

**Water Treatment Plant Evaluation
Using Microscopic Particulate Analysis (MPA)
(All limitations of analysis apply)**

Date:	6/2/2008	
Raw Water:	Stream or River	
Treatment Plant:	Meadow Mountain Water/Plant	
PWSID #:	CO0207504	
Centrifugate	Raw Water	Finished Water
mL/100 L	0.392	<0.001
NTU	unrec.	unrec.
Microorganisms	Raw Water (numbers per 100 L)	Finished Water (numbers per 100 L)
<i>Cryptosporidium total IFA count</i>	NR	NR
<i>Giardia total IFA count</i>	NR	NR
Nondiatomaceous Algae	90,000	1,000
Diatoms	600,000	2,000
Plant Debris	ND	ND
Rotifers	ND	0.5
Nematodes	ND	1
Pollen	10,000	6
Ameba	8,000	1
Ciliates	800	1
Colorless Flagellates	ND	200
Crustaceans	ND	ND
Other Arthropods	ND	ND
Others	ND	ND
Total:	708,800	3,209.5
Water Treatment Plant Evaluation	Percent Reduction*	Log Reduction
Centrifugate Removal:	>99.75%	>2.6
Microorganism Removal:	99.45%	2.3
None Detected (ND), Not Requested (NR)		
See enclosed reports		
*Values are extended beyond significant numbers for computation.		
Comments:		

ANALYSIS FOR WATERBORNE PARTICULATES

CH Diagnostic and Consulting Service, Inc.
512 5th Street, Berthoud, CO 80513
P: (970) 532-2078 F: (970) 532-3358

Invoice 20080429

Customer 20011350
Meadow Mountain Water
PO Box 394
Allenspark, CO 80510
PWSID# CO0207504

Laboratory Information

Hand Delivery: 6/2/2008; 0745 Hrs; 5.8°C; Wound
Results submitted by:

T. B. Y. S. P. C. S. J. P. S.

Sample Identification: Plant, Raw water

Sample Information: SOURCE: Stream or River: Unchlorinated, 41°F

Sample Date & Time: 5/31/2008 02:00 PM — 5/31/2008 04:00 PM

Sampler: unrec.

Amount: 145.7225 L (38.5 gal)

Filter Color: Tan

Filter Type: Polypropylene wound cartridge

Date/Time Eluted: 6/4/2008 11:07 AM

Centrifugate: 0.392 mL/100 L

RESULTS OF MICROSCOPIC PARTICULATE ANALYSIS

Amount of sample assayed: 0.255 L

Amorphous Debris	clay (1-2 µm), silt (2-50 µm), sand (50-2000 µm), inorganic precipitate, aggregates
Algae	90,000/100 L, predominantly Chlorophytes, Chlamydomonas, Ulothrix, some Euglenophytes, Euglena
Diatoms	600,000/100 L, predominantly Pennales, Diatoma, Achnanthes, Synedra, Navicula, Gomphonema, Cocconeis
Plant debris	ND
Rotifers	ND
Nematodes	ND
Pollen (pine)	10,000/100 L
Ameba	8,000/100 L, test
Ciliates	800/100 L
Colorless Flagellates	ND
Crustaceans	ND
Other Arthropods	ND
Other	ND

This sample was analyzed for particulates following the procedure outlined in: Microscopic Particulate Analysis (MPA) for Filtration Plant Optimization, 1996 USEPA, Region 10, EPA 910-R-96-001. Particle free water used as wash water; organisms counted by natural unit count in a Palmer Maloney Counting Chamber, Section 11.1.1 omitted. All limitations stated in the method apply. If HV capsule or foam filter was received, method was modified by filtering sample through a Pall Envirochek™ HV capsule or IDEXX Filta-Max™ filter at the sample site. If Giardia and Cryptosporidium Analysis was also performed, then particulate extraction was modified.

ANALYSIS FOR WATERBORNE PARTICULATES

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P: (970) 532-2078 F: (970) 532-3358

Invoice 20080429

Customer 20011350
Meadow Mountain Water
PO Box 394
Allenspark, CO 80510
PWSID# CO0207504

Laboratory Information

Hand Delivery: 6/2/2008; 0745 Hrs; 5.4°C; Wound
Results submitted by:

Theresa Weidert
Theresa

Sample Identification: Plant, Finished water

Sample Information: Unchlorinated; 41°F, DISINFECTION: Post-chlorination

Sample Date & Time: 5/31/2008 02:00 PM → 6/1/2008 03:00 PM

Sampler: unrec.

Amount: 1021.95 L (270 gal)

Filter Color: White

Filter Type: Polypropylene wound cartridge

Date/Time Eluted: 6/4/2008 10:30 AM

Centrifugate: <0.001 mL/100 L

RESULTS OF MICROSCOPIC PARTICULATE ANALYSIS

Amount of sample assayed: 204.4 L

Amorphous Debris	clay (1-2 µm), silt (2-50 µm), detritus, inorganic precipitate, aggregates
Algae	1,000/100 L, predominantly Chlorophytes, Chlamydomonas, some Euglenophytes, Euglena
Diatoms	2,000/100 L, predominantly Pennales, Navicula, Synedra, Achnanthes
Plant debris	ND
Rotifers	5/100 L
Nematodes	1/100 L
Pollen (pine)	6/100 L
Ameba	1/100 L
Ciliates	1/100 L
Colorless Flagellates	200/100 L
Crustaceans	ND
Other Arthropods	ND
Other	ND

This sample was analyzed for particulates following the procedure outlined in: Microscopic Particulate Analysis (MPA) for Filtration Plant Optimization, 1996, USEPA, Region 10, EPA 910-R-96-001. Particle free water used as wash water; organisms counted by natural unit count in a Palmer Maloney Counting Chamber, Section 11.1.1 omitted. All limitations stated in the method apply. If HV capsule or foam filter was received, method was modified by filtering sample through a Pall Envirochek™ HV capsule or IDEXX Fila-Max™ filter at the sample site. If Giardia and Cryptosporidium Analysis was also performed, then particulate extraction was modified.