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Live Healthy

Performance Data for the Aquasana OptimH2O™ Drinking Water System: Model AQ-RO-3						
Replacement	Operating pressure range	Operating temp. range	Recovery rating	Efficiency rating	Daily production (DPR)	Rated flow
AQ-RO3-RO, AQ-RO3-Carbon, AQ-RO3-Claryum	40-100 psi *275-689 kPa*	40-100° F *4.44-37.7° C*	29.43%	17.91%	13.32 gallons 50.4 liters	0.5 gpm *1.8 lpm*

Manufactured by: Aquasana, Inc. 6310 Midway Road · Haltom City, Texas 76117 · 866.662.6885

Testing performed under NSF/ANSI Standards 42, 53, and 58 and in accordance with the California Department of Health Services Drinking Water Treatment Device Program. This system has been tested according to NSF/ANSI 42, 53 & 58 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42, 53, and 58.

NSF/ANSI 42	Minimum reduction	Overall % reduction	Results
Chlorine Reduction, Free Available	<0.5 mg/l	97.66%	Pass
Chloramine Reduction, Free Available	<0.5 mg/l	97.66%	Pass
Particulate Reduction	85%	99.9%	Pass
NSF/ANSI 53	**Required reduction**	**Overall % reduction**	**Results**
Cyst Live Giardia & Cryptosporidium	99.95%	>99.99%	Pass
Mercury Reduction pH 8.5	<2 ug/L	>95.8%	Pass
Mercury Reduction pH 6.5	<2 ug/L	>96.5%	Pass
Lead Reduction pH 6.5	<10 ug/L	>99.4%	Pass
Lead Reduction pH 8.5	<10 ug/L	>99.3%	Pass
MTBE Reduction	<5 ug/L	86.6%	Pass
Turbidity	<0.5 NTU	99.1%	Pass
VOC Surrogate Test	95%	99.4%	Pass
Asbestos Reduction	99%	>99%	Pass
NSF/ANSI 58	**Required reduction**	**Actual min. reduction**	**Results**
Arsenic (Pentavalent)	80.0%	97.6%	Pass
Barium	80.0%	95.2%	Pass
Cadmium	83.3%	95.3%	Pass
Chromium (Hexavalent)	66.7%	97.0%	Pass
Chromium (Trivalent)	66.7%	96.6%	Pass
Copper	56.7%	96.6%	Pass
Fluoride	81.2%	95.7%	Pass
Lead	93.3%	96.6%	Pass
Radium 226/228	80.0%	80.0%	Pass
Selenium	50.0%	97.9%	Pass
TDS	75.0%	95.0%	Pass
Turbidity	95.4%	99.1%	Pass

NSF

The AQ-RO3 Post Filter has been tested and certified by NSF International against NSF/ANSI Standards 42 and 53 in model AQ-RO-3 for the reduction claims specified on the Performance Data Sheet as verified and substantiated by test data and at nsf.org.

NSF

The AQ-RO-3 system has been tested and certified by NSF International against NSF/ANSI Standard 58 for the reduction claims specified on the Performance Data Sheet as verified and substantiated by test data and at nsf.org.

Do not use with water that is microbiologically unsafe or of unknown water quality without adequate disinfection before or after the system.

