

ENVIROTEK LABORATORIES, INC.

33 Third Street, Bordentown, NJ 08505
PHONE 856-478-0010 www.enviroteklab.com EPA ID # NJ01298 NJ DEP ID # 03048

TEST RESULTS FOR ALEXPURE, LLC

Gravity Block Filter With Hybrid Shell NSF Standard 53, and NSF Standard 42 Chemical Reduction Tests Results

Report #15-125
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ENVIROTEK LABORATORIES, INC.

33 Third Street, Bordentown, NJ 08505
PHONE 856-478-0010 www.enviroteklab.com EPA ID # NJ01298 NJ DEP ID # 03048

GRAVITY BLOCK FILTER WATER TEST REPORT

Report # 15-125 (Gravity Block Filter With Hybrid Shell) Report Date: 10/24/2015
Customer Name: Alexapure, LLC.

Drinking Water Contaminant Tested	Influent Water Concentration in µg/L	Block Filter Element Effluent Concentration in µg/L	% Reduction
Volatile Organic Contaminants µg/L			
Dichlorodifluoromethane	80.1	<0.5	99.9+
Chloromethane	80.3	<0.5	99.9+
Vinylchloride	80.3	<0.5	99.9+
Bromomethane	80.4	<0.5	99.9+
Chloroethane	80.1	<0.5	99.9+
Trichlorofluoromethane	80.1	<0.5	99.9+
1,1-Dichloroethene	81.0	<0.5	99.9+
Methylene Chloride	80.2	<0.5	99.9+
trans-1,2-Dichloroethene	80.5	<0.5	99.9+
MTBE	80.5	<0.5	99.9+
1,1-Dichloroethane	80.2	<0.5	99.9+
cis-1,2-Dichloroethene	171.1	<0.5	99.9+

2,2-Dichloropropane	80.1	<0.5	99.9+
Bromochloromethane	81.0	<0.5	99.9+
Chloroform	81.1	<0.5	99.9+
Carbon Tetrachloride	80.0	<0.5	99.9+
1,1,1-Trichloroethane	81.3	<0.5	99.9+
1,1-Dichloropropene	81.0	<0.5	99.9+
Benzene	81.0	<0.5	99.9+
1,2-Dichloroethane	80.0	<0.5	99.9+
Trichloroethene	180.1	<0.5	99.9+
Dibromomethane	80.2	<0.5	99.9+
1,2-Dichloropropane	80.1	<0.5	99.9+
Bromodichloromethane	80.0	<0.5	99.9+
cis-1,3-Dichloropropene	50.1	<0.5	99.9+
Toluene	80.1	<0.5	99.9+
trans-1,3-Dichloropropene	81.2	<0.5	99.9+
Tetrachloroethene	80.5	<0.5	99.9+
1,1,2-Trichloroethane	150.8	<0.5	99.9+
Chlorodibromomethane	80.1	<0.5	99.9+
1,3-Dichloropropane	79.9	<0.5	99.9+
Ethylbenzene	82.2	<0.5	99.9+
Chlorobenzene	79.8	<0.5	99.9+
1,1,1,2-Tetrachloroethane	79.8	<0.5	99.9+
m-Xylene	70.0	<0.5	99.9+
o-Xylene	70.2	<0.5	99.9+
Styrene	80.1	<0.5	99.9+
Bromoform	80.4	<0.5	99.9+
Isopropylbenzene	80.2	<0.5	99.9+
n-Propylbenzene	80.2	<0.5	99.9+
Bromobenzene	80.0	<0.5	99.9+
1,1,2,2-Tetrachloroethane	81.0	<0.5	99.9+
1,3,5-Trimethylbenzene	80.1	<0.5	99.9+
2-Chlorotoluene	80.1	<0.5	99.9+
1,2,3-Trichloropropane	80.2	<0.5	99.9+
4-Chlorotoluene	80.3	<0.5	99.9+
tert-Butylbenzene	80.2	<0.5	99.9+
1,2,4-Trimethylbenzene	80.4	<0.5	99.9+
sec-Butylbenzene	80.1	<0.5	99.9+
4-Isopropyltoluene	80.2	<0.5	99.9+
1,3-Dichlorobenzene	80.2	<0.5	99.9+
1,4-Dichlorobenzene	40.1	<0.5	99.9+
n-Butylbenzene	80.0	<0.5	99.9+
1,2-Dichlorobenzene	80.3	<0.5	99.9+

