

水

30 years ago Haru Naito left Japan to attend the State University of New York. After four years of study, and having won an NCAA national swimming championship, he returned to Japan to coach their national swimming team. Haru became interested in the emerging science of sports medicine. He became actively involved in health and performance research programs and was an early proponent of 'muscle memory' training.

Haru's other fascination was the health and vitality of certain peoples, such as the Hunza of Pakistan, in geographically diverse parts of the world. He wondered how these groups enjoyed healthier and longer lives than people living in other regions. After extensive work, Haru determined that the common element was a proximity to naturally occurring mountain water sources that were of delicate and exquisite composition.

Wanting to provide similar benefits to his athletes in Japan, Haru sought to devise a water purification system which embodied all of the key components found in the naturally occurring mountain spring waters. Over the years Haru's system evolved. He carefully blended the natural processes with scientific research, in order to create the ultimate water purifier. The result was the Wellness Filter™.

Reports of health benefits from using the Wellness Filter™ began to circulate throughout Japan. The Japanese Ministry of Health took interest and conducted rigorous tests, resulting in their unprecedented endorsement of the filter.

The Wellness Filter™ will change the way you experience water forever.



...much more than a filter

The Best Source of Water on Earth...

...could be your faucet.™



Purified to leave only beneficial components:

- Produces clean, pure, natural tasting water
- Removes chlorine and other foreign tastes and odors
- Removes harmful contaminants, and carcinogens like MTBE
- Retains beneficial minerals like calcium and magnesium

Many potential health benefits:

- Reduces free-radicals and acts as a mild antioxidant
- Enhances assimilation of vitamins and nutrients
- Beneficial in weight-loss programs and skin care
- Assists digestion and waste elimination

The Wellness Filter™, a revolutionary water purification system!

WELLNESS FILTER® HEALTH APPLICATIONS

INTRODUCTION

Americans are living in a new age of health consciousness. There is hardly anyone that is not taking a variety of nutritional supplements or trying a new diet or home exercise machine to make them look better, lose weight or achieve optimum health. This expanded health consciousness has led to an unprecedented pursuit of natural or holistic approaches even within the established medical community. It is no wonder that American's spend more than \$30 billion a year on nutritional supplements, herbs, homeopaths and the like. Today, tens of thousands of physicians, chiropractors and health practitioners are even including such supplements in their practices. It is becoming more common every day to have a patient leave the doctor's office with a nutritional formulation in hand as part of a particular health therapy. Unfortunately, despite the new openness within the medical community to explore the benefits of nutritionals and natural remedies, most practitioners overlook or underemphasize the single most important element of any health program...water. No matter what the specific health or fitness goal, one cannot achieve the **maximum** benefit from any health program without drinking the right kind of water in the proper amount. All experts agree, that next to the air we breathe, water is the most important thing we will ever put in our bodies. It is surprising that so much time and money is being spent on supplements, organic foods and natural remedies (some of which are very subtle and delicate) but little attention is given to the quality and effect of the water with which those items are taken.

One of the reasons for this is that Americans pride themselves in having very high quality water from every tap and assume that all water is the same. A thorough study of water in America and the world in general tells a different story. A few well-placed hours on the Internet show that the world is in an unprecedented water quality crisis as well as water shortage. Depending on what part of the country one lives in, it is easy to find trace amounts of nitrates, pesticides, heavy metals, radioactive compounds, petrochemicals and parasites coming from the local municipal water supply. The toxins and free radicals in these waters are made significantly more toxic to humans by the addition of chlorine -- a compound mandated by the public health department. The Environmental Protection Agency now reports that individuals who drink and bath in chlorinated surface waters (i.e., water from lakes, rivers and shallow wells) have a 50% greater likelihood of getting cancer in their lifetime.^{1 2} Most consumers are surprised to

¹ "Cancer Incidence and Trihalomethane Concentrations in the Public Drinking Water System", George L. Carlo. American Journal of Public health, Vol. 74, No. 5, 1984, pp. 479-484.

learn that one can absorb up to 600% more contaminants in your body in a ten-minute shower than in all the water consumed in a day.³ In January 2000, *Sixty Minutes*, the investigative TV program, reported that as many as 100 million Americans were drinking water contaminated with MTBE, a gasoline additive that has been leaching into our water supplies since 1992. MTBE is believed to cause cancer in concentrations as low as 10 parts per billion and unfortunately local water companies are helpless to remove it. Because of such contaminants, two out of every five households now have a water filter or drink bottled water, as will be discussed later, with no assurance of safety. The problem is that the average consumer and even most medical professionals do not know what is the best way to treat water or the best source of water to drink.

