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Model: HMP

NSF/ANSI 42 – 2018 version: Drinking Water Treatment Units, Aesthetic Effects, Section 4

Analyte	CAS Registry Number	Reporting Limit (RL)	Corrected Sample Results[1]	Total Allowable Concentration (TAC)	Units
Volatile Organic Compounds					**EPA Method 524.3**
1,1,1,2-Tetrachloroethane	630-20-6	0.5	ND	10	µg/L
1,1,1-Trichloroethane	71-55-6	0.5	ND	200	µg/L
1,1,2,2-Tetrachloroethane	79-34-5	0.5	ND	2	µg/L
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5	ND	*	µg/L
1,1,2-Trichloroethane	79-00-5	0.5	ND	5	µg/L
1,1-Dichloroethane	75-34-3	0.5	ND	3	µg/L
1,1-Dichloroethene	75-35-4	0.5	ND	7	µg/L
1,1-Dichloropropanone	513-88-2	5	ND	*	µg/L
1,1-Dichloropropene	563-58-6	0.5	ND	3	µg/L
1,2,3-Trichlorobenzene	87-61-6	0.5	ND	3	µg/L
1,2,3-Trichloropropane	96-18-4	0.5	ND	40	µg/L
1,2,3-Trimethylbenzene	526-73-8	0.5	ND	Refer to THFAN	µg/L
1,2,4-Trichlorobenzene	120-82-1	0.5	ND	70	µg/L
1,2,4-Trimethylbenzene	95-63-6	0.5	ND	Refer to THFAN	µg/L
1,2-Dibromo-3-chloropropane	96-12-8	0.2	ND	0.2	µg/L
1,2-Dibromoethane	106-93-4	0.5	ND	0.05	µg/L
1,2-Dichlorobenzene	95-50-1	0.5	ND	600	µg/L
1,2-Dichloroethane	107-06-2	0.5	ND	5	µg/L
1,2-Dichloropropane	78-87-5	0.5	ND	5	µg/L
1,3,5-Trimethylbenzene	108-67-8	0.5	ND	Refer to THFAN	µg/L
1,3-Butadiene	106-99-0	0.05	ND	100	µg/L
1,3-Dichlorobenzene	541-73-1	0.5	ND	600	µg/L
1,3-Dichloropropane	142-28-9	0.5	ND	100	µg/L
1,4-Dichlorobenzene	106-46-7	1	ND	75	µg/L
1-Chlorobutane	109-69-3	5	ND	*	µg/L
2,2-Dichloropropane	594-20-7	0.5	ND	*	µg/L
2-Butanone (MEK)	78-93-3	5	ND	4,000	µg/L
2-Chloro-1,3-butadiene	126-99-8	0.5	ND	*	µg/L
2-Chlorotoluene	95-49-8	0.5	ND	100	µg/L
2-Ethyl-1-hexanol	104-76-7	5	ND	800	µg/L
2-Hexanone	591-78-6	5	ND	40	µg/L
2-Methyl-1,3-butadiene	78-79-5	5	ND	50	µg/L
4-Chlorotoluene	106-43-4	0.5	ND	100	µg/L
4-Isopropyltoluene	99-87-6	0.5	ND	Refer to THFAN	µg/L
4-Methyl-2-pentanone	108-10-1	5	ND	7,000	µg/L
Acetone	67-64-1	5	ND	6,000	µg/L