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Drinking Water Contaminant Tested	Influent Water Concentration in µg/L	Block Filter Element Effluent Concentration in µg/L	% Reduction
Volatile Organic Contaminants µg/L			

Hexachlorobutadiene	44.1	<0.5	99.9+
1,2,4-Trichlorobenzene	160.1	<0.5	99.9+
Naphthalene	80.2	<0.5	99.9+
1,2,3-Trichlorobenzene	80.0	<0.5	99.9+
Heavy Metal Contaminants µg/L			
Aluminum	220	<2	99.9+
Antimony	6.2	<0.5	99.9+
Arsenic	310	<0.5	99.9+
Beryllium	50.2	<0.2	99.9+
Bismuth	50.2	0.7	97.4+
Cadmium	30.1	<0.2	99.9+
Chromium	302	4.9	98.7+
Copper	3050	29.1	99.0+
Iron	3030	24.2	99.2+
Lead	152	5.4	96.4+
Manganese	1020	<0.5	99.9+
Mercury	6.1	<0.1	99.9+
Nickel	102	<0.5	99.9+
Selenium	106	<0.5	99.9+
Zinc	102	18.4	82.0+
Pesticide Contaminants µg/L			
4,4'-DDD	50.1	<0.1	99.9+
4,4'-DDE	50.2	<0.1	99.9+
4,4'-DDT	50.1	<0.1	99.9+
Alachlor	40.1	<0.1	99.9+
Aldrin	50.1	<0.1	99.9+
Alpha-BHC	49.9	<0.1	99.9+
Ametryn	50.1	<0.1	99.9+
Atraton	51.0	<0.1	99.9+
Atrazine	9.9	<0.1	99.9+
Beta-BHC	49.7	<0.1	99.9+
Bromacil	51.1	<0.1	99.9+
Carbofuran	80.0	<0.1	99.9+
Chlordane	40.2	<0.1	99.9+
Chlorneb	51.0	<0.1	99.9+
Chlorobenzilate	49.9	<0.1	99.9+
Chlorothalonil	50.2	<0.1	99.9+
Chlorprophane	51.1	<0.1	99.9+
Chlorpyrifos	51.1	<0.1	99.9+
Cyanizene	51.2	<0.1	99.9+
Delta-BHC	50.8	<0.1	99.9+
Dichlorvos	50.1	<0.1	99.9+
Dieldrin	50.4	<0.1	99.9+
Diphenamid	51.1	<0.1	99.9+
Disulfoton	50.2	<0.1	99.9+
Endosulfan Sulfate	51.0	<0.1	99.9+
Endrin	6.1	<0.1	99.9+
Endrin Aldehyde	51.5	<0.1	99.9+
Endrin Ketone	51.0	<0.1	99.9+
Endosulfan I	49.5	<0.1	99.9+
Endosulfan II	50.1	<0.1	99.9+

Ethoprop	50.2	<0.1	99.9+
Fenamiphos	51.2	<0.1	99.9+
Fenarimol	50.4	<0.1	99.9+
Fluoridone	51.2	<0.1	99.9+
Gamma-BHC (Lindane)	2.1	<0.1	99.9+
Glyphosate	798	<0.1	99.9+
Heptachlor	80.0	<0.1	99.9+
Heptachlor Epoxide	4.0	<0.1	99.9+
Methoxychlor	122	<0.1	99.9+
Molinate	50.4	<0.1	99.9+
PCB's	10.4	<0.1	99.9+

