WATER BASICS

Understanding how water is critical to a quality beverage program and efficient foodservice operation

WATER BASICS

Water is the main ingredient in prepared beverages and a vital part of any foodservice program. In many countries, water is treated to make it potable, but the resulting formula is not necessarily ideal for preparing quality beverages. BUNN is your partner in evaluating commercial foodservice water specifications in three categories:

FORMULA

Disinfectants such as chlorine and chloramines are usually added by governing authorities to make water safe for drinking. Less priority is placed on the overall taste and clarity of the supply. These additives impact what is referred to as your water "formula" and can affect the final taste and appearance of prepared beverages.

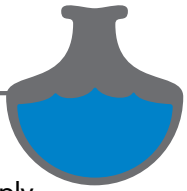
QUALITY

Sixty percent of beverage equipment failures are due to water quality Once the characteristics of your water are known, it can be determined if a commercial-grade filtration system is necessary to treat the incoming water supply to ensure optimal flavor and help prevent unnecessary equipment service costs.

DEDICATED DISPENSERS

The convenience of a dedicated hot water dispenser can aid in quality beverage preparation and also offer the added benefit of increasing overall employee and kitchen operational efficiency.

KNOW YOUR WATER

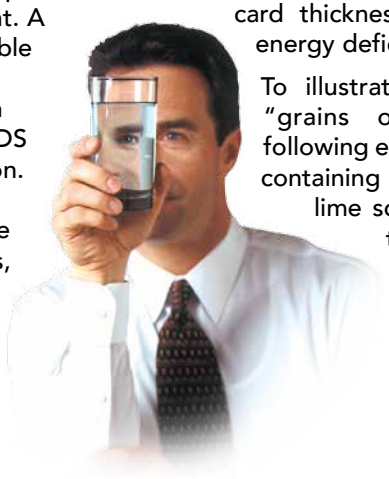


A quality beverage program must begin with quality water. Many of us take tap water for granted because it is readily available from any faucet. Optimal water for preparing beverages is clear, odorless and good tasting but the natural incoming supply does not always start that way. A shrewd foodservice operator will dedicate as much time getting to know the characteristics of the local water supply as the origin of selected coffee beans or tea leaves.

TOTAL DISSOLVED SOLIDS

In the course of its journey into your beverage, water attempts to dissolve everything that comes in contact with it, while adding those dissolved items to its own composition. Total Dissolved Solids, or TDS, is an important factor in your water formula. Essentially, TDS is everything present in water other than pure H2O and suspended solids, such as sediment. A range of meters and readers are available to determine your local TDS level, or your BUNN representative can assist in determining this level. Some level of TDS is desired, depending on the application. However, water with high TDS levels can affect taste of beverages and cause deposits in equipment. For best results, water should be within the following recommendations for parts per million (ppm) in TDS:

Overall: Below 500 ppm
Water and coffee:
50-100 ppm or 18 grains of hardness
Water and tea:
50-150 ppm or 1-3 grains of hardness

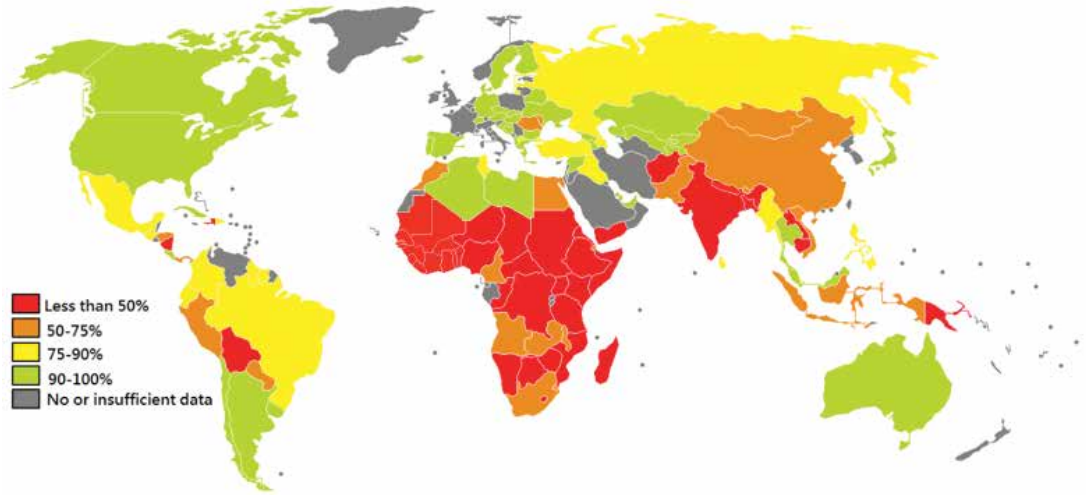


WATER HARDNESS

Water hardness is determined by measuring the mineral content, specifically calcium and magnesium. Hard water has a high mineral content. Some mineral content is preferred to create great tasting beverages. However, high levels of calcium carbonate can cause adverse effects on equipment by leaving lime scale deposits. A credit card thickness of lime can create a 30% energy deficiency in equipment!