As indicated above, failure to heed what type of water one drinks can negate or diminish the benefit of whatever supplements or health protocol is being followed. However, as it will be discussed below, there is a significant difference between water purification systems and the type of water they produce. Depending on the type of system one uses and the way one drinks, it can positively or negatively affect one's health.

THE IMPORTANCE OF WATER

Medical researchers report that there is virtually no function or reaction in the body that can take place without the presence of water. Approximately 75% of our body weight is water and water makes up over 80% of our brain and 90% of our blood. Since water is an integral part of everything the body does, there is now evidence to indicate that insufficient hydration of the body can, in itself, lead to or exacerbate specific health conditions and illnesses.⁴ Water therapy has been reported to reverse or minimize such conditions as premature aging, arthritis, heartburn, back pain, asthma, hypertension and migraine headaches...to mention just a few. In addition water has also been shown to provide the following important benefits⁵:

- ❖ Water helps the body absorb and assimilate nutrients into the blood stream and internal organs.
- ❖ Proper hydration helps the body resist the formation of kidney stones, urinary infections, and constipation. Water also accelerates the excretion of toxins and wastes from the body.

² "Organic Chemical Contaminants in Drinking Water and Cancer", American Journal of Epidemiology, Vo. 110, 1979, p.420.

³ "Showers Pose a Risk to Health", Ian Anderson, New Scientist, 9/18/86.

⁴ *Your Body's Many Cries for Water*, F. Batmanghelidj, MD. Global Health Solutions, Inc. Falls Church, VA, Copyright 1992.

⁵ Real Simple, May 2001, www.realsimple.com, Time, Inc.

- ❖ Sufficient consumption of clean water has been shown to cut the risk of certain cancers like colon, breast, bladder and kidney.
- ❖ Drinking water before meals helps with weight loss and weight control since it aids digestion and reduces cravings.
- ❖ Water lubricates joints and muscles, reduces inflammation, aids in the recovery of injuries and decreases the risk of certain types of physical injuries such as sprains and pulls.
- ❖ Water boosts mental performance. As little as 2% dehydration can lead to significant short-term memory loss.

With so much to be gained by its consumption but so much risk of contaminants, consumers face a dilemma to find the “perfect water”. For those practitioners who are concerned about the type of water their patients drink, most prescribe either distilled water or reverse osmosis water, thinking the purest is the best. Others recommend bottled natural spring water or specialty waters. As will be discussed, all of these have their drawbacks and none offer the patient the optimum source of water.

THE WELLNESS FILTER[®]

The purpose of this paper is to introduce the medical practitioner and educated consumer to a proven system, the Wellness Filter[®], that has been shown to not only purify but also to enhance water in such a way that it can maximize the benefits listed above. This paper will include a discussion of the results of specific hydration studies at Japanese medical schools and by the Japanese Ministry of Health using Wellness Filter[®] water. These discussions, which will suggest that Wellness Filter water may be the ideal water to accompany any therapy, will also offer insights as to what results might be expected in a US medical setting. This paper will also compare and contrast the Wellness Filter’s water with reverse osmosis water, distilled water and mineral spring water. An appendix of test studies and summary results is also offered. Unabridged copies of all tests referenced herein are on file at Wellness Enterprises, L.L.C, Oneonta, NY.

Product History:

The Wellness Filter[®] was developed in 1980 by Harusuke Naito, a renowned Japanese sports physiologist, as part of an effort to produce “perfect water” for the Japanese Olympic swimming team and professional athlete clients. Mr. Naito believed that even subtle differences in water purity, surface tension and mineral content could affect body hydration, cellular function, and athletic performance. After years of testing and experimentation, Mr. Naito introduced the Wellness Filter[®] to the Japanese market in 1984. After several years of sales, Naito’s company began to assemble thousands of consumer reports regarding the unexpected health benefits experienced by the owners of the product. Soon many doctors began to introduce the filter in their practices and test these reports against more controlled