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Drinking Water Contaminant Tested	Influent Water Concentration in µg/L	Block Filter Element Effluent Concentration in µg/L	% Reduction
Pesticide Contaminants µg/L			
Prometron	50.0	<0.1	99.9+
Simazine	12.1	<0.1	99.9+
Toxaphene	15.2	<0.1	99.9+
Semivolatile Contaminants µg/L			
Acenaphthylene	50.1	<0.5	99.9+
Anthracene	50.1	<0.5	99.9+
Benzo[a]anthracene	51.5	<0.5	99.9+
Benzo[b]fluoranthene	50.2	<0.5	99.9+
Benzo[k]fluoranthene	50.1	<0.5	99.9+
Benzo[a]pyrene	51.8	<0.5	99.9+
Benzo[g,h,i]perylene	50.1	<0.5	99.9+
Butylbenzylphthalate	50.2	<0.5	99.9+
Carboxin	50.1	<0.5	99.9+
2-Chlorobiphenyl	50.2	<0.5	99.9+
Chrysene	50.4	<0.5	99.9+
Cycloate	49.9	<0.5	99.9+
Dacthal (DCPA)	49.2	<0.5	99.9+
Diazinon	50.1	<0.5	99.9+
Dibenz[a,h]anthracene	50.2	<0.5	99.9+
Di-n-Butylphthalate	51.4	<0.5	99.9+
2,3-Dichlorobiphenyl	52.2	<0.5	99.9+
Diethylphthalate	50.1	<0.5	99.9+
Di(2-ethylhexyl)adipate	51.0	<0.5	99.9+
Di(2-ethylhexyl)phthalate	50.0	<0.5	99.9+
Dimethylphthalate	51.4	<0.5	99.9+
EPTC	52.1	<0.5	99.9+
Fluorene	51.0	<0.5	99.9+
2,2', 3,3', 4,4', 6-Heptachlorobiphenyl	50.1	<0.5	99.9+
Hexachlorobenzene	49.0	<0.5	99.9+
2,2', 4,4', 5,6'-Hexachlorobiphenyl	51.1	<0.5	99.9+

Hexachlorocyclohexane, alpha	50.2	<0.5	99.9+
Hexachlorocyclohexane, beta	50.1	<0.5	99.9+
Hexachlorocyclohexane, delta	50.2	<0.5	99.9+
Hexachlorocyclopentadiene	51.7	<0.5	99.9+
Hexazinone	51.1	<0.5	99.9+
Indeno[1,2,3,c,d]pyrene	50.0	<0.5	99.9+
Isophorone	50.0	<0.5	99.9+
Merphos	50.1	<0.5	99.9+
Methyl Paraoxon	50.4	<0.5	99.9+
Norflurazon	50.4	<0.5	99.9+
2,2', 3,3', 4,5', 6,6'-Octachlorobiphenyl	51.2	<0.5	99.9+
Pebulate	50.8	<0.5	99.9+
2,2', 3', 4,6'-Pentachlorobiphenyl	49.8	<0.5	99.9+
Pentachlorophenol	51.2	<0.5	99.9+
Phenanthrene	50.1	<0.5	99.9+
cis-Permethrin	50.2	<0.5	99.9+
trans-Permethrin	49.0	<0.5	99.9+
Prometon	51.0	<0.5	99.9+
Prometryn	51.0	<0.5	99.9+
Pronamide	49.0	<0.5	99.9+
Propachlor	50.1	<0.5	99.9+
Propazine	50.9	<0.5	99.9+
Triademefon	49.3	<0.5	99.9+
2,4,5-Trichlorobiphenyl	49.0	<0.5	99.9+
Tricyclazole	49.4	<0.5	99.9+
Trifluralin	50.2	<0.5	99.9+
Vernolate	50.2	<0.5	99.9+
Disinfectant and Inorganic Non-Metallic Contaminants in mg/L			
Chloramines	3.1	<0.1	99.9+
Free Chlorine	2.1	<0.1	99.9+
Chloride	250	0.1	99.9+
Sodium Fluoride	4.2	0.1	97.6+