To illustrate the meaning of the term "grains of hardness", imagine the following example: 1 gallon (3.8L) of water containing 5 grains of hardness contains lime scale equal in size to an aspirin tablet.

Water hardness is the most commonly mapped water characteristic. The map below is a general guide to countries that actively treat water supplies and publish information on water hardness. Consult your local water authority for specific formula details available in your geographic area.



WATER TREATMENT BY COUNTRIES

KNOW YOUR WATER

SEDIMENT

Water often contains small, suspended particles such as sand grains and organic matter that are invisible to the human eye. High levels of these sediments can detract from the appeal of brewed beverages and can clog beverage equipment affecting its performance and increasing service costs. Simple Test: Hold a clear glass of water up to the light. It should appear crystal clear. If tiny particles or tints of color appear, the water may have a high level of sediment.

OFF TASTE AND ODORS

Disinfectants can give water a bitter taste and a strong odor. Other tastes and odors such as "rotten egg" or musty smell result from naturally occurring elements and minerals in both tap and well water. Achieving tasteless and odorless water is key for consistently high beverage quality. Simple Test: Draw a glass of water directly from the tap. Immediately smell it, and take a sip. If an off taste or odor is detected, the water may have a quality problem.

LIME SCALE

Natural minerals in water are the cause of lime scale deposits in beverage equipment. Excessive lime scale deposits will affect the performance of heating elements, reduce the volume of water in heating tanks and clog tubing which can result in higher service maintenance bills and energy bills. Simple Test: Check the hot water faucet or sprayhead on equipment for white lime scale deposits. The presence of lime scale indicates high mineral levels.

ENSURING QUALITY WATER

Installing water filtration or conditioning equipment can help minimize or eliminate problems associated with a less than optimal water supply. BUNN is your partner in navigating the advances of water filtering technology.

SEDIMENT FILTERS	CARBON FILTERS	INHIBITOR FILTERS	ION EXCHANGE SYSTEMS
Traps debris in tap water such as dirt, rust flakes and sand Not intended to correct water hardness or taste and odor problems	Helps to improve taste and odor of beverages by oxidizing the surfaces of carbon particles so they can attract and hold organics Not intended to correct water hardness	Does not correct water hardness but reduces the effects by sequestering lime-forming minerals in water. Not intended to correct taste or odor problems	These "water softeners," exchange calcium and magnesium in the water for sodium. They are effective in reducing or nearly eliminating water hardness. However, "softened" water can cause overflow in coffee filter brew systems (iced tea actually loves softened water) and water taste may be altered as well.

BUNN® has solutions for common water problems

SYMPTOMS	PROBLEM	SOLUTION
• Chlorine Smell • Musty Smell • Unpleasant Smell	Off taste and odors	Any standard BUNN Easy Clear® EQHP filter can help resolve taste as well as odor issues and remove sediment from water.
• Cloudy Water • Visible Sediment	Sediment	
• White or discolored deposits on faucets or within pipes	Lime Scale	BUNN Scale-Pro encapsulates the minerals which cause lime scale.
• Salty or Brackish Taste • Alkaline Taste	High TDS	Reverse Osmosis filters can help with high TDS levels. Contact a BUNN representative for customized solutions to reduce overall TDS.

ENSURING QUALITY WATER

FILTER OPTIONS FROM BUNN®

www.bunn.com

Model #	Part #	Lifetime Capacity/ Chlorine Reduction	Output Flow Rate	Taste & Odor	Sediment	Lime	Softwater	Replacement Cartridges
EQ-17-TL	30200.1000	5600L	1.9Lpm	●		●		30200.1001
EQHP10L	39000.0001	37,800L	5.7Lpm	●	●	●		39000.1001
EQHP10	39000.0004	37,800L	5.7Lpm	●	●			39000.1004
EQHP25L	39000.0002	94,600L	7.9Lpm	●	●	●		39000.1002
EQHP25	39000.0005	94,600L	7.9Lpm	●	●			39000.1005
EQHP35L	39000.0011	132,400L	12.6Lpm	●	●	●		39000.1011
EQHP54L	39000.0003	204,400L	18.9Lpm	●	●	●		39000.1003
EQHP54	39000.0006	204,400L	18.9Lpm	●	●			39000.1006
EQHP-TWIN 70L*	39000.0012	264,900L	25.3Lpm	●	●	●		(2) 39000.1011
EQHP-TWIN 108SP**	39000.0013	408,800L	37.8Lpm	●	●	●		(2) 39000.1006 (1) 39000.1010
Scale-Pro®	39000.0010	Recommended 6 month change-out				●		39000.1010
EQHP-ESP	39000.0008	1,500L @ 2.77GPL @ 2Lpm		●				39000.1008
EQHP-SFTN	39000.0009	1350 grains		●			●	39000.1009
EQHP-TEA	39000.0007	4350 grains		●				39000.1007

**Requires two (2) cartridges. **Requires three (3) cartridges*

All Easy Clear Systems are manufactured with U.S. Standard Pipe Thread

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