

# Wellness Filter Comparison Booklet

## PRODUCT DESIGN AND SPECIFICATION

### How It Works:

To understand how the Wellness Filter® is able to produce such an unusual and highly sought after water, it is best to think of it as having two distinct zones. The first zone is a purification zone where contaminants are removed. This results in a pure, natural tasting water. This zone contains a deep bed of high-efficiency, proprietarily prepared coconut-based activated carbon. This carbon provides the removal of organic contaminants, chlorine and its derivative compounds, MTBE and tastes and odors. The carbon is preceded by a layer of ultra-high surface area volcanic sand for precise removal of suspended solids, parasites such as cryptosporidium and giardia, and bacteria.

The second zone of the Wellness Filter® is the enhancement zone. This zone consists of five layers of natural media – each designed to impart a specific effect to the water. The first three layers consist of a layer of far-infrared emitting ceramic media sandwiched in between two layers of magnetite media (a naturally magnetic ore). The far-infrared ceramic media is made from proprietary mixture of powdered Tenko-seki stone (an extremely rare Japanese mineral) and several other semi-precious stones. The far infrared ceramic beads provide a permanent source of free negative ions in the water. These negative or reduced ions have been shown to provide a mild anti-oxidant effect when consumed or used for bathing and showering.

The two layers of magnetite are sandwiched in between two high gauss magnets. As water passes through this high magnetic field, individual water molecules are affected in such a way that their physical properties are temporarily changed. While there are many theories to explain the phenomena, what can be observed is that water treated in this manner will be more readily absorbed by human, animal and plant life.<sup>1</sup> NEC Corporation, one of Japan's most prestigious scientific companies has conclusively shown that the solubility of water at a given temperature goes up significantly after passing through this array of media.<sup>2</sup> Water with higher solubility will also tend to dissolve more substances in it or prevent existing dissolved solids from plating out (anti-scaling). The combined effect is a super hydrating water that will accelerate the transport of water through membranes in the body as well as out of the body. The Japanese believe this is one reason why long term consumption of the water seems to aid certain conditions like kidney stones and the plaque build-up in arteries. It also explains why the water is particularly effective in removing heavy metals from the body without stripping critical minerals at the same time.

The last two layers of the enhancement zone are

two rare stones, Bakuhan and Taicho respectively. Bakuhan stone is of igneous origin and the the only mineral that has ever been certified by the Japanese Ministry of Health as a natural medicinal. The Japanese Ministry of Health has tested and found that water treated with Bakuhan is quite therapeutic when used for bathing and soaking. The Ministry was able to verify that regular soaking in Bakuhan treated water aids the body in recovering from many skin rashes including eczema and supports the body's repair of burns and minor frostbite. Bakuhan helps stabilize the pH of the water and promotes a natural alkaline state in the body. It also introduces into the water specific trace minerals such as magnesium, potassium, and soluble silica, which the Japanese believe support optimum cellular health.

Taicho has been certified as a natural anti-bacterial and anti-fungal mineral. In 850 AD, a famous Japanese monk used Taicho to stop an epidemic of what was believed to *E-coli* in the public water supply. Wellness Enterprises has tested the properties of these minerals in several agricultural applications and found the water to stimulate plant growth while retarding fungal attack. In summary, the Wellness Filter® purifies and also enhances water. The enhancement process produces a water that has a faster rate of hydration, contains negative ions, has a higher solubility, and contains specific beneficial trace ions and minerals. The treated water has also been shown to be naturally anti-bacterial and anti-fungal. A summary table of each type of media follows.

### Summary of Media Composition

1. **SPG Sand** – A manufactured media, the surface area of this material is 6.16 sq. meters per gram and provides 0.5-micron level filtration. Produces high efficiency filtration, removes parasites and adsorbs trace heavy metals, and yields very pure water. SPG sand is used in some Japanese dialysis machines to purify blood.
2. **Granulated Activated Carbon** - Made from highest quality coconut shell carbon. Removes chlorine, tastes, odors, and other harmful contaminants.
3. **Taicho Mineral** - Made from igneous minerals. Will detoxify harmful organics. Inactivates harmful bacteria. Enhances structure of water molecules. Removes iron, cadmium, and many harmful substances in tap water.
4. **Bakuhan Mineral** - Igneous mineral that stabilizes the pH of the water, increases dissolved oxygen, removes harmful substances and enhances the taste of the water. Imparts trace mineral such as silica, potassium, and magnesium.
5. **Magnet & Magnetite Stone** – High flux density (greater than 5,600 gauss) magnetic stone and magnets create magnetic field in filter for magnetic structuring of the water. Increases the rate of hydration and the solubility of treated water.
6. **Far-Infrared Ceramic** – A far infrared emitting ceramic media made from a proprietary blend of rare minerals. Produces negative ions, which provide a mild anti-oxidant effect. Believed to aid the body in fighting immune disorders, diabetes, cancer, and heart disease.

