Just Fitter Water Hardness Test Strips Instructional Guide

INTRODUCTION: Hard water is formed when water percolates through deposits of limestone and chalk which are largely made up of calcium and magnesium carbonates. Hard water can pose critical problems in industrial settings, where water hardness is monitored to avoid costly breakdowns in boilers, cooling towers, and other equipment that handles water. In domestic settings, hard water is often indicated by a lack of foam formation when soap is agitated in water, and by the formation of limescale in kettles and water heaters.1

PRODUCT DESCRIPTION: Just Fitter Water Hardness Strips changes color as it reacts to indicate the level of hardness in water. Color is compared to the color chart printed on the box and/or bottle label.

Precaution:

- Just Fitter Water Hardness Test Strips are for diagnostic use only. DO NOT CONSUME.
- Just Fitter Water Hardness Test Strips are used for water testing only. DO NOT USE for other liauids.
- Store Test Strips in the original container only.



HOW TO GET THE BEST RESULTS WHEN USING THE JUST FITTER WATER HARDNESS TEST STRIPS:

- Remove one strip from the bottle and replace car. Immediately.
- 2. Test the temperature of the water. Temperature should be around 68° - 75° F (20° - 24° C).
- 3. Dip the reagent area of the strips in the water specimen for 1 - 2 seconds
- 4. Do not shake off excess water. Hold strip horizontally for 60
- 5. Match the color to the color chart found in the packaging of the product.
- 6. Remember that when handling the Water Hardness Test Strips, make sure to hold or touch only the white portion of the strip which is the part of the strip that sticks out the bottle. Touching or holding the colored area may compromise the accuracy of the results.

HOW TO STORE YOUR WATER HARDNESS TEST STRIPS:

Store the Test Strips in its bottle at room temperature. Your Just Fitter Water Hardness Test Strips are made of imported quality materials which make it very durable and stay "fresh" in the package. This allows the test strips to provide accurate results.

ABNORMAL TEST RESULTS:

- 1. Check 'Expiration' date. If 'Expiration' date has passed, or it is 60-90 days past the date the seal was broken, discard strips and repeat test with new strips.
- 2. Check for discoloration of unused reagent strips. Discoloration may occur if bottle cap was not completely closed, or if bottle was stored in extreme heat or cold. Repeat test with strips from new bottle.

At times when the color on the strip does not match the chart, choose the closest shade, or you may also run another test and make sure to carefully follow the instructions provided above.

GENERAL GUIDELINES FOR CLASSIFICATION OF WATERS:2

0 to 60 mg/L as Calcium Carbonate is classified Soft; 61 to 120 mg/L as moderately hard;

121 to 180 mg/L as hard;

181 mg/L or more as very hard;

FAOs - JUST FITTER Hard Water Test Strips

What is Hard Water?

As water moves through soil and rock, it dissolves very small amounts of minerals and holds them in solution. Calcium and magnesium dissolved in water are the two most common minerals that make water "hard." The degree of hardness becomes greater as the calcium and magnesium content increases and is related to the concentration of multivalent cations dissolved in the water. 2

What are the indications that water is hard?

Hard water interferes with almost every cleaning task from laundering and dishwashing to bathing and personal grooming. - Clothes washed in hard water may look dingy and feel harsh and scratchy. The amount of hardness minerals in water affects the amount of soap and detergent necessary for cleaning. Soap used in hard water combines with the minerals to form a sticky soap curd. Some synthetic detergents are less effective in hard water because the active ingredient is partially inactivated by hardness, even though it stays dissolved.

- Dishes and glasses may be spotted when dry. Hard water may cause a film on glass shower doors, shower walls, bathtubs, sinks, faucets, etc.
- Hair washed in hard water may feel sticky and look dull. Bathing with soap in hard water leaves a film of sticky soap curd on the skin. The film may prevent removal of soil and bacteria. Soap curd interferes with the return of skin to its normal, slightly acid condition, and may lead to irritation. Soap curd on hair may make it dull, lifeless and difficult to manage. $^{\rm 2}$

Is hard water bad for the health?

The World Health Organization says that "there does not appear to be any convincing evidence that water hardness causes adverse health effects in humans". In fact, the United States National Research Council has found that hard water actually serves as a dietary supplement for calcium and magnesium. 3

How do I control water hardness?

There are two ways to help control water hardness: use a packaged water softener or use a mechanical water softening

Packaged water softeners are chemicals that help control water hardness

Mechanical water softening units can be permanently installed into the plumbing system to continuously remove calcium and magnesium.

References:

- Wikipedia.org, Water Hardness
 https://water.usgs.gov/owq/hardness-alkalinity.html
- ${\it 3. https://www.water-research.net/index.php/water-treatment/tools/hard-water-hardness}$
- 4. World Health Organization Hardness in Drinking-Water, 2003



Manufactured By: JUST FITTER Phone: 1-888-297-8388 support@justfitter.com

PO Box 803338 #57363. Chicago, IL 60680 USA

Vista Centre, 50 Salisbury Road. Hounslow, TW4 6JQ UK

18 Riverbank Court. Ashmore, OLD 4214 Australia