Total Hardness (As $CaCO_3$)

100 TOTAL WATER HARDNESS

Colorimetric test strips. (1 test per strip)

Water Hardness is composed of mostly calcium and magnesium. The water hardness comes from naturally occurring minerals in the local and regional geology being dissolved by water.

Hardness is a key water parameter and its control is important to assure proper water quality. Low Hardness (Soft water) can contribute to corrosive water. High Hardness (Hard water above 400) can lead to clarity and scaling problems. Water softeners are used to reduce Total Hardness of water.

Testing for hardness in tap water is very common and is very quick and easy with these test strips. The Color Comparator Chart for this test allows you to read Total Hardness in mg/L or ppm.

This test reports calcium hardness concentrations in water at 0, 40, 80, 120, 180, 250, 425, 1000 mg/L or ppm.

Results are obtained from this test in about 5 seconds.

Find more water information at **www.sciencefairwater.com** (a web work in progress).

ScienceFairCenter.com
6830 NE Bothell Way #C424
Kenmore, WA 98028

SCIENCEFAIRCENTER.COM

Phone: 206-440-3008
sales@sciencefaircenter.com

Background Information

Total Hardness (TH) is a measure of the total amount of calcium and magnesium that has naturally leached into the water during its journey through the watershed. In the U.S. water hardness is most often reported as milligrams per liter (mg/L) or parts per million (ppm) as calcium carbonate (CaC03).

It is difficult to produce soap suds in water with high levels of calcium and magnesium ions, hence the term “hardness”.

In addition to reducing the effectiveness of soaps and detergents, hard water may cause an insoluble scale to form on fixtures and on the inside of pipes. Scale formation depends on several factors, one of which is pH.

The EPA does not regulate the levels of hardness in the water supply. There are, however, generally recognized levels that describe the amount of hardness in a water sample:

Hardness as Calclum carbonate (ppm)	**Classification**
0-60	Soft
61-120	Moderately Hard
121-180	Hard
>180	Very Hard

Find more water information at **www.sciencefairwater.com** (a web work in progress).

ScienceFairCenter.com
6830 NE Bothell Way #C424
Kenmore, WA 98028

SCIENCEFAIRCENTER.COM

Phone: 206-440-3008
sales@sciencefaircenter.com