<sup>1</sup> American Petroleum Institute. 1985. "Evaluation of the Principles of Magnetic Water Treatment", Publication 960.

<sup>2</sup> A translated summary of the NEC study is available upon request.

Most physicians agree that the most important prescription for good health and nutrition is to properly hydrate the body with pure, clean water. Water is the essence of life on Earth and sufficient hydration is essential

for the proper functioning of all life as we know it. Along with the thousands of doctors who use and recommend the Wellness Filter® in Japan, several hospitals have outfitted their entire facilities with commercial sized Wellness Filters®. The Wellness Filter® has been measured to change the physical characteristics of the water (e.g., surface tension, reduction-oxidation potential, and solubility). The result is a fresh, enhanced water that is engineered to emulate the famous Hunza water in Pakistan.

After over seventeen years of use and testing in Japan, there is a substantial accumulation of reports, data, studies, and experience regarding the benefits and observed effects of water treated by the Wellness Filter®. The benefits and observations referenced were obtained by drinking Wellness Filter® water and/or from external bathing/washing. The maximum benefits were obtained when patients followed a specific drinking protocol, which immediately follows this section.

**Standard Drinking Protocol** – After several years of hydration studies, which included the optimum amount of water to ingest and the schedule for ingestion, a specific protocol was developed to optimize the effects of the Wellness Filter® water. Water temperature (iced versus room temperature) was left to individual taste. This protocol is a simple four (4) step program. It is summarized as follows:

1. Drink approximately 10 to 12 ounces of freshly prepared water immediately upon rising.
2. Drink 10 to 12 ounces approximately thirty (30) minutes before each meal and use the water sparingly with the meal.
3. Drink 2 to 3 ten-ounce glasses between meals.
4. Drink one 10 ounce glass approximately 2 hours after the last meal of the day.

**Bathing/Washing Protocol** – When studying the effects of the water on specific dermatological conditions such as eczema and acne, maximum effect was observed when the subject washed the affected area with a mild cleansing soap and treated water two times per day and just prior to bedtime. Severely affected areas were treated with a compress of warm treated water for approximately 15 minutes twice per day or by soaking in a bath for 15 minutes.

#### **Other Notable Benefits:**

In addition to the health benefits of drinking and bathing in Wellness water, it provides a number of other tangible benefits. Some of these are:

- ❖ **Retardation of bacteria and fungus** – treated water resists the growth of bacteria and fungus whether in standing containers such as toilets or ponds, on the surfaces of fruits and vegetables or in the filter housing itself.
- ❖ **Enhanced cleaning** – treated water can be observed to

more effectively remove unwanted residues (i.e., chemicals, pesticides, bacteria, etc.) and dirt from surfaces such as fruits and vegetables, floors, dishes, laboratory glassware, cooking utensils, clothes and the like. Glass and stainless steel surfaces that are washed in the water exhibit less spotting than untreated water does.

- ❖ **Enhanced flavor of food & beverages** – food and beverages prepared with treated water have no intruding taste (i.e., from chlorine or sulfide in the raw water) and appear to have a richer taste due to the higher solubility of taste producing compounds per unit volume of the treated water.
- ❖ **Deodorizing and freshening** – treated water can be observed to remove odors from surfaces and from the air by simply spraying a mist of water on the surface or by leaving open containers of the treated water in refrigerators -- much like the effect observed with baking soda.
- ❖ **Conditioning** – although the filter does not remove dissolved calcium and magnesium (i.e., soften), treated water behaves as if it has been partially softened. This conditioning effect helps the water dissolves soap more readily and reduce unsightly deposits on surfaces including the body – without the need for chemicals, resins or salt.

## **COMPARISON TO OTHER WATERS**

Water is the most important substance we will ever consume and yet is one of the most consistently misunderstood within the medical community. The following is a discussion of four different types of water routinely recommended by physicians in the US and how they compare with water produced by the Wellness Filter®.