studies. In the late 1980’s and early 1990’s, a number of universities began to test the effect of the filter’s water on animals and plants in order to avoid the psychological or placebo effect associated with human subjects. In all cases, the researchers witnessed a substantial improvement in health and growth when compared against normal municipal water or well water. In the early 1990’s, the Japanese Ministry of Health began to investigate what it thought might be unsubstantiated claims being made by Mr. Naito’s company. The Ministry conducted its own tests and evaluations and was surprised to find that the water actually improved many degenerative diseases when consumed in a specific protocol. Mr. Naito’s company cooperated with the Ministry in its evaluations and also supported several independent studies with research physicians. One such study involved a group of 300 men and children who were suffering from severe skin disorders. The subjects were bathed in the Wellness Filter[®] water and were given it to drink in replacement of their normal beverages. The results showed that better than 80% of the disorders (mostly severe eczema and acne) completely cleared up without other drugs or lotions and within three to four months of initiating treatment. An example of the before and after effects of the water can be seen in the photos of one baby subject shown below.



In the mid-1990’s Mr. Naito submitted two of the proprietary media used in his filter to the Ministry of Health for evaluation. These media, Taicho-seki stone and Bakuhan-seki stone, are natural minerals available only in Japan. After extensive testing, the Japanese Ministry of Health verified their unique, natural medicinal properties and certified them as being approved for medicinal use...the only two such minerals ever certified as natural medicinals in the history of the Ministry. In 1999, the filter was seen for the first time in the US when it was exhibited in the Smithsonian Institute as part of an exhibit on natural health.

Also in 1999, Dr. Tadahiro Hotta, a famous Japanese cancer researcher and physician, began testing the

effects of the Wellness Filter® on 300 terminal cancer patients as part of a comprehensive experimental treatment program. The program involves a vegetarian diet, intravenous injections of vitamin C and a specific drinking protocol of Wellness Filter® water. As of the beginning of 2001, 75% of these patients had gone into remission. Dr. Hotta's work, although not yet published, along with the support of the Ministry of Health prompted thousands of Japanese doctors to begin referring patients to the Wellness Filter®.

In 2000, the Wellness Filter® was introduced to the US for the first time – primarily in test programs and evaluation studies. The results of these studies have confirmed the Japanese reports and have gained strong endorsements from a renowned cancer clinic and a diabetes foundation, which will be discussed in more detail later.

During its 17 years, the Wellness Filter® has received unprecedented acclaim and tribute while reaching over 400,000 satisfied users. The filter has been independently tested and certified by the Japan Water Works and found to satisfy all water treatment standards in Japan and to satisfy comparable US standards from the American Water Works Association (AWWA) and NSF Standards 42 & 53. In addition, the filter has been the subject of a long-term evaluation by private physicians and universities during which many health and personal benefits were studied and verified. These unexpected benefits have set the Wellness Filter® apart from any other water treatment system and have generated substantial data along with thousands of anecdotal reports.

Currently, a national movement is underway in Japan to add the filter to all of the public baths and spas due to its superior sanitation abilities and its apparent curative effects on the skin. The Japanese Ministry of Health has also installed a large capacity system in each of their hospitals.

In addition to the comprehensive tests contained herein, continual research, testing, and evaluation for additional applications are ongoing.

As evidenced by the discussion above, the Wellness Filter® is much more than a water filter since it has been shown to actually change the physical characteristics of the water such as surface tension, solubility and oxidation-reduction potential. These changes are believed to be the reason that certain health benefits have been experienced by its users (see **Appendix C – Water Enhancement Benefits and Applications**).⁶

⁶ **DISCLAIMER:** While thousands of users have reported the reversal of certain chronic health conditions and current Japanese clinical trials indicate a correlation between consumption of Wellness Filter® water and the effective treatment of certain illnesses such as cancer and diabetes, Wellness Enterprises, LLC does not make any claim of specific health benefit nor does it guarantee any specific result. However, Wellness Filter® provides a 90 day satisfaction guarantee on all products.

