

# Water Hardness Testing Guide

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# HoneForest

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Water contains minerals, and this can be a double-edged sword. One mineral that is prevalent in water is calcium, and human beings need to ingest a certain level of calcium each day. Problems present themselves when there is too much calcium in our water supply, and we begin to notice the effects of it. The first thing we have to do is know whether or not we have too many minerals in our water. Then, we need to find a way to reduce them, and this is very easy to do.

## 1. What Exactly Is Water Hardness?

Water hardness is determined by how much calcium and magnesium are present in the water. Water is too hard when it has large amounts of dissolved calcium, magnesium and other minerals. It is the reason that you may feel that a residue has been left on your hands after you wash them. That is because the soap and the calcium react to create soap scum.

## 2. What Is the Difference between Hard and Soft Water?

Hard water contains the minerals mentioned above along with chalk and lime. It is the reason that dishes and glasses come out of your dishwasher with spots and residue. When you wash your clothes, hard water causes them to look dingy, and it is the reason that film and soap scum is left behind in your bathtub. Instead of the refreshing feeling you get after you wash your hair, it feels sticky and may appear to be dull. Even your appliances are affected because the hard water causes them to work harder and use more energy.

Soft water has been treated to only contain sodium, and this is very beneficial in many ways. With soft water, soap lathers up much more efficiently, and dishes and clothes appear to be cleaner. There are no longer spots on glasses washed in the dishwasher, and hair feels and looks better. People who use soft water do not have to worry about soap scum on their shower curtains because it doesn't exist, and their skin and clothes are softer. Another bonus is the fact that appliances do not have to work as hard, so the life of their appliances is extended by softening the water. You will also be glad to know that your energy bills will do down.

### 3.Hard/soft classification

The United States Geological Survey uses the following classification into hard and soft water

Classification	Hardness in mg-CaCO <sub>3</sub> /L	Hardness in gpg	Hardness in ppm
Soft	0–60	0-3.50	0-60
Moderately hard	61–120	3.56-7.01	61-120
Hard	121–180	7.06-10.51	121-180
Very hard	≥ 181	≥ 10.57	≥ 181

\*Grains per Gallon (gpg) is defined as 1 grain (64.8 mg) of calcium carbonate per U.S. gallon (3.79 litres), or 17.118 ppm.

\*Parts per million (ppm) is usually defined as 1 mg/L CaCO<sub>3</sub>. It is equivalent to mg/L without chemical compound specified, and to **American degree**.

### 4.How to Test for Water Hardness Levels

If your water is supplied by the water company, contact the superintendent of water, and ask what the results were of their water tests. If you have a private well or you would like to have your own individual water tested, contact the health department so that you can schedule an appointment to have a water test done.

Another option that provides quick results is to test your water yourself. This can easily be done with an at-home test kit purchased online. HoneForest offers water hardness test strips that will give you results promptly.

To perform the hard water test:

1. Take out a strip from bottle, hold the end of the strip with no pads.
2. Dip the pads end into water for 2 seconds(or pass through gentle water stream).
3. Remove and shake off excess water.

4. Hold the strip level, with pad sides up, for 40 seconds.
5. Compare the pad color to the Total Hardness color chart on the bottle label.

## 5. How to Fix Hard Water if You Have It

A very simple thing you can do is purchase a water filtering pitcher. These pitchers are very inexpensive at around \$20, and they can filter out the minerals as well as chlorine. This option may not be enough because you can only use it to remove minerals from your drinking water.

Another option is the faucet water filter that you attach directly to your faucet. This type of filter will make it easier for you to use while cooking, but it presents the same problem as the water filtering pitcher.

If what you want is to soften the water in your entire home, you will need to purchase a water-softening system. These systems use sodium to remove calcium and chlorine from your water. This option is more expensive than the other two, but it will prevent minerals from building up within your pipes, and this will save money in the end.

If a water-softening system cannot fit into your budget, there is the option of buying a magnetic water conditioner. Rather than remove the calcium, the conditioner chemically alters it so that lime scale does not buildup.



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## **6. FAQ(Frequent Asked Questions)**

### **1).Before using, Is there anything I should pay special attention to?**

The strips would go bad if suffer high temperature or moisture, here are some points does need be noticed.

1. Always keep the bottle lid be covered tightly. For example during using, take out a strip for testing, then cover the lid tightly immediately.
2. Do not remove the desiccant, just left it in bottle.
3. Store at room temperature.
4. Do not touch the color pad on strips.

### **2).What's the expiration date of the product?**

We manufacture products according sales volume, so almost all are produced in recent 1-3 month. The valid period is 2 years.

The batch number, manufacture date and expire date(last raw) all are printed on the top of color box.

### **3).No matter what I test the color is the same, why?**

Usually there's 2 possible reasons:

1. The strips suffered moisture and went bad, for example, incorrect operation, some very humid area or weather may cause the problem.  
Remember we offer 100% money back guarantee, if you find it's defective after receive it, just please contact us at [honeforestservice@gmail.com](mailto:honeforestservice@gmail.com), we'll send you a new one, or refund immediately.
2. Some customers maybe suffered from color blindness(achromatopsia), then cannot distinguish between colors. If so, also welcome contact us to get refund.

### **4).Why the test result can't match any color with bottle color chart?**

Here are some possible reasons:

1. The material of strip pad and color chart is different, this physical characteristics would cause small color difference, it's impossible to

eliminated.

2. The strip pad color is changed gradually, but bottle color chart only shows 6 colors, the test result may locate between bottle color chart.

For example, after finish a test, the strip pad can't match any color with bottle color chart, but it's more red than 120ppm color chart, and less red than 250ppm color chart, then the test result shall between 120ppm-250ppm.

3. If the test results are too far away with color chart, it maybe because the strips suffered moisture and went bad. Then please don't hesitate to contact us to get after sales service. [honeforestservice@gmail.com](mailto:honeforestservice@gmail.com)

## 5).My hardness test strips seems defective, what shall I do?

All products has been checked carefully before delivery, But it's still may be go bad because of incorrect storage condition or damaged during violent transportation.

If unluckily you received a defective one, we're extremely sorry for the inconvenience, but there is nothing to worry, we are here for you and we will definitely help you in this.

Please don't hesitate to contact [honeforestservice@gmail.com](mailto:honeforestservice@gmail.com). We'll resolve your problem immediately. Thanks.

**Your voice is very important for us!**

**Not happy, or questions?**



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