### **Distilled Water and Reverse Osmosis Water:**

The two most commonly recommended types of water by doctors are distilled water and reverse osmosis water. Both types are generally very pure although both can allow the carry over of trace contaminants if boiling points are similar or if molecular size is similar. Unfortunately, many advocates are unaware that ultra pure water is not the best for regular long-term consumption and that it can carry an unexpected long-term health risk. To understand the reason why the purest is not always the best, one has to look at the basic chemistry of water itself. Water has what some chemists call a “stability index”. This index indicates how stable water is in relation to the chemicals and minerals in its immediate environment. Water naturally seeks to achieve a zero or neutral index. If water has a positive index at a given temperature, it will tend to release or precipitate minerals that are dissolved in it. One can witness the results of water having a strongly positive stability index (for example hard water) when such water deposits scale in pipes or hot water heaters. Water that is on the negative side of the index is aggressive and prone to dissolving minerals and metals from its immediate environment. One can see evidence of such

water when it corrodes pipes or produces rust. The more negative the index, the more aggressive the water is. Water produced from distillation and reverse osmosis has an extremely negative stability index. This water also actively absorbs carbon dioxide from the air and makes the water more acidic. When one drinks small quantities of this water for short periods of time, it has the special property of being able to absorb toxic substances in the body and remove them. This detoxification can be good for the body and can aid it in recovering from long-term exposure to certain contaminants. However, regular and long-term consumption of ultra-pure, demineralized water will also strip the body of magnesium, calcium and trace minerals.

The more the mineral loss, the greater the risk of osteoporosis, osteo-arthritis, hypothyroidism, coronary artery disease, high blood pressure and a long list of degenerative diseases generally associated with premature aging. The longer a person drinks demineralized water, the more likely the development of mineral deficiencies and an acid state in the body. A number of physicians, nutritionists and researchers now believe that aging and disease are the direct result of these deficiencies and lead to the development of an acid state in the body. Dr. Zoltan P. Rona, a Canadian physician and clinical nutritionist, reports that exclusive consumption of demineralized water will, over time, lead to multiple mineral deficiencies. His research with over 3000 patients indicates that those who supplemented their purified water intake with trace minerals were not as deficient but still not as adequately nourished in minerals as their non-purified water drinking counterparts even after several years of mineral supplementation.<sup>3</sup>

The Wellness Filter<sup>®</sup> has been shown to produce a very pure but minerally enhanced water that will not leach trace minerals from the body like distilled water and R/O water does. Animal studies have shown Wellness Filter<sup>®</sup> water to build stronger bones and more dense muscle mass than distilled water, R/O water or regular tap water.

**Ionized or Alkaline Water** – So-called ionizers or alkalizers have been popular with some US physicians for the past eight years. These machines don't purify the water as much as they physically modify it by producing high levels of negative ions via electrolysis. Developed in Japan in the late 1960's, the ionizer produces two different streams of water (i.e., one positively charged with a low pH and one negatively charged with a high pH). The negatively charged water is recommended for drinking and the acidic water is either thrown away or used to wash dishes or for irrigating plants. The focus of the alkalizer is to produce a constant source of negative ions in the water that can act as an anti-oxidant. Although originally approved by the Japanese Ministry of Health in the 1960's, long-term health studies recently prompted the Ministry to publish a health warning

<sup>3</sup> *Return to the Joy of Health: Natural Medicine and Alternative Treatment for All Your Health Complaints*, Zoltan P. Rona, MD, MSc., October 1995.

to Japanese citizens about the potential adverse effects of routine consumption of highly alkaline water (pH greater than 9). This warning as well as a rebuke of the product's health claims was also reported in *Science Scramble*, a Japanese consumer-oriented science journal in 2000 (**a translated copy is available upon request**).

The Wellness Filter<sup>®</sup> has been shown to produce a consistent level (4,000 to 7,000 ions/cc/second) but highly stable stream of negative ions (see Figure 1) by natural ionization of the water without raising the alkalinity above a

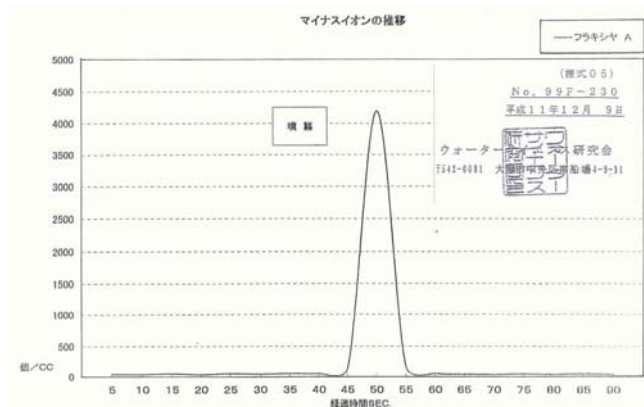


Figure 1 - Negative ions produced per cc/sec  
Measured by Japanese Water Research Laboratories