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Analyte	CAS Registry Number	Reporting Limit (RL)	Corrected Sample Results[1]	Total Allowable Concentration (TAC)	Units
Volatile Organic Compounds (continued)					**EPA Method 524.3**
Acrylonitrile	107-13-1	0.2	ND	0.6	µg/L
Allyl chloride	107-05-1	5	ND	300	µg/L
Benzene	71-43-2	0.5	ND	5	µg/L
bis(2-Chloroethyl)ether	111-44-4	0.5	ND	0.3	µg/L
Bromobenzene	108-86-1	0.2	ND	3	µg/L
Bromochloromethane	74-97-5	0.5	ND	90	µg/L
Bromodichloromethane	75-27-4	0.5	ND	Refer to TTHM	µg/L
Bromoform	75-25-2	0.5	ND	Refer to TTHM	µg/L
Bromomethane	74-83-9	0.5	ND	10	µg/L
Carbon disulfide	75-15-0	5	ND	700	µg/L
Carbon tetrachloride	56-23-5	0.5	ND	5	µg/L
Chloroacetonitrile	107-14-2	5	ND	*	µg/L
Chlorobenzene	108-90-7	0.5	ND	100	µg/L
Chloroethane	75-00-3	0.5	ND	0.4	µg/L
Chloroform	67-66-3	0.5	ND	Refer to TTHM	µg/L
Chloromethane	74-87-3	0.5	ND	30	µg/L
cis-1,2-Dichloroethene	156-59-2	0.5	ND	70	µg/L
cis-1,3-Dichloropropene	10061-01-5	0.5	ND	Refer to TDCP	µg/L
Cyclohexanone	108-94-1	5	ND	30,000	µg/L
Dibromochloromethane	124-48-1	0.5	ND	Refer to TTHM	µg/L
Dibromomethane	74-95-3	0.5	ND	*	µg/L
Dichlorodifluoromethane	75-71-8	0.5	ND	3	µg/L
Diethyl ether	60-29-7	5	ND	*	µg/L
Diisopropyl ether (DIPE)	108-20-3	5	ND	*	µg/L
Ethyl acrylate	140-88-5	0.5	ND	10	µg/L
Ethyl methacrylate	97-63-2	5	ND	10	µg/L
Ethylbenzene	100-41-4	0.5	ND	700	µg/L
Hexachlorobutadiene	87-68-3	0.5	ND	4	µg/L
Hexachloroethane	67-72-1	0.5	ND	9	µg/L
Iodomethane	74-88-4	0.5	ND	3	µg/L
Isopropylbenzene	98-82-8	0.5	ND	700	µg/L
m&p-Xylenes	179601-23-1	1	ND	Refer to TX	µg/L
Methacrylonitrile	126-98-7	5	ND	10	µg/L
Methyl acetate	79-20-9	5	ND	3	µg/L
Methyl acrylate	96-33-3	0.5	ND	3	µg/L
Methyl methacrylate	80-62-6	5	ND	10,000	µg/L

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Analyte	CAS Registry Number	Reporting Limit (RL)	Corrected Sample Results[1]	Total Allowable Concentration (TAC)	Units
Volatile Organic Compounds (continued)					**EPA Method 524.3**
Methyl tert-butyl ether (MTBE)	1634-04-4	0.5	ND	2	µg/L
Methylene chloride (Dichloromethane)	75-09-2	0.5	ND	5	µg/L
n-Butyl acrylate	141-32-2	5	ND	10	µg/L
n-Butylbenzene	104-51-8	0.5	ND	Refer to THFAN	µg/L
n-Propylbenzene	103-65-1	0.5	ND	Refer to THFAN	µg/L
o-Xylene	95-47-6	0.5	ND	Refer to TX	µg/L
Pentachloroethane	76-01-7	5	ND	*	µg/L
sec-Butylbenzene	135-98-8	0.5	ND	Refer to THFAN	µg/L
Styrene	100-42-5	0.5	ND	100	µg/L
TDCP (Total 1,3-Dichloropropene)	542-75-6	1	ND	4	µg/L
tert-Amyl ethyl ether	919-94-8	5	ND	3	µg/L
tert-Amyl methyl ether (TAME)	994-05-8	5	ND	3	µg/L
tert-Butanol	75-65-0	5	ND	9,000	µg/L
tert-Butyl ethyl ether (ETBE)	637-92-3	5	ND	20,000	µg/L
tert-Butylbenzene	98-06-6	0.5	ND	Refer to THFAN	µg/L
Tetrachloroethene	127-18-4	0.5	ND	5	µg/L
Tetrahydrofuran	109-99-9	5	ND	1,000	µg/L
THFAN (Total High Flash Aromatic Naphtha)	64742-95-6	0.5	ND	200	µg/L
Toluene	108-88-3	0.5	ND	1,000	µg/L
trans-1,2-Dichloroethene	156-60-5	0.5	ND	100	µg/L
trans-1,3-Dichloropropene	10061-02-6	0.5	ND	Refer to TDCP	µg/L
trans-1,4-Dichloro-2-butene	110-57-6	5	ND	*	µg/L
Trichloroethylene	79-01-6	0.5	ND	5	µg/L
Trichlorofluoromethane	75-69-4	0.5	ND	2,000	µg/L
TTHM (Total Trihalomethanes)	Various	0.5	ND	80	µg/L
TX (Total Xylenes)	1330-20-7	1.5	ND	90	µg/L
Vinyl chloride	75-01-4	0.2	ND	2	µg/L
Semi-Volatile Organics - Polynuclear Aromatic Hydrocarbon (PNA) Compounds					**EPA Method 625**
Acenaphthene	83-32-9	0.4	ND	3	µg/L
Acenaphthylene	208-96-8	0.4	ND	3	µg/L
Anthracene	120-12-7	0.2	ND	3	µg/L
Benzo(a)anthracene	56-55-3	0.4	ND	0.2	µg/L
Benzo(a)pyrene	50-32-8	0.2	ND	0.04	µg/L
Benzo(b)fluoranthene	205-99-2	0.2	ND	0.2	µg/L
Benzo(g,h,i)perylene	191-24-2	0.6	ND	0.2	µg/L
Benzo(k)fluoranthene	207-08-9	0.2	ND	*	µg/L

