

Report # 13-71-02A Report Date: 03/13/13 Date Sampled: 03/03/13 Biotite Treatment Only (no filtration), adding 1 mL Biotite per 1000mL of water

Test Parameter	Water Sample	Standard Exceeded (Yes/No)	Date of Analysis	Analytical Method	EPA Maximum Contaminant Level (MCL)
Aluminum	1200 µg/L	Yes	3/9/13	EPA 200.9	200 µg/L
Antimony	<0.5 µg/L	No	3/9/13	EPA 200.9	6 µg/L
Arsenic	<0.5 µg/L	No	3/9/13	EPA 200.9	10 µg/L
Beryllium	<0.5 µg/L	No	3/9/13	EPA 200.9	4 µg/L
Bismuth	<0.5 µg/L	No	3/9/13	EPA 200.9	Not specified (µg/L)
Cadmium	<0.2 µg/L	No	3/9/13	EPA 200.9	5 µg/L
Chromium	<0.5 µg/L	No	3/9/13	EPA 200.9	100 µg/L
Copper	29.7 µg/L	No	3/9/13	EPA 200.9	1300 µg/L
Iron	1800µg/L	Yes	3/9/13	EPA 200.9	300 µg/L
Lead	<0.5 µg/L	No	3/9/13	EPA 200.9	15 µg/L
Manganese	18.7 µg/L	No	3/9/13	EPA 200.9	50 µg/L
Nickel	7.4 Mg/L	No	3/9/13	EPA 200.9	Not specified (µg/L)
Selenium	<0.5 µg/L	No	3/9/13	EPA 200.9	50 µg/L
Silver	<0.5 µg/L	No	3/9/13	EPA 200.9	100 µg/L
Thallium	<0.5 µg/L	No	3/9/13	EPA 200.9	2 µg/L
Zinc	52.7 µg/L	No	3/9/13	EPA 200.9	5000 µg/L
Mercury	<0.5 µg/L	No	3/9/13	EPA 200.9	2 µg/L
Inorganic Contaminants/Physical Properties (in mg/L)					
Alkalinity	30	N/A	3/4/13	SM 2320 B	Recommended 100-200 (mg/L)
Bromine	<0.1	No	3/4/13	Hach 8015	Not specified (µg/L)
Chloride	5.9	No	3/4/13	SM 4500-Cl B	250 mg/L
Color	45	Yes	3/4/13	SM 2120 B	15 (Color Units)
Conductivity	740	No	3/4/13	SM 2510 B	Not specified (µs/cm)
Calcium Hardness	100	No	3/4/13	EPA 215.2	Recommended 50-100 (mg/L)
Magnesium Hardness	150	N/A	3/4/13	EPA 3500 Mg B	Recommended 50-100 (mg/L)
Total Hardness	250	N/A	3/4/13	SM 2340 C	Recommended 100-200 (mg/L)
Free Chlorine	0.1	N/A	3/4/13	SM 4500-Cl G	4 mg/L
Total Chlorine	0.1	No	3/4/13	SM 4500-Cl G	4 mg/L
Fluoride	0.1	No	3/4/13	EPA 340.2	4 mg/L
Nitrates	<0.5	No	3/4/13	SM 4500 NO3 D	10 mg/L
pH	5.1	Yes	3/4/13	EPA 150.1	6.5-8.5
Hydrogen Sulfide	<0.5	No	3/4/13	SM 4500-S	Not specified (mg/L as S)
Sulfates	190	No	3/4/13	EPA 375.4	250 mg/L
Total Dissolved Solids	377	No	3/4/13	EPA 160.3	500 mg/L (as NaCl)
Turbidity	19.6	Yes	3/4/13	EPA 180.1	<1 NTU
Volatile Organic Compounds (VOCs in µg/L)					
Acetone	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Acrylonitrile	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Allyl Chloride	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Benzene	<0.5 µg/L	No	3/10/13	EPA 524.2	1 µg/L
Bromobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Bromochloromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Bromodichloromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Bromoform	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Bromomethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
2-Butanone	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
n-Butylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
sec-Butylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Carbon disulfide	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Carbon tetrachloride	<0.5 µg/L	No	3/10/13	EPA 524.2	2 µg/L
Chloroacetonitrile	<0.5 µg/L	No	3/10/13	EPA 524.2	100 µg/L
Chlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	50 µg/L
1-Chlorobutane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Chloroform	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Chloromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
2-Chlorotoluene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
4-Chlorotoluene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Dibromochloromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2-Dibromo-3-chloropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2-Dibromoethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Dibromoethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2-Dichlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	600 µg/L
1,3-Dichlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	600 µg/L
1,4-Dichlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	75 µg/L
trans-1,4-Dichloro-2-butene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Dichlorodifluoromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,1-Dichloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	50 µg/L
1,2-Dichloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	2 µg/L
1,1-Dichloroethene	<0.5 µg/L	No	3/10/13	EPA 524.2	2 µg/L
cis-1,2-Dichloroethene	<0.5 µg/L	No	3/10/13	EPA 524.2	70 µg/L
trans-1,2-Dichloroethene	<0.5 µg/L	No	3/10/13	EPA 524.2	100 µg/L
1,2-Dichloropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
1,3-Dichloropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
2,2-Dichloropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
1,1-Dichloropropene	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
1,1-Dichloropropanone	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
cis-1,3-Dichloropropene	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
trans-1,3-Dichloropropene	<0.5 µg/L	No	3/10/13	EPA 524.2	5 µg/L
Diethyl ether	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Ethylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	700 µg/L
Ethyl Methacrylate	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Hexachlorobutadiene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Hexachloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
2-Hexanone	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Isopropylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
4-Isopropyltoluene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Methacrylonitrile	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Methacrylate	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Methylene Chloride	<0.5 µg/L	No	3/10/13	EPA 524.2	3 µg/L
Methyl iodide	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Methylmethacrylate	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
4-Methyl-2-pentanone	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
4-Methyl-t-butyl ether	<0.5 µg/L	No	3/10/13	EPA 524.2	70 µg/L
Naphthalene	<0.5 µg/L	No	3/10/13	EPA 524.2	300 µg/L
Nitrobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
2-Nitropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Pentachloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Propionitrile	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
n-Propylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Styrene	<0.5 µg/L	No	3/10/13	EPA 524.2	100 µg/L
1,1,1,2-Tetrachloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,1,2,2-Tetrachloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	1 µg/L
Tetrachloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	1 µg/L
Tetrahydrofuran	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Toluene	<0.5 µg/L	No	3/10/13	EPA 524.2	1000 µg/L
1,2,3-Trichlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2,4-Trichlorobenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	9 µg/L
1,1,1-Trichloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	30 µg/L
1,1,2-Trichloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	3 µg/L
Trichloroethane	<0.5 µg/L	No	3/10/13	EPA 524.2	1 µg/L
Trichlorofluoromethane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2,3-Trichloropropane	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,2,4-Trimethylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
1,3,5-Trimethylbenzene	<0.5 µg/L	No	3/10/13	EPA 524.2	Not specified
Vinyl chloride	<0.5 µg/L	No	3/10/13	EPA 524.2	2 µg/L
Xylenes	<0.5 µg/L	No	3/10/13	EPA 524.2	1000 µg/L
TTHMs	<0.5 µg/L	No	3/10/13	EPA 524.2	80 µg/L