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Drinking Water Contaminant Tested	Influent Water Concentration in µg/L	Block Filter Element Effluent Concentration in µg/L	% Reduction
Disinfectant and Inorganic Non-Metallic Contaminants in mg/L			
Hexafluorosilicate	4.2	0.2	95.2+
Fluorosilic Acid	4.1	0.2	95.1+
Nitrates	27.2	0.5	98.2+
Nitrites	2.9	<0.1	99.9+
Herbicide Contaminants in µg/L			
Dalapon	151	<0.1	99.9+
Dicamba	150	<0.1	99.9+
Dinosep	20.1	<0.1	99.9+
Dichlorporp	150	<0.1	99.9+

2,4-D	210	<0.1	99.9+
Pentachlorophenol	10.2	<0.1	99.9+
Picoram	151	<0.1	99.9+
2,4,5-T	152	<0.1	99.9+
2,4,5-TP (Silvex)	151	<0.1	99.9+
2,4-DB	150	<0.1	99.9+
Bentazom	150	<0.1	99.9+
DCPA	150	<0.1	99.9+
Quinclorac	151	<0.1	99.9+
Aciflurfen	149	<0.1	99.9+
Pharmaceutical Drugs Contaminants in µg/L			
Acetaminofen	20.1	<0.1	99.9+
Caffeine	19.9	<0.1	99.9+
Carbamazepine	20.0	<0.1	99.9+
Ciprofloxacin HCl	20.2	<0.1	99.9+
Erythromycin USP	20.2	<0.1	99.9+
Sulfamethoxazole	20.1	<0.1	99.9+
Trimethoprim	21.0	<0.1	99.9+
Bisphenol A	20.4	<0.1	99.9+
Diclofenac Sodium	19.9	<0.1	99.9+
4-para-Nonylphenol	20.0	<0.1	99.9+
4-tert-Octylphenol	20.2	<0.1	99.9+
Primidone	20.4	<0.1	99.9+
Progesterone	20.3	<0.1	99.9+
Gemfibrozil	20.1	<0.1	99.9+
Ibuprofen	20.2	<0.1	99.9+
Naproxen Sodium	20.2	<0.1	99.9+
Triclosan	20.4	<0.1	99.9+

Jaime Young

Jaime Young Lab Director

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ENVIROTEK LABORATORIES, INC.

33 Third Street, Bordentown, NJ 08505

PHONE 856-478-0010 www.enviroteklab.com EPA ID # NJ01298 NJ DEP ID # 03048

ALEXAPURE FILTER MICROBIOLOGICAL P231 TEST REPORT

Report # 15-288 (Alexapure Filter Element) Report Date: 10/27/2015

Customer Name: Alexapure, LLC

EXECUTIVE SUMMARY

The Alexapure Filter Element was tested for Microbiological Reduction following the NSF protocol P231 for a total volume of 200 gallons. The Alexapure Filter element qualifies as a microbiological water purifier set forth by the NSF protocol P231 for 200 gallons.

INTRODUCTION

The Alexapure Filter Element was tested for Microbiological Reduction following the NSF protocol P231 for a total volume of 200 gallons. The filter element was challenged with tap water adjusted and spiked with Bacteria (Klebsiella); Virus (Rotavirus); and Polystyrene Microspheres (Cryptosporidium, Giardia lamblia) and tested using Standard Methods for the Examination of Water. The Alexapure filter element qualifies as a microbiological water purifier set forth by the NSF protocol P231 for 200 gallons.

REAGENTS, MATERIALS, AND LAB EQUIPMENT

Barnstead Lab-Line Incubator
 Klebsiella pneumoniae (Bacteria)
 Rotavirus (Virus)
 Polystyrene Microsphere (Giardia lamblia, Cryptosporidium).
 Sterile water, Phosphate buffer, fluorescein isothiocyanate dye (FITC), 0.45 µm membrane filters. Amscope EPI Fluorescence Microscope FM-320TA-3M.
 Alexapure Filter Element.