PRODUCT DESIGN AND SPECIFICATION

To fully appreciate exactly how the Wellness Filter® can best be utilized to assist certain health conditions or treatment regimens, it is important to first understand the design of the system. Unlike conventional water filters, the Wellness Filter® has a permanent filter media which is regenerated by periodic backwashing. As a result, it **does not** require expensive replacement filter cartridges and the owner is spared the concern and expense of maintenance, chemicals and replacement parts. The Wellness Filter® employs mechanical and adsorptive filtration and water enhancement by utilizing six types of natural filtering media, arrayed in nine treatment layers. The countertop unit attaches easily to the kitchen faucet to provide fresh, clean, natural tasting water, while the larger units are attached at the primary water source to the home or building. The filter's patented design allows the user to regenerate the filter's media by periodically backwashing the filter. With the countertop unit this is accomplished by merely turning a valve and running water back through the media for a few minutes once per week. On the larger units, the backwashing is automatically performed by a built-in timer. The backwashing action flushes accumulated contaminants out of the media and down the drain. This regeneration feature will give the average user continuous use for up to 20 years at a cost of less than 5 cents per gallon.

How It Works:

To understand how the Wellness Filter® is able to produce the health effects that it does, 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 consists of a double bed of high-efficiency coconut-based activated carbon -- the finest and highest adsorptive capacity carbon available in the world. This carbon provides the removal of organic contaminants, chlorine and its derivative compounds, 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 combined effect of the carbon and sand also removes exotic organics like pesticides, PCBs and MTBE.

The second zone of the Wellness Filter® is the enhancement zone. This zone consists of five additional 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 powdered Tenko-seki stone, a rare mineral, which has been shown to produce negative ions when contacted with water. These negative or reduced ions create a negative oxidation-reduction potential (“ORP”) in the water, which neutralizes free radicals on contact. Unlike electrically operated water ionizers, which can produce highly alkaline water as a result of producing negative ions, this proprietary ceramic media

has been shown to produce water that naturally neutralizes free radicals and disrupts the normal function of cancer cells.⁷

The two layers of magnetite are sandwiched in between two high gauss magnets that impart their magnetic field into the magnetite. As water passes through this high magnetic field, individual water molecules are aligned into linear arrays and produce what are known as micro-clusters. This drops the surface tension of the water while increasing its solubility.⁸ Lower surface tension water will penetrate surfaces faster and more completely. Higher soluble water will also 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 reverse 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, which have received Japanese Ministry of Health certification as medicinal minerals. Taicho has been certified as a natural anti-bacterial and anti-fungal mineral. Water treated in Taicho aids the healing of skin ailments and rashes. It also removes certain heavy metals. Bakuhan adjusts the alkalinity of the water and promotes a natural alkaline state in the body. It also elutes into the water specific Angstrom sized minerals such as magnesium, potassium and silica, which have been shown to enhance certain cellular functions and biochemical reactions.

In summary, the Wellness Filter® is much more than a water filter since it has been shown to actually change the physical characteristics of the water. These characteristics (i.e., low surface tension, increased solubility and oxidation-reduction potential, mineral enhancement, and natural retardation of bacteria and fungi) are believed to be the reason that certain health benefits have been experienced by its users.⁹

A cross section picture of the Wellness Filter® kitchen unit follows along with a summary table of each of the media.



Summary of Media Composition

1. **SPG Sand** - Obtained from volcanic rocks, 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.
2. **Granulated Activated Carbon** - Made from highest quality coconut shell carbon. Removes chlorine, chlorinated hydrocarbons, organics, volatiles, MTBE, tastes and odors.
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 adjusts the water to a stable alkaline pH, increases dissolved oxygen, removes harmful substances and enhances the taste of the water. It will also remove lead, mercury, and chromium, from tap water. Imparts trace Angstrom size minerals (silica, potassium, and magnesium).
5. **Magnet & Magnetite Stone** - High flux density (greater than 4,500 gauss) magnetic stone and magnets create magnetic field in filter for magnetic resonance activation of the water. Lowers surface tension, increases solubility and increases absorptivity.
6. **Far-Infrared Ceramic** - Proprietary ceramic media made from far infrared emitting stone at 2,200°F. Produces hydroxyl ions and hydrogen ions, which neutralize free radicals. Believed to aid the body in fighting immune disorders, diabetes, cancer and heart disease.

⁷ "Far Infrared Ray Emitting Stone (SGES) to Treat Cancer and Degenerative Diseases" by Professor Serge Jurasunas, pg. 123-134. *Townsend Letter for Doctors and Patients* – June 2000

⁸ American Petroleum Institute. 1985. "Evaluation of the Principles of Magnetic Water Treatment, Publication 960.

