

name: _____	analysis# : _____
address: _____	date prepared: _____
phone: _____	persons serviced: _____
dealer: _____	number of baths: _____
address: _____	water source: _____
phone: _____	water concerns: Hydrogen Sulfide _____
fax: _____	
existing water treatment equipment: _____	
Other _____	

### ANALYSIS RESULTS:

<u>CATEGORY</u>	<u>MEASUREMENT</u>	<u>SCORE</u>											
water pressure	PSI	_____	<table border="0"> <tr> <td>30</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	30	40	50	60	70					
30	40	50	60	70									
iron	PPM	_____	<table border="0"> <tr> <td>.0</td> <td>.3</td> <td>1</td> <td>2</td> <td>5</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	.0	.3	1	2	5					
.0	.3	1	2	5									
pH		_____	<table border="0"> <tr> <td>6.2</td> <td>6.8</td> <td>7</td> <td>7.2</td> <td>8.0</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	6.2	6.8	7	7.2	8.0					
6.2	6.8	7	7.2	8.0									
chlorine	PPM	_____	<table border="0"> <tr> <td>0</td> <td>.5</td> <td>1.0</td> <td>1.5</td> <td>2.0</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	0	.5	1.0	1.5	2.0					
0	.5	1.0	1.5	2.0									
hardness	GPG	_____	<table border="0"> <tr> <td>0</td> <td>1.0</td> <td>3.5</td> <td>7.0</td> <td>10.5</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	0	1.0	3.5	7.0	10.5					
0	1.0	3.5	7.0	10.5									
TDS	PPM	_____	<table border="0"> <tr> <td>0</td> <td>50</td> <td>250</td> <td>375</td> <td>500</td> </tr> <tr> <td colspan="5"></td> </tr> </table>	0	50	250	375	500					
0	50	250	375	500									

This water analysis is for mineral content only. There is no expressed or implied warranty given for water that has bacteriological problems or has been chemically contaminated.

## **WATER CONDITIONS**

There are two types of water in your home. Drinking water is water at your kitchen sink and running to your refrigerator for cold water or ice maker if you have these appliances. Working water is for the bathing facilities, laundry, dishwasher, and outside faucets.

Our water analysis's primary concern is your drinking water and any adverse effects it may have on your health. Your health is our number one concern. We also examine conditions that may affect your working water. These conditions are usually economic in nature rather than health related. Some conditions affect both your health and economics. Read on for more insight.

## **WATER PRESSURE**

Water pressure is necessary for the reverse osmosis (RO) process to be effective. The RO process operates using a membrane to separate the water molecules from everything else in the water, rather than filtering the foreign matter from the water. The amount of pressure has a direct impact on the percentage of material the membrane is capable of rejecting.

The minimum pressure should be 45 psi and the ideal range is 60-65+ psi. The higher the pressure the more efficient the membrane functions. The patented AQUATHIN Water Purification System utilizes Reverse Osmosis PLUS Deionization. The Deionization Module removes what an RO has difficulty removing such as nitrates, and insures your drinking water to be salt free and free of heavy metals and chemicals – this is exclusive to *AQUATHIN!* When source water pressure is in the ideal range, a more efficient RO operation reduces the work load on the DI making it last longer.

## **IRON**

There are three types of iron that may be present in your water. Each displays a different characteristic.

- Ferrous iron: clear water, clear when drawn but when exposed to the air develops a rusty or red color.
- Ferric iron: red water, visible when drawn, has a red, yellow or rusty color.
- Bacterial iron: is a bacteria which thrives in iron bearing water and utilizes the iron as an energy source. It is easily detected as a slime on the inside of the toilet water closet.

Iron beyond 0.3 ppm will cause staining in toilets, tubs, showers, and clothing. While not a danger to your health at these levels, iron will clog pipes and appliances, causing frequent repairs or replacement of hot water heaters, dishwashers, washing machines, ice makers, even irons.

## **pH**

pH is defined as the negative logarithm of the effective hydrogen-ion concentration. Or, for us non-chemist types, a scale whose values run from 1-14 with 7 representing neutrality. Numbers less than 7 have increasing acidity and numbers greater than 7 have increasing alkalinity. Normal pH is between 6.8 and 7.2 as shown on your water analysis report.