PROCEDURE

Flushed the filter element with approximately 1 gallon of sterile water. Prepared 20 gallons of general test water daily for 6 consecutive days with Klebsiella at a concentration of 10⁸/L, Rotavirus at 10⁷/L, and microspheres at 10⁶/L. Two days of stagnation. Prepared 20 gallons of challenge water for the following 4 days without adding the micro-organisms and two additional days of stagnation. Table 1 and 2 summarize the general test and challenge water properties. Passed 20 gallons of the general test water through the filter element per day, every day for the first 6 days. Collected the effluent water and analyzed the filtered water for micro-organisms following the Standard Methods of Analysis of Water 21st Edition, methods SM 9222-D (bacteria); SM 9510-B (virus); SM9711-B (cyst). Left the filter system in stagnation for the following 2 days, then added 20 gallons per day of the challenge water and analyzed the filtered water for micro-organisms following the Standard Methods of Analysis of Water 21st Edition, methods SM 9222-D (bacteria); SM 9510-B (virus); SM9711-B (cyst). The results are summarized in Table 3, 4, and 5 below.

RESULTS

**Table 1
 General Test Water Properties**

Parameter	General Test Water	Target
pH	7.10 to 7.55	6.5 to 8.5
Temperature	20.0 °C to 22.5 °C	20 ± 5°C
TDS	300 to 400 mg/L	50 - 500 mg/L
Turbidity	3.5 to 4.5 NTU	3 to 5 Nephelometric Turbidity Units
TOC	2.5 to 3.2 mg/L	2 to 5 mg/L

Table 2 Challenge Water Properties

Parameter	Influent Challenge Water	Target
pH	8.60 to 9.30	8.5 to 9.5
Temperature	20.0 °C to 22.5 °C	20 ± 5°C
TDS	1300 to 1650 mg/L	1250 - 1700 mg/L
Turbidity	30 to 50 NTU	30 to 50 Nephelometric Turbidity Units
TOC	10 to 15 mg/L	10 to 15 mg/L

**Table 3
Klebsiella pneumoniae (Bacteria) Test Results**

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	Criteria: Minimum % Reduction 99.9999
Day 1 (20 gallons)	10 ⁸ /L	<10 CFU/L	99.9999	Passed
Day 2 (40 gallons)	Not tested	Not tested	N/A	N/A
Day 3 (60 gallons)	10 ⁸ /L	<10 CFU/L	99.9999	Passed
Day 4 (80 gallons)	Not tested	Not tested	N/A	N/A
Day 5 100 gallons)	Not tested	Not tested	N/A	N/A
Day 6 (120 gallons)	10 ⁸ /L	<10 CFU/L	99.9999	Passed
Day 7 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 8 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 9 (140 gallons)	10 ⁷ /L	<10 CFU/L	99.9999	Passed
Day 10 (160 gallons)	10 ⁷ /L	<10 CFU/L	99.9999	Passed
Day 11 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 12 ((stagnation day)	Not tested	Not tested	N/A	N/A
Day 13 (180 gallons)	10 ⁶ /L	<10 CFU/L	99.9999	Passed
Day 14 (200 gallons)	10 ⁵ /L	<10 CFU/L	99.9999	Passed

**Table 4
Rotavirus (Virus) Test Results**

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	Criteria: Minimum % Reduction 99.99
Day 1 (20 gallons)	10 ⁷ /L	<10 PFU/L	99.99	Passed
Day 2 (40 gallons)	Not tested	Not tested	N/A	N/A
Day 3 (60 gallons)	10 ⁷ /L	<10 PFU/L	99.99	Passed
Day 4 (80 gallons)	Not tested	Not tested	N/A	N/A
Day 5 100 gallons)	Not tested	Not tested	N/A	N/A
Day 6 (120 gallons)	10 ⁷ /L	<10 PFU/L	99.99	Passed
Day 7 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 8 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 9 (140 gallons)	10 ⁷ /L	<10 PFU/L	99.99	Passed
Day 10 (160 gallons)	10 ⁶ /L	<10 PFU/L	99.99	Passed
Day 11 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 12 ((stagnation day)	Not tested	Not tested	N/A	N/A
Day 13 (180 gallons)	10 ⁶ /L	<10 PFU/L	99.99	Passed
Day 14 (200 gallons)	10 ⁵ /L	<10 PFU/L	99.99	Passed