⁹ **DISCLAIMER:** While thousands of users have reported the reversal of certain chronic health conditions and current Japanese clinical trials indicate a correlation between consumption of Wellness Filter® water and the effective treatment of certain illnesses such as cancer and diabetes, Wellness Enterprises, LLC does not make any claim of specific health benefit nor does it guarantee any specific result. However, Wellness Filter® provides a 90 day satisfaction guarantee on all products.

Purification Specifications:

The Wellness Filter® has been thoroughly tested against US and Japanese treatment standards and has been shown to produce water that satisfies or exceeds all American Water Works Association (AWWA) standards. A sampling of results is given below (see **Appendix B – Purification Specifications for further details**).

	AWWA	WELLNESS FILTER®
Bacteria	<100/ml	0
Colitis Germs	not detectable	not detectable
Cadmium	<0.01 mg/l	<0.001 mg/l
Mercury	<0.0005 mg/l	<0.00005 mg/l
Selenium	<0.01 mg/l	<0.001 mg/l
Lead	<0.05 mg/l	<0.001 mg/l
Arsenic	<0.01 mg/l	<0.001 mg/l
Chromate 6+	<0.05 mg/l	<0.005 mg/l
Cyanide	<0.01 mg/l	<0.001 mg/l
MTBE	no standard	<0.0001 mg/l
Carbontetrachloride	<0.002 mg/l	<0.002 mg/l
1,2 Dichloroethane	<0.004 mg/l	<0.0004 mg/l
1,1 Dichloroethylene	<0.02 mg/l	<0.002 mg/l
CIS 1,2 Dichloro-ethylene	<0.04 mg/l	<0.004 mg/l
Tetrachloroethylene	<0.01 mg/l	<0.001 mg/l
1,1,2 Trichloroethane	<0.006 mg/l	<0.0006 mg/l
Trichloroethylene	<0.03 mg/l	<0.003 mg/l
Benzene	<0.01 mg/l	<0.001 mg/l
Chloroform	<0.06 mg/l	<0.001 mg/l
Dibromochloromethane	<0.03 mg/l	<0.001 mg/l
Bromodichloromethane	<0.03 mg/l	<0.001 mg/l
Bromoform	<0.09 mg/l	<0.001 mg/l
All Trihalomethanes	<0.1 mg/l	<0.001 mg/l
1,3 Dichloropropane	<0.002 mg/l	<0.0002 mg/l
Free Chlorine	0.5 mg/l	0
Pesticides	<0.0006 mg/l	<0.0006 mg/l
Detergents	<0.2 mg/l	<0.05 mg/l
1,1,1 Trichloroethane	<0.3 mg/l	<0.03 mg/l
Phenol	<0.005 mg/l	<0.005 mg/l
Taste	not abnormal	normal
Odor	not abnormal	normal
Color	< 5 degrees	< 2 degrees
Turbidity	< 2 degrees	<0.5 degrees

Physical Specifications:

	COUNTERTOP	RESIDENTIAL
Flow rate	2 gpm at 20 psig	30 gpm @ 45 psig
Water pressure	10-100 psig	10-100 psig
Water temperature	40°F - 176°F (4°C - 80°C)	40°F - 176°F (4°C - 80°C)
Weight	11 lbs	100 lbs
Dimensions	7" W x 5" D x 14" H	10" D x 32" H
Backwash	Manual	Automated
Electrical	None	110 VAC

Cost Comparisons:

Although it has a higher initial investment, the Wellness Filter® eliminates the need for expensive replacement cartridges, parts or fixtures. Disposable filters can have a deceptively low purchase cost but create a very high operating cost. The Wellness Filter® produces pure natural tasting water for less than 5 cents per gallon for up to 20 years.

	Unit Cost	Cartridge Cost	Replace. Frequency	20 yr. Cost	Cost per gal.
Wellness	\$980	\$0	20 yr.	\$980	4.9¢
PurQuest	\$597	\$0	5 yr.	\$1194	6.0¢
Doulton	\$398	\$69	1 yr.	\$1700	8.5¢
Amway	\$423	\$108	1 yr.	\$2042	10.2¢
Everpur	\$285	\$70	0.8 yr.	\$2035	10.2¢
Brita	\$22	\$7	.06 yr	\$3510	17.6¢
Pur	\$30	\$20	.08 yr.	\$4008	20.0¢

UNIQUE BENEFITS OF WELLNESS FILTER® WATER

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® (**Appendix D – Installations**). 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 health 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.