pH of 8.5. These negative ions loosely attach themselves to the soluble silica ions produced by the Bakuhan stone and are able to survive the harsh conditions of the stomach and progress into the bloodstream. These ions are produced by the interaction of the filter's proprietary media and do not require electricity to produce the ions (thus allowing for the design of shower units, whole house units and portable units). The Wellness Filter<sup>®</sup> also does not have the limitation of having to discard 50% of the treated water the way that ionizers do. In addition, recent reports by the Ministry of Health indicate that as many as 50% of the patients that consume alkalized water may be experiencing a decline in their health condition rather than an improvement. The Japanese Ministry of Health has been publicly reported in Japanese newspapers to be reconsidering its approval of this product for consumer use.

**Carbon Filtered Water** – There are many excellent carbon, carbon block and carbon/ceramic filters available to consumers. These filters are capable of efficiently removing chlorine, chlorination byproducts (e.g., THMs), organics and pesticides. They can be combined with other additives to also preferentially remove arsenic and lead. Current carbon filters have, however, several notable drawbacks. All activated carbon filters are not made of the same carbon and some carbons like coconut shell carbon are more highly adsorbent of certain hydrocarbons than coal-based carbons, which are primarily designed to remove chlorine. In addition, certain specialty carbons like catalytic carbon can remove non-organic compounds like chloramines much more effectively than coconut shell carbon. Traditional

carbon filters also have to be changed on a regular basis because they eventually saturate with the contaminants they contact and fail to meet removal standards after that. They also have problems accumulating bacteria over time and then releasing these bacteria, which can be harmful, directly into the user's drinking water. As a result, carbon filters are rated for specific pollutants and for a specific period of time...usually 6 months to a year.

The Wellness Filter<sup>®</sup> kitchen unit and point-of-entry systems are quite different from conventional filters in that they utilize a permanent carbon section (one of its seven sections of media) that does not require periodic changing like traditional cartridge filters. Instead the filter utilizes a patented backwashing system that is uniquely capable of purging the filter of most of its accumulated contaminants and regenerating the carbon for continued use. Unlike traditional backwashed point of entry carbon filters (which are backwashed only to flush out dirt and to agitate the carbon for more efficient contact), the Wellness Filter<sup>®</sup> truly does regenerate in its backwash mode. To understand this, one must look at the arrangement of the media in the filter and the sequence in which it contacts the water during the backwash cycle. During the backwash cycle, water enters into the filter from bottom up. It first contacts the five layers of enhancement media before contacting the carbon for the first time. As it passes through these five layers the water is magnetically structured, which increases its solubility, and it is ionized. This water competes with the carbon for most of what it has adsorbed, removes it and flushes it out with the wastewater. The carbon is cleaned, regenerated and readied for more service.

The Wellness Filter<sup>®</sup> also has an antibacterial layer of media that is the last to contact water during the normal mode and the first to contact the water during the backwash mode. This media (Taicho stone) aids the water in keeping the filter and the finished water free of bacteria. A standing water test was performed on the filtered water produced by four filters and normal tap water. Water was allowed to sit in an open container for nine days and was tested each day for the presence of bacteria. Only the Wellness Filter's water was shown to be free of bacteria throughout the test

**Mineral Spring Water** – More and more Americans drink bottled water in an effort to seek safe drinking water. Few are aware that bottled water is only required to meet minimum tap water standards in the US. Minimum tap water standards require only that there are no visible suspended solids and no living bacteria. They unfortunately don't regulate organics, heavy metals or radionuclides. Despite these fairly loose standards, a recent analysis of 400+ brands of bottled water sold in the US showed that approximately one third failed to meet even minimum tap water standards. In addition, recent studies indicate that the plasticizer in bottled water can leach into the water and then be absorbed by the body. Some researchers are suspicious that these plasticizers (also referred to as Phthalates or xeno-

estrogens) can cause serious long-term health conditions and/or compromise the body's immune system.

## **PRODUCT LINE**

The Wellness Filter<sup>®</sup> is available in five basic types of systems: a residential/office countertop unit, two whole-house residential systems, a shower system, a portable unit and custom-built commercial-sized systems. Each patented system contains the proprietary Wellness Filter<sup>®</sup> media and varies only by the size, capacity, and application.

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