**Table 5
Microspheres (Cryptosporidium, Giardia lamblia) Test Results**

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	Criteria: Minimum % Reduction 99.9
Day 1 (20 gallons)	10 ⁶ /L	<10 oocysts/L	99.9	Passed
Day 2 (40 gallons)	Not tested	Not tested	N/A	N/A
Day 3 (60 gallons)	10 ⁶ /L	<10 oocysts/L	99.9	Passed
Day 4 (80 gallons)	Not tested	Not tested	N/A	N/A
Day 5 100 gallons)	Not tested	Not tested	N/A	N/A
Day 6 (120 gallons)	10 ⁶ /L	<10 oocysts/L	99.9	Passed
Day 7 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 8 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 9 (140 gallons)	10 ⁶ /L	<10 oocysts/L	99.9	Passed

Day 10 (160 gallons)	10 ⁵ /L	<10 oocysts/L	99.9	Passed
Day 11 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 12 (stagnation day)	Not tested	Not tested	N/A	N/A
Day 13 (180 gallons)	10 ⁴ /L	<10 oocysts/L	99.9	Passed
Day 14 (200 gallons)	10 ⁴ /L	<10 oocysts/L	99.9	Passed

CONCLUSION:

The Alexapure Filter Element meets the requirements for the Microbiological Reduction NSF Protocol P231 for 200 gallons. Passed.

Jaime A. Young

Jaime A. Young Lab Director

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ENVIROTEK LABORATORIES, INC.

33 Third Street, Bordentown, NJ 08505

PHONE 856-583-0445 www.enviroteklab.com EPA ID # NJ01298 NJ DEP ID # 03048

MICROBIOLOGICAL TEST REPORT

Report # 15-287 (Alexapure Gravity Block Filter with Hybrid Shell) Report Date: 10/13/2015

Customer Name: Alexapure, LLC.

EXECUTIVE SUMMARY

One Filter Element was tested for Microbiological Reduction for a total volume of 10 gallons. The filter element qualifies as a microbiological water purifier.

INTRODUCTION

One Filter Element was tested for Microbiological Reduction for a total volume of 10 gallons. The filter element was challenged with tap water adjusted and spiked with e. Coli Bacteria and tested using Standard Methods for the Examination of Water. The filter element qualifies as a microbiological water purifier.

REAGENTS, MATERIALS, AND LAB EQUIPMENT

Barnstead Lab-Line Incubator

e. Coli Bacteria NSI Catalog # 9001H Lot 052215. Sterile water, Phosphate buffer

Alexapure Gravity Block Filter Element.

PROCEDURE

Flushed the filter element with approximately 1 gallon of sterile water. Prepared 10 gallons of challenge influent water with e. Coli Bacteria at a concentration of 10⁸/L. Table 1 summarizes the Influent water properties. Passed 10 gallons of Influent water through the filter element. Collected the effluent water and analyzed the filtered water every 5 gallons for micro-organisms following the Standard Methods of Analysis of Water 21st Edition, methods SM 9222-D (bacteria); The results are summarized in Table 2 below.