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. This protocol involved drinking approximately 12 ounces of freshly prepared water immediately upon rising and thirty (30) minutes before each meal (as opposed to drinking it with their meal). Subjects were directed to drink 2 to 3 additional 12 ounce portions of water between breakfast and lunch and then again between lunch and dinner. A final portion of treated water was ingested

approximately 2 hours after the last meal of the day. Water temperature (i.e., room temperature versus iced) was left to the individual taste of the subject.

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.

Summary of Japanese Studies:

The Wellness Filter® and the beneficial effect it has on water have been studied by the Japanese Ministry of Health, several US and Japanese universities, and by independent physicians during the past several years. Most studies have focused on either the observed effect of a specific hydration schedule (i.e., drinking) or on the dermatological effects of bathing/washing with treated water. Although controlled clinical studies have been less frequent, there have been numerous case studies performed in the area of: cancer research, diabetes, gastroenterology, dermatology, nutrition and internal medicine. In addition, the filter has been evaluated in weight loss and fitness training programs. A number of beneficial results have been observed, some of which were directly measurable such as the reduction of certain immune disorders while others were more subjective such as an increase in personal energy, endurance and a heightened sense of well being. Results were the most reproducible when a specific ingestion or bathing protocol was followed.

Observed effects resulting from drinking and/or bathing in Wellness Filter® water can be summarized into several categories:

- ❖ **Digestion & assimilation of nutrients** – Users of the treated water were observed to digest their food more quickly and thoroughly than subjects using untreated water. Treated water has been shown to assist the body in achieving a natural alkaline state. Nutritional supplements have been shown to be transported into the blood stream faster than with untreated water. At the cellular level, osmotic pressure is reduced and the transport of biochemical reactants across cell membranes is increased.¹⁰
- ❖ **Waste elimination** – virtually all subjects were observed to adjust to a more frequent waste elimination schedule and that bowel movements were easy without experiencing diarrhea. Stool specimens were observed to be significantly more digested than subjects consuming untreated water.

- ❖ **Gastrointestinal disorders** – Subjects ingesting the treated water were observed to reduce complaints of gastric reflux, heartburn and indigestion by more than 80%. Subjects who suffered from peptic ulcers showed a 60% reduction in complaints of pain. All subjects reported less intestinal cramping and gas.^{11 12}
- ❖ **Dermatological conditions** – Subjects who suffered from acute acne were observed to experience a greater than 90% reduction in episodes and severity when following the daily washing protocol for four weeks or longer. Subjects suffering from eczema and other chronic skin conditions showed a greater than 90% reduction after daily bathing and soaking in the treated water for three to four months. This is believed to be the synergistic result of the antibacterial qualities of Taicho (which reduces acne forming bacteria) and the antioxidant properties induced by the far-infrared ceramic.¹³
- ❖ **Cancer treatment & prevention** – Wellness Filter® treated water is part of a long-term 300-patient study in cancer treatment in Japan. Final clinical studies are expected in the spring of 2002 but preliminary test results in comparative studies show 75% remission rate with patients following a restricted diet and drinking 14 glasses of treated water per day. In cancer prevention studies, it was observed that reduced ions in the water reduced the presence of free radicals and the subsequent reduction in damage to DNA.^{14 15 16}
- ❖ **Diabetes treatment and prevention** – The Japanese report that Wellness Filter® water helps normalize blood sugar levels for diabetics – both type I and type II. This normalization effect (i.e., reducing the highs and lows of blood sugar by approximately 50%) was observed after approximately 11 to 12 weeks of hydration. The Japanese report that Wellness Filter® water also reduces oxidative stress to the pancreas and liver. Insulin dependent diabetics were seen to reduce their daily intake of insulin by 25% to 40% after approximately 12 weeks of daily usage.
- ❖ **Migraine headaches** – Patients were treated with a specific protocol for migraines. Patients were given 12 ounces of treated water immediately upon the onset of a migraine. The patients were asked to wait 20 minutes

¹¹ Unpublished studies, Tobioka Internal Medicine Takashi Tobioka, MD, Okayama, Japan, 1997.

¹² *Your Body's Many Cries for Water*, F. Batmanghelidj, MD, July 1995, Second Edition.

¹³ "Two hundred patient dermatological studies using naturally ionized water", Tadahiro Hotta, MD, Kyoto, Japan 1997.