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Analyte	CAS Registry Number	Reporting Limit (RL)	Corrected Sample Results[1]	Total Allowable Concentration (TAC)	Units
Semi-Volatile Organics - Polynuclear Aromatic Hydrocarbon (PNA) Compounds (continued)					**EPA Method 625**
Chrysene	218-01-9	0.3	ND	3	µg/L
Dibenzo(a,h)anthracene	53-70-3	0.4	ND	*	µg/L
Fluoranthene	206-44-0	0.2	ND	3	µg/L
Fluorene	86-73-7	0.4	ND	300	µg/L
2-Methylnaphthalene	91-57-6	0.4	ND	30	µg/L
Naphthalene	91-20-3	0.5	ND	100	µg/L
Phenanthrene	85-01-8	0.2	ND	3	µg/L
Pyrene	129-00-0	0.6	ND	3	µg/L
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	ND	*	µg/L
Semi-Volatile Organics - Other Compounds					**EPA Method 625**
2,4,6-Trichlorophenol	88-06-2	1	ND	5	µg/L
2,4-Dichlorophenol	120-83-2	1	ND	50	µg/L
2,4-Dimethylphenol	105-67-9	2	ND	100	µg/L
2,4-Dinitrophenol	51-28-5	1	ND	*	µg/L
2,6-Di-tert-butyl-4-methoxyphenol	489-01-0	3	ND	3	µg/L
2-Chlorophenol	95-57-8	1	ND	*	µg/L
2-Nitrophenol	88-75-5	1	ND	3	µg/L
2-Phenyl-2-propanol	617-94-7	0.6	ND	300	µg/L
3,3-Dichlorobenzidine	91-94-1	1	ND	0.8	µg/L
4,6-Dinitro-2-methylphenol	534-52-1	1	ND	*	µg/L
4-Chloro-3-methylphenol	59-50-7	1	ND	700	µg/L
4-Nitrophenol	100-02-7	1	ND	60	µg/L
Acetophenone	98-86-2	0.6	ND	200	µg/L
Benzothiazole	95-16-9	1	ND	50	µg/L
Bis(2-ethylhexyl)adipate	103-23-1	0.5	ND	400	µg/L
Bis(2-ethylhexyl)phthalate	117-81-7	1	ND	6	µg/L
Butyl benzyl phthalate	85-68-7	1	ND	1,000	µg/L
Diethyl phthalate	84-66-2	1	ND	6,000	µg/L
Dimethyl phthalate	131-11-3	1	ND	50	µg/L
Di-n-butyl phthalate	84-74-2	2	ND	700	µg/L
Di-n-octyl phthalate	117-84-0	1.1	ND	10	µg/L
4-tert-Butylphenol	98-54-4	2	ND	500	µg/L
Isophorone	78-59-1	0.5	ND	400	µg/L
m,p-Cresol	108-39-4, 106-44-5	1	ND	400	µg/L
N-Nitrosodiphenylamine	86-30-6	0.3	ND	70	µg/L
o-Cresol	95-48-7	1	ND	400	µg/L