RESULTS

**Table 1
Influent Challenge Water Properties**

Parameter	Influent Challenge Water	Target
pH	7.55	6.5 to 8.5

Temperature	21.5 °C	20 ± 5°C
TDS	420 mg/L	50 - 500 mg/L
Turbidity	4.1 NTU	0.1 to 5 Nephelometric Turbidity Units
TOC	4.0 mg/L	0.1 to 5.0 mg/L

**Table 2
Coliform Bacteria Test Results**

Accumulated volume	Influent Water Concentration	Filtered Water Concentration	% Reduction	Minimum % Reduction 99.9999
5 gallons	10 ⁸ CFU/L	0 CFU/L	100	Passed
10 gallons	10 ⁸ CFU/L	0 CFU/L	100	Passed

CONCLUSION:

The Gravity Block Filter Element meets the requirements for the Microbiological Reduction up to 10 gallons.

Jaime A. Young

Jaime A. Young Lab Director

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GROSS BETA REDUCTION TEST REPORT

Report # 15-353-Gross Beta Reduction Test (Gravity Block Filter with Hybrid Shell). Customer Name: Alexapure, LLC.

Report Date: 12/23/2015.

EXECUTIVE SUMMARY

Twenty gallons of tap water was spiked with Gross Beta Standard Solution to have a final concentration of 100 ± 25 pCi/L, the spiked tap water was filtered through the filter element and tested; the Gross Beta Standard Solution in the tap water was reduced by at least 97.8%.

INTRODUCTION

Twenty gallons of tap water was spiked with Gross Beta Standard Solution to have a final concentration of 100 ± 25 pCi/L of Gross Beta, the spiked tap water was filtered through the filter element, the spiked solution and the filtered solution were tested following the EPA method 900.0; the Gross Beta Standard Solution in the tap water was reduced by more than 97.8%.

REAGENTS AND LAB EQUIPMENT

Gravity Block Filter with Hybrid Shell.

Gross Beta Standard Solution CsCl 10 µCi/L Eckert & Ziegler Isotope Products Catalog # 7137. Gamma Products Alpha/Beta counter G5000W Counting System.

Type A glassware necessary to perform the EPA 900.0 method for drinking water analysis.

PROCEDURE

Twenty gallons of tap water was spiked with Gross Beta Standard Solution in a Tank and mixed well; this solution was tested and adjusted to have a final concentration of 100 ± 25 pCi/L of Gross Beta, the results are summarized in Table 1 below. The solution was filtered and tested following the EPA method 900.0. The results are summarized in 2 below.

RESULTS

Table 1
Spiked Tap Water Properties

Parameter	Influent Water Properties	Target
pH	7.55	7.00 to 8.00
TDS	460 mg/L	200 to 500 mg/L
Temperature	20.5 \diamond C	20 \diamond 2.5 \diamond C
Turbidity	0.70 NTU	< 1 Nephelometric Turbidity Units
Gross Beta	114.1 pCi/L	100 ± 25 pCi/L

Table 2
Gross Beta Filtered Water Results

Gravity Block Filter Effluent Water Result	% Reduction
2.477 pCi/L	97.8 %

CONCLUSION

The Gravity Block Filter reduced the Gross Beta concentration in the tap water by at least 97.8 %. The EPA limit for Gross Beta is 15 pCi/L; the Gravity Block Filter meets the EPA requirements for drinking water.

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URANIUM REDUCTION TEST REPORT

Report # 15-353-Uranium Reduction Test (Gravity Block Filter with Hybrid Shell). Customer Name: Alexapure, LLC.

Report Date: 12/23/2015.

EXECUTIVE SUMMARY

20 gallons of tap water was spiked with Uranium to have a final concentration of $100 \mu\text{g/L} \pm 30 \mu\text{g/L}$ of Uranium, the spiked tap water was filtered through the filter element and tested; the Uranium in the tap water was reduced by more than 99.9%.

INTRODUCTION

Twenty gallons of tap water was spiked with Uranium to have a final concentration of $100 \mu\text{g/L} \pm 30\mu\text{g/L}$ of Uranium, the spiked tap water was filtered through the filter element, the spiked solution and the filtered solution were tested following the EPA method 200.8; the Uranium in the tap water was reduced by more than 99.9%.

REAGENTS AND LAB EQUIPMENT

Gravity Block Filter with Hybrid Shell.