Organic chemicals included by surrogate testing				
VOCs (by surrogate testing using chloroform)	Drinking water regulatory level (MCL/MAC) mg/L	Influent/ Unfiltered	Effluent/ Filtered	Percent Reduction
alachlor	0.002	0.050	0.001	>98%
atrazine	0.003	0.100	0.003	>97%
benzene	0.005	0.081	0.001	>99%
carbofuran	0.04	0.190	0.001	>99%
carbon tetrachloride	0.005	0.078	0.0018	98%
chlorobenzene	0.1	0.077	0.001	>99%
chloropicrin	—	0.015	0.0002	99%
2,4-D	0.07	0.110	0.0017	98%
dibromochloropropane (DBCP)	0.0002	0.052	0.00002	>99%
o-dichlorobenzene	0.6	0.080	0.001	>99%
p-dichlorobenzene	0.075	0.040	0.001	>98%
1,2-dichloroethane	0.005	0.088	0.0048	95%
1,1-dichloroethylene	0.007	0.083	0.001	>99%
cis-1,2-dichloroethylene	0.07	0.170	0.0005	>99%
trans-1,2-dichloroethylene	0.1	0.086	0.001	>99%
1,2-dichloropropane	0.005	0.080	0.001	>99%
cis-1,3-dichloropropylene	—	0.079	0.001	>99%
dinoseb	0.007	0.170	0.0002	99%
endrin	0.002	0.053	0.00059	99%
ethylbenzene	0.7	0.088	0.001	>99%
ethylene dibromide (EDB)	0.00005	0.044	0.00002	>99%
haloacetonitriles (HAN)				
Bromochloroacetontrile	—	0.022	0.0005	98%
Dibromoacetontrile	—	0.024	0.0006	98%
Dichloroacetontrile	—	0.0096	0.0002	98%
Trichloroacetontrile	—	0.015	0.0003	98%
haloketones (HK)				
1,1-dichloro-2-propanone	—	0.0072	0.0001	99%
1,1,1-trichloro-2-propanone	—	0.0082	0.0003	96%
heptachlor (H-34, Heptox)	0.0004	0.025	0.00001	>99%
heptachlor epoxide	0.0002	0.0107	0.0002	98%
hexachlorobutadiene	—	0.044	0.001	>98%
hexachlorocyclopentadiene	0.05	0.060	0.000002	>99%
lindane	0.0002	0.055	0.00001	>99%
methoxychlor	0.04	0.050	0.0001	>99%
pentachlorophenol	0.001	0.096	0.001	>99%
simazine	0.004	0.120	0.004	>97%
styrene	0.1	0.150	0.0005	>99%
1,1,2,2-tetrachloroethane	—	0.081	0.001	>99%
tetrachloroethylene	0.005	0.081	0.001	>99%
toluene	1	0.078	0.001	>99%
2,4,5-TP (silvex)	0.05	0.270	0.0016	99%
tribromoacetic acid	—	0.042	0.001	>98%
1,2,4-trichlorobenzene	0.07	0.160	0.0005	>99%
1,1,1-trichloroethane	0.2	0.084	0.0046	95%
1,1,2-trichloroethane	0.005	0.150	0.0005	>99%
trichloroethylene	0.005	0.180	0.0010	>99%
Trihalomethanes (THMs)		Influent/ Unfiltered	Effluent/ Filtered	Percent Reduction
Bromodichloromethane (THM)	0.080	0.300	0.015	95%
Bromoform (THM)				
Chloroform (THM)				
Chlorodibromomethane (THM)				
Xylenes (total)	10	0.070	0.001	>99%

This system has been tested for the treatment of water containing pentavalent arsenic (also known as As(V), As(+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic, but may not remove other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the ***Arsenic Facts*** section of this Performance Data Sheet for further information.

Arsenic Facts

Arsenic (abbreviated As) is found naturally in some well water. Arsenic in water has no color, taste, or odor. It must be measured by a laboratory test. Public water utilities must have their water tested for arsenic. You can get the results from your water utility. If you have your own well, you can have the water tested. The local health department or the state environmental health agency can provide a list of certified labs. The cost is typically $15 to $30. Information about arsenic in water can be found on the Internet at the U.S. Environmental Protection Agency website: **epa.gov/safewater/arsenic.html.**

There are two forms of arsenic: ***pentavalent arsenic*** (also called As(V), As(+5), and arsenate) and ***trivalent arsenic*** (also called As(III), As(+3), and arsenite). In well water, arsenic may be pentavalent, trivalent, or a combination of both. Special sampling procedures are needed for a lab to determine what type and how much of each type of arsenic is in the water. Check with the labs in your area to see if they can provide this type of service.

Reverse osmosis (RO) water treatment systems do not remove trivalent arsenic from water very well. RO systems are very effective at removing pentavalent arsenic. A free chlorine residual will rapidly convert trivalent arsenic to pentavalent arsenic. Other water treatment chemicals such as ozone and potassium permanganate will also change trivalent arsenic to pentavalent arsenic. A combined chlorine residual (also called chloramine) may not convert all the trivalent arsenic. If you get your water from a public water utility, contact the utility to find out if free chlorine or combined chlorine is used in the water system.

The AQ-RO-3 system is designed to remove pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic. The system was tested in a lab. Under testing conditions, the system reduced [0.30 mg/L (ppm) or 0.050 mg/L (ppm)] pentavalent arsenic to 0.010 mg/L (ppm) (the USEPA standard for drinking water) or less. The performance of the system may be different at your installation. Have the treated water tested for arsenic to check whether the system is working properly.

The RO component of the AQ-RO-3 system must be replaced every 1-3 years to ensure that the system will continue to remove pentavalent arsenic. The component identification and locations where you can purchase the component are listed in the installation/operation manual.

- Testing was performed under standard laboratory conditions, actual performance may vary.
- Filter usage must comply with all state and local laws.
- Filter is only to be used with cold water.
- Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.
- See owner's manual for general installation conditions and needs as well as manufacturer's limited warranty.
- All contaminants reduced by this filter are listed. Not all contaminants listed may be present in your water. Filter does not remove all contaminants that may be present in tap water.
- ***Efficiency rating*** means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
- ***Recovery rating*** means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.