Water below 6.8 is beyond slightly acidic and approaching extremely corrosive (4.0-5.9). Evidence of this condition is green stains on sinks and porcelain fixtures. Obviously, any water this corrosive will be damaging to your pipes, fixtures and especially when heated by the hot water heater and becomes more aggressive. Water with a pH above 7.2 will leave deposits such as calcium and magnesium that will, over time, clog your pipes. High alkalinity should be corrected for both economic and health concerns. Bad pH is bad for everybody's pipes.

## CHLORINE

Not typically found in well water, chlorine is usually found in municipal (treated) water. Today the water going into water treatment plants (source water) has more contamination than fifty years ago when chlorine was first used as a disinfectant. Each year water treatment plants use more chlorine to disinfect the water of newly developed bacteria strains and viruses. More chlorine causes a very serious health concern by combining with other contaminants making for a real “chemical cocktail”. Studies continue to determine the long term effects of excess chlorine. Some studies indicate it could cause a breakdown in your immune system. And the New England Journal of Medicine confirms that certain cancers such as colon, rectal and prostate can be attributed to chlorinated compounds found in water. High chlorine and chloramine concentrates can also cause skin and eye irritations and damage rubber plumbing components.

How much chlorine should you have in your drinking water? NONE. This is a health consideration, a very important one. Chlorine does its job disinfecting at the water treatment plant. It’s up to you to remove all chlorine from your drinking water.

## HARDNESS

Two-thirds of the water on earth is groundwater. As it travels through rock and soil it picks up particles of calcium, magnesium, iron, lead, and other minerals. For 85% of the country, that translates into “hard water”. “Hardness” refers to the amount of calcium and magnesium in the water and is measured in grains per gallon (gpg).<sup>1</sup> The following guide defines your water’s hardness based on two different measurements. Our test determines the grains of hardness that can easily be converted into the ppm.

<u>Description</u>	<u>Grains of Hardness</u>	<u>Parts per million</u>	<u>Laundry Detergent Required<sup>2</sup></u>
soft (ideal)	0.0 - 1.0	0 - 18	¼ dispenser
slightly hard	1.0 - 3.5	18 - 60	
moderately hard	3.5 - 7.0	60 - 120	½ dispenser
hard	7.0 - 10.5	120 - 180	
very hard	10.5 - over	180 - over	full dispenser

Most of the problems associated with hard water are economical in nature. Hardness causes unsightly soap scum on fixtures, water spots on glasses and whitish scale deposits in your tubs and showers. Hard water means you use more soap and cleaning agents because they first have to “clean” the water before they clean anything else.

## TDS (Total Dissolved Solids)

The Environmental Protection Agency (EPA) has established a maximum contaminant level (MCL) of 500 ppm inorganic salts and minerals for safe drinking water. Sound a little like alphabet soup? It means that if your water contains 500 ppm or higher of Total Dissolved Solids, your water is unsafe to drink as defined by Uncle Sam. So how many TDS are safe to drink? **THE LOWER THE TDS THE BETTER, LIKE NATURE’S RAIN WATER!**

The laws today, designed to protect our precious drinking water, are much more strict than what they were 10 and 20 years ago. Government research and laboratory test conclude that we must consume less heavy metals, less chemicals, and less pesticides. **However, common sense should say that the water we were told to drink years ago, was not safe by today’s standards.** And you can be sure that drinking water laws are going to become more protective in the next 20 years. We at AQUATHIN can not — and will not — allow our family and clients to wait for the safest drinking water. That is why we produce the most effective water purification systems available today. We believe there are others, like us at AQUATHIN®, who believe there is no level of acceptance for any pollutant. DON’T YOU?!

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<sup>1</sup> Copyright 1988 Council of Better Business Bureaus, Inc. Printed in U.S.A. (Reprinted 1990)

<sup>2</sup> Recommended use of detergent by leading appliance manufacturer to overcome the adverse affects of hard water