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Analyte	CAS Registry Number	Reporting Limit (RL)	Corrected Sample Results[1]	Total Allowable Concentration (TAC)	Units
Semi-Volatile Organics - Other Compounds (continued)					**EPA Method 625**
Pentachlorophenol	87-86-5	0.5	ND	1	µg/L
Phenol	108-95-2	0.5	ND	2,000	µg/L
Phenyl sulfone	127-63-9	0.2	ND	3	µg/L
Bisphenol-A	80-05-7	1	ND	100	µg/L
Regulated Metals					**EPA Method 200.8**
Antimony	7440-36-0	0.2	0.4	6	µg/L
Arsenic	7440-38-2	0.5	7	10	µg/L
Barium	7440-39-3	0.2	ND	2,000	µg/L
Beryllium	7440-41-7	0.2	ND	4	µg/L
Cadmium	7440-43-9	0.2	ND	5	µg/L
Chromium	7440-47-3	0.5	ND	20	µg/L
Copper	7440-50-8	0.5	ND	1,300	µg/L
Lead	7439-92-1	0.2	ND	5	µg/L
Mercury	7439-97-6	0.2	ND	2	µg/L
Selenium	7782-49-2	1	ND	50	µg/L
Thallium	7440-28-0	0.2	ND	2	µg/L
Other Metals					**EPA Method 200.8**
Aluminum	7429-90-5	1	36	9,000	µg/L
Silver	7440-22-4	5	ND	100	µg/L
Titanium	7440-32-6	1	14	90,000	µg/L
Zinc	7440-66-6	0.4	ND	3,000	µg/L
Nitrosamines					**EPA Method 521**
N-Nitrosodi-n-butylamine (NDBA)	924-16-3	2	ND	60	ng/L
N-Nitrosodi-n-propylamine (NDPA)	621-64-7	2	ND	50	ng/L
N-Nitrosodiethylamine (NDEA)	55-18-5	2	ND	2	ng/L
N-Nitrosodimethylamine (NDMA)	62-75-9	2	ND	7	ng/L
N-Nitrosomethylethylamine (NMEA)	10595-95-6	2	ND	20	ng/L
N-Nitrosomorpholine	59-89-2	2	ND	40	ng/L
N-Nitrosopiperidine (NPIP)	100-75-4	2	ND	50	ng/L
N-Nitrosopyrrolidine (NPYR)	930-55-2	2	ND	200	ng/L

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Exposure Temperature:	23°C
Conditioning/Exposure Procedure Used:	Initially, the following manufacturer conditioning was performed: the test unit was flushed for 10 minutes with water. For the exposure procedure, the test unit was exposed for three 24-hour periods. For each 24-hour period, the test unit was filled with water and exposed for 24 hours; and a sample was then collected. The manufacturer conditioning stated above was performed after each of the first two periods. After the final exposure period, the three samples collected were then combined for analysis.
Holding Volume:	One unit of 4.5 liters

* Action level for the analyte is not available. If the sample result is below reporting limit, the specific analyte is not evaluated in the certification process. If the sample result is at or above the reporting limit, the specific analyte would need a toxicological risk assessment to determine evaluation criteria.

[1] Corrected Sample Results reflect the non-corrected sample results minus the process blank results.

Testing Labs

Product Testing	WQA Product Testing Laboratory
EPA Method 524.3	WQA Analytical Laboratory
EPA Method 625	Suburban Laboratories, Inc.
EPA Method 200.8	WQA Analytical Laboratory
EPA Method 521	Suburban Laboratories, Inc.

Non-target analytes not specifically required by the initial toxicological review will show as Tentatively Identified Compounds (TICs) if found to be present within their respective scans. If a non-target analyte is not listed as a TIC, then it is not present at reportable levels for this testing.

This report has been reviewed for technical accuracy and completeness. The analyses were performed using EPA or other approved methodologies and the results were reported on an "as received" basis unless otherwise noted. These results relate only to the items tested. Sample analyses conducted for this laboratory report were performed by WQA or by a WQA technical service provider (TSP).

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Definitions:

CAS Registry Number = Chemical Abstracts Service Registry Number; an unique, universal number assigned to individual compounds.

N/A = Not available.

ND = Non Detected, the corrected sample result is lower than reporting limit.

TDCP = Total 1,3-Dichloropropene: total concentration of mixed isomers, cis-1,3-dichloropropene, and trans-1,3-dichloropropene.

THFAN = Total concentration of High Flash Aromatic Naphtha compounds.

TTHM = Total Trihalomethanes: total concentration of the following compounds; bromodichloromethane, bromoform, chlorodibromomethane, chloroform.

TX = Total Xylenes: total concentration of o-xylene, m-xylene and p-xylene.