Uranium Standard Solution 10.00 mg/L, Inorganic Ventures Catalog # IV-ICPMS-71A. Perkin Elmer ICP/MS Elan DRCe 6100

Type A glassware necessary to perform the EPA 200.8 method for drinking water analysis.

PROCEDURE

Twenty gallons of tap water was spiked with Uranium in a Tank and mixed well; this solution was tested and adjusted to have a final concentration of $100 \mu\text{g/L} \pm 30\mu\text{g/L}$ of Uranium, the results are summarized in Table 1 below. The solution was filtered and tested following the EPA method 200.8 The results are summarized in 2 below.

RESULTS

**Table 1
Spiked Tap Water Properties**

Parameter	Influent Water Properties	Target
pH	7.50	7.00 to 8.00
TDS	400 mg/L	200 to 500 mg/L
Temperature	20.5 \diamond C	20 \diamond 2.5 \diamond C
Turbidity	0.40 NTU	< 1 Nephelometric Turbidity Units
Uranium	129 $\mu\text{g/L}$	$100.0 \pm 30 \mu\text{g/L}$

**Table 2
Uranium Filtered Water Results**

Gravity Block Filter Effluent Water Result	% Reduction
<2 $\mu\text{g/L}$	+99.9 %

CONCLUSION

The Gravity Block Filter reduced the Uranium concentration in the tap water by more than 99.9%. The EPA limit for Uranium is 30 $\mu\text{g/L}$; the Gravity Block Filter meets the EPA requirements for drinking water.

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GROSS ALPHA REDUCTION TEST REPORT

Report # 15-353-Gross Alpha Reduction Test (Gravity Block Filter with Hybrid Shell). Customer Name: Alexapure, LLC.

Report Date: 12/23/2015.

EXECUTIVE SUMMARY

Twenty gallons of tap water was spiked with Gross Alpha Standard Solution to have a final concentration of 100 ± 25 pCi/L, the spiked tap water was filtered through the filter element and tested; the Gross Alpha Standard Solution in the tap water was reduced by at least 96.0%.

INTRODUCTION

Twenty gallons of tap water was spiked with Gross Alpha Standard Solution to have a final concentration of 100 ± 25 pCi/L of Gross Alpha, the spiked tap water was filtered through the filter element, the spiked solution and the filtered solution were tested following the EPA method 900.0; the Gross Alpha Standard Solution in the tap water was reduced by more than 96.0%.

REAGENTS AND LAB EQUIPMENT

Gravity Block Filter with Hybrid Shell.

Gross Alpha Standard Solution PoCl_4 0.1 $\mu\text{Ci/L}$ Eckert & Ziegler Isotope Products Catalog # 7310. Gamma Products Alpha/Beta counter G5000W Counting System.

Type A glassware necessary to perform the EPA 900.0 method for drinking water analysis.

PROCEDURE

Twenty gallons of tap water was spiked with Gross Alpha Standard Solution in a Tank and mixed well; this solution was tested and adjusted to have a final concentration of 100 ± 25 pCi/L of Gross Alpha, the results are summarized in Table 1 below. The solution was filtered and tested following the EPA method 900.0. The results are summarized in 2 below.

RESULTS

Table 1
Spiked Tap Water Properties

Parameter	Influent Water Properties	Target
pH	7.45	7.00 to 8.00
TDS	450 mg/L	200 to 500 mg/L
Temperature	20.5 \diamond C	20 \diamond 2.5 \diamond C
Turbidity	0.60 NTU	< 1 Nephelometric Turbidity Units
Gross Alpha	100.3 pCi/L	100 ± 25 pCi/L

Table 2
Gross Alpha Filtered Water Results

Gravity Block Filter Effluent Water Result	% Reduction
4.054 pCi/L	96.0 %

CONCLUSION

The Gravity Block Filter reduced the Gross Alpha concentration in the tap water by at least 96.0 %. The EPA limit for Gross Alpha is 15 pCi/L; the Gravity Block Filter meets the EPA requirements for drinking water.

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