

Using Your TDS Meter to Check Your Filters

Radiant Life Biocompatible Drinking Water
System



TDS* Meter (*Total Dissolved Solids)

TDS meters measure minerals and many impurities in water.

TDS testing is used widely with purified water, not because it reveals exactly what is in the water, but because it tracks how efficiently a water purifier is functioning.



TDS Meter (yours may look slightly different)



Radiant Life Biocompatible Drinking Water System

TDS Testing

It's important to regularly test your water to determine how your filters are performing.

We recommend testing as often as every month, but at least every quarter, such as on the solstice/equinox (this is a great way to remember!).

Understanding the TDS Scale

The TDS Scale is a reflection of minerals and many dissolved toxins in water. It is used in the water industry to track performance of purifiers.

1000 ppm:

Brackish sea water*

500+ ppm:

Very hard water*

100-250 ppm:

Typical municipal water

0-10 ppm:

“Distilled Quality”

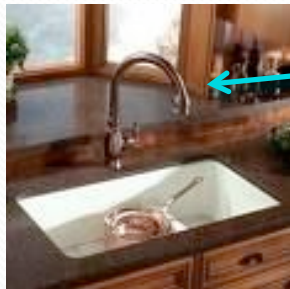


*If you have hard water, we recommend a softener.

TDS Testing

Now go ahead and test your water.

Use your TDS meter to test:



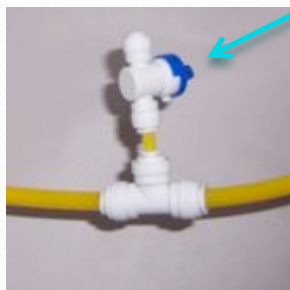
1) your tap water;

2) your membrane, (Test Valve 1*);



3) your deionization purifiers, (Test Valve 2*);

4) the water coming from your RO spigot;



5) track your results in your manual.

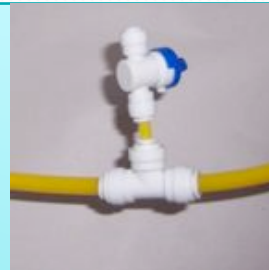
(*see next page for more details)

TDS Test Valves

Note: *If you don't have test valves on your system such as those pictured below, (or if your plumber did not install a test valve on the tube leading to the tank) please skip ahead to page 15 for instructions.*

Membrane Test Valve (Test Valve 1)

This valve is located either on the right side or on the front of the unit. (Shown: side valve)



Tank Test Valve (Test Valve 2)

This valve is located on the yellow tube leading to the tank.

TDS Testing Instructions

1. Fill a clean glass with 8 oz of **water you wish to test.**
2. Turn on TDS meter.
3. Remove TDS meter cap.
4. Holding over a sink, pour water to test into cap.
5. Still over sink, insert TDS meter back into cap.
6. Note the number that appears on the LED readout.
7. Write down reading, making sure “ppm” appears *after* the digits on meter.
8. Repeat 4 times; discard highest and lowest readings.
9. Take the average of the three remaining readings.
- 10. Record this average number – this is the TDS result.**
- 11. Record readings from all four testing areas. (See page 6)**



How to Interpret Your Results

Now that you have four numbers, what do they mean?

1. Tap Water:

Your results could vary between 50 and 500 ppm depending on what toxins and minerals are in your water, whether you are on a well or city water, where your municipal water district is drawing their water from at the moment, and what season of the year it is (rainy or dry). - Remember that this TDS reading can change throughout the year so don't assume you should only do this reading once!

How to Interpret Your Results

Membrane Purification Efficiency

To calculate your membrane purification efficiency:

Test Valve 1 Result	<input type="text"/>	(ex: 6 ppm)
Divide/by Tap Water Result..	<input type="text"/>	(ex: 110 ppm)
Mem. Purification Efficiency =	<input type="text"/>	(ex: 6/110=.05)

Multiply by 100 and subtract that number from 100. This will give you the membrane purification % (how well your membrane is working).

Example: $6 \text{ ppm} / 110 \text{ ppm} = .05$ $.05 \times 100 = 5$ $100 - 5 = 95\%$
Radiant Life Biocompatible Drinking Water System

How to Interpret Your Results

Total Purifier Efficiency

To calculate your total purifier efficiency:

Test Valve 2 Result	<input type="text"/>	(ex: 1 ppm)
Divide by Tap Water Result...	<input type="text"/>	(ex: 90 ppm)
Total Purifier Efficiency	= <input type="text"/>	(ex: 1/90=.01)

Multiply by 100 and subtract that number from 100. This will give you the total purifier efficiency % (how well all 3 purifiers are working).

Example: $1 \text{ ppm} / 90 \text{ ppm} = .01$ $.01 \times 100 = 1$ $100 - 1 = 99\%$
Radiant Life Biocompatible Drinking Water System

How to Interpret Your Results

4. Alka-Min Level

To calculate your Alka-Min level:

Spigot Test Result	<input type="text"/>	(ex: 16 ppm)
Minus Test Valve 2 Result.....	<input type="text"/>	(ex: 4 ppm)
Alka-Min Level	= <input type="text"/>	(ex: 16 - 4 = 12 ppm)

*Because TDS levels will **rise** over time as your purifiers age, but TDS will **fall** over time as the Alka-Min Stage 14 ages, we need to subtract one from the other to know how the Alka-Min is really functioning in absolute terms.*

Example: 16ppm - 4ppm = **12 ppm**

When to Change Filters

	Test Valve 1: RO Membrane	Test Valve 2: Deionization Purifiers	Spigot Test: Alka-Min Stage 14
Brand New:	96-97% purification	99%+ purification	10-20 ppm <i>(after first 3 weeks)</i>
1 Year Typical	90-96% purification	99%+ purification	10-20 ppm
2 Year Typical	85-90% purification	95%-99%+purif.	5-15 ppm
Replace:	Membrane: <80% purification 3+ yrs	DI Purifiers: 97-99% purification 1-2 yrs	Alka-Min: <5 ppm 2-3+ yrs

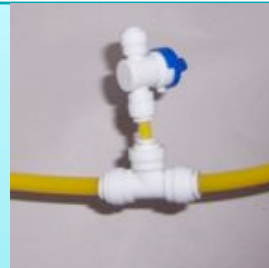
TDS Testing Without Test Valves

Note: If you don't have test valves on your system such as those pictured below*, please review this presentation for general reference and then refer to the newly updated instructions in our manual (on our website) called "TDS Testing Without Test Valves."

If your plumber did not install a test valve on the yellow tube leading to the tank, see the online manual for how to install this (very simple).

Membrane Test Valve (Test Valve 1)

**This valve is located either on the right side or on the front of the unit. (Shown: side valve)*



Tank Test Valve (Test Valve 2)

This valve is located on the yellow tube leading to the tank.

may be on front of system

For Further Information:

For the latest information on maintaining your 14-Stage Biocompatible Water System, please see our website at www.radiantlifecatalog.com.

If you have questions that were not addressed in this presentation, please check our FAQs and other resources, all available at our website.

Thank you and enjoy your Biocompatible Drinking Water!