¹⁴ "Electrolyzed-Reduced Water Scavenges Active Oxygen Species and Protects DNA from Oxidative Damage", Sanetaka Shirahata, et. al., *Biochemical and Biophysical Research Communications*, V234/1 pp 269-274 (1997), Academic Press.

¹⁵ Unpublished research observations and discussions, Sanetaka Shirahata, 1999-2000.

¹⁶ *Water, The Chemistry of Life*, Hidemitsu Hayashi, MD, Volume 6, Nos. 2-5, 1995.

¹⁰ Research observations and discussions to be presented at the 13th International Meeting of Japanese Association for Animal Cell Technology, Fukuoka, Japan, November 17-21, 2000, Sanetaka Shirahata

and consume a second 12-ounce portion of the water. Twenty minutes later a third aliquot of water was administered. Eighty percent (80%) of the patients experienced a significant reduction or the complete elimination of the headache by the time the third aliquot was consumed.

- ❖ **Urinary tract infections** – Physicians’ studies have shown that patients who are prone to recurring urinary tract infections experience a significant reduction (greater than 90%) in the incidence of urinary tract infection when the standard drinking protocol previously referenced is followed.
- ❖ **Kidney stones** – Patients with a history of kidney stones experienced a reduction in incidence by more than 70% when drinking the Wellness Filter® water. In a small, statistically insignificant population, patients suffering from kidney stones were able in 100% of the test subjects to reduce the size of the stone and successfully pass it after following the drinking protocol.
- ❖ **Kidney dialysis** – In a sample population of ten kidney patients who were confined to regular dialysis treatment, four of the patients were able to eliminate dialysis after four months of following a strict drinking protocol of four liters of Wellness Filter® water per day.
- ❖ **Weight loss and fitness training** – Subjects who drank the prescribed amount of treated water and who participated in several different diet programs were observed to lose more weight (16% to 24%) and keep the weight off longer. Fitness trainers using the water were observed to develop significantly more lean muscle mass (8% to 12%).¹⁷
- ❖ **Dental hygiene** – Clinical studies at USC Dental School and in Sweden have shown that daily brushing and rinsing with treated water produced a 46% reduction in plaque when compared to the same amount of brushing and rinsing with regular tap water regardless of the brand of tooth paste used. This study further showed a 42% reduction in the incidence of gingivitis - one of the principal causes of gum disease.^{18 19}

Summary of US Studies:

Because of the recent arrival of the Wellness Filter to the US, most human studies are just getting organized. However, there are two notable human studies, one animal study, and one major biology study to report. These are summarized below:

¹⁷ Unpublished fitness training studies, Gainesville, FL, 2000

¹⁸ “The Effect of oral irrigation with a magnetic water treatment device on plaque and calculus”, *J. Clinical Periodontal*, 1993: 20: 314-317.

¹⁹ Hibben, S.O. (1973) “Magnetic treatment of water”, National Technical Information Service, no. 1622-4. Krasse, B. (1977) “Adherence of bacteria to tooth surfaces”. *Swedish Dental Journal I*, 253-259.

- ❖ **Hippocrates Health Institute** – Hippocrates is a Florida based medical spa specializing in the treatment of cancer and heart disease by a specialty program of diet and nutrition. Recently rated by *Spa Magazine* as the number one such institute in the world, the Institute conducted a seven month study of the effect of Wellness Filter® water on their patients (approximately 600 patients). Patient blood samples were taken upon entering the Institute and upon leaving 21 days later. Blood samples were given a comprehensive blood chemistry analysis by an outside laboratory and were examined at the Institute by dark field microscopy. The Institute reported a statistically significant increase in hemoglobin and blood alkalinity in virtually all patients during the 21 day test period. This increase was above and beyond the increase that has been historically reported with their program. Dark field microscopy showed an increase in blood cell elasticity and mobility...indicators of improved immune function. The Institute has since converted their entire facilities over to Wellness Filter® water.
- ❖ **Diabetes Resource Center** – The DRC is a non-profit corporation focused on educating diabetics about their disease management. The DRC evaluated the Wellness Filter® by treating diabetics with the Japanese hydration protocol and the evaluating before and after blood samples. The DRC reported a qualitative increase in blood hydration when compared with normal tap water. Diabetics typically suffer from chronic dehydration due to the routine injection of insulin. The substitution of Wellness water improved blood cell elasticity and mobility in 100% of the patients tested. The DRC later issued the Wellness Filter® its US seal of approval as a product beneficial for diabetic health (see Appendix E).
- ❖ **In-house diabetes studies** – Wellness Enterprises is currently conducting its own long term study of diabetic reaction to Wellness Filter® water. After three months and in a small sample population of type I diabetics, 100% of the subjects have observed a reduction in blood sugar swings and one subject has reported a 50% reduction in insulin requirement.
- ❖ **University of Idaho studies** – The University of Idaho conducted a nine month test of the treated water’s effect on plant fungus and plant growth. The study showed that watering plants and harvested potatoes with Wellness Filter® water reduced fungus by 99.33%. Plant growth studies, which are still on-going, show an increase in growth rate by 50% while reducing fertilizer loading by 50%. The study confirms Japanese studies showing increased rates of hydration, nutrient utilization and improved cellular function.

- ❖ **Hillandale Farms** – Hillandale farms (White Springs, Florida), the tenth largest producer of eggs in the US, conducted a 40 week study of the effect of Wellness Filter® water on hens and their egg production. The chicken study was particularly important since hens are not influenced by the placebo effect like humans are. In a study of 50,000 hens, the Wellness hens produced 199,052 more eggs than the control hens did. In addition, the Wellness hens began producing Grade A sized eggs 2.5 months earlier than the other hens and experienced a 30% reduction in mortality.

Other Notable Benefits:

The filter removes or reduces all harmful contaminants but unlike distillation systems and reverse osmosis systems, provides a stabilized water which will not leach calcium or other precious minerals from the body tissue and bones. In addition to removing suspended and dissolved contaminants, the Wellness Filter® has also been shown to alter the physical and chemical properties of water as it passes through the filter's media. Specifically, treated water can be measured to have a lower surface tension, increased solubility, and lower viscosity. It also produces a negative ORP and produces a substantial anti-fungal effect.²⁰ As a direct result of these changes, treated water can be observed to more readily wet surfaces, dissolve salts, transport a higher concentration of dissolved minerals, and penetrate membranes at a faster rate than untreated water. These features yield a benign “purified and enhanced water” that produces other desirable physical results (documented in footnotes and **Appendix D –Installations**):

- ❖ **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, treated water behaves as if it has been softened, i.e., it dissolves soap more readily and does not leave deposits on surfaces including the body.

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 prescribed 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 consumption and that it can carry a significant 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 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 is good for the body and aids it recovering from long-term exposure to certain contaminants. However, regular and long term consumption of ultra-pure, demineralized water will strip the body of magnesium, calcium and trace minerals.

The more the mineral loss, the greater the risk of osteoporosis, osteo-arthritis, hypothyroidism, coronary

²⁰ Laboratory studies on the effect of water treated by the Wellness Filter on specific biological species. Nelson Laboratories, Inc., Salt Lake City, UT, Sept. 2000

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 three thousand 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.²¹

The Wellness Filter® 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® 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 used for drinking and the positively charged water is used for irrigating plants or washing dishes. 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 to Japanese citizens about the potential adverse effects of routine consumption of highly alkaline water (pH greater than 9). This warning was also reported in a consumer-oriented science journal in 2000 (**a translated copy is provided in Appendix F**).

The Wellness Filter® has been shown to produce the sought after negative ions by natural ionization of the water without raising the alkalinity above a pH of 8.5. As a result, it does not require electricity to produce the ions (thus allowing for the design of shower units, whole house units and portable units) nor does it 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 experience a decline in their health condition rather than an improvement.

²¹ *Return to the Joy of Health: Natural Medicine and Alternative Treatment for All Your Health Complaints*, Zoltan P. Rona, MD, MSc., October 1995.

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 all 400 brands of bottled water sold in the US showed that 37% failed. 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 can cause or complicate health conditions.

FLUORIDE REMOVAL

Few public health programs have attracted as much controversy as the use of fluoride-based compounds in drinking water. Shortly after a 1939 report by Dr. T. Trendley Dean, a dentist working for the US Public Health Service, in which he stated that fluoridated water could lessen the incident of cavities, America began the practice of adding fluoridated compounds to our public drinking water. However, despite decades of endorsement by the American Dental Association and the US Public Health Service, fluoridation