 21st Edition methods SM 9222-D (bacteria); and method SM 9510-B (Virus), Polystyrene Microsphere method SM 9711-B (Cryptosporidium parvum). The results are summarized in Tables 2, 3, and 4 below.

RESULTS

Table 1
Influent Challenge Water Properties

Parameter	Influent Challenge Water	Target
pH	7.35	7.00 to 8.00
Temperature	20.0 °C	20 ± 2.5°C
TDS	480 mg/L	200 to 500 mg/L
Turbidity	0.90 NTU	<1 Nephelometric Turbidity Units

Table 2
Escherichia coli Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.9999%
Initial (0.1 gallons)	10^7/L	<10 CFU/L	99.9999	Passed
100 gallons	10^7/L	50 CFU/L	99.9999	Passed

Table 3
Klebsiella pneumoniae Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.9999%
Initial (0.1 gallons)	10^7/L	<10 CFU/L	99.9999	Passed
100 gallons	10^7/L	60 CFU/L	99.9999	Passed

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Table 4
Pseudomona aeruginosa Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.9999%
Initial (0.1 gallons)	10^7/L	<10 CFU/L	99.9999	Passed
100 gallons	10^7/L	50 CFU/L	99.9999	Passed

Table 5
Enterococcus faecalis Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.9999%
Initial (0.1 gallons)	10^7/L	<10 CFU/L	99.9999	Passed
100 gallons	10^7/L	60 CFU/L	99.9999	Passed

Table 6
Polyspheres (Cysts) Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.9999%
Initial (0.1 gallons)	10^7/L	<10 CFU/L	99.9999	Passed
100 gallons	10^7/L	80 CFU/L	99.9999	Passed

Table 7
Rotavirus Test Results

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	NSF % Reduction requirement ≥99.95%
Initial (0.1 gallons)	10^7/L	<10 PFU/L	99.9999	Passed
100 gallons	107/L	80 PFU/L	99.9999	Passed

CONCLUSION:
The Propur ProMax Full Spectrum Filter reduces the Micro-organisms concentration by 99.9999% for up to 100 gallons, tested following the NSF P-231.

CERTIFICATION OF RESULTS:
I certify in writing that all analyses, and reporting performed herein, comply with all requirements set forth in N.J.A.C. 7:9E and N.J.A.C. 7:18, and hereby certify that this laboratory is in compliance with all laboratory certification and quality control procedures and requirements as set forth in N.J.A.C. 7:18; the NYCRR Subpart 55-2 and the National Environmental Laboratory Accreditation Conference (NELAC) Institute Standards.

Disclaimer: The test results are only related to the filter sample tested.

Jaime A. Young
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Lab Director

The reduction of contaminants or other substances that may be present in your water supply may vary depending on its content. The contaminants or other substances reduced are not necessarily present in all users water. Some contaminants may be more easily filtered than others. Percentage of reduction will vary over the life of the filter based on the level of contaminant(s) found in your water supply, user rate and psi of your water source. Testing was performed under standard laboratory conditions. Actual performance may vary. Do not use with water that is microbiologically unsafe or of unknown water quality with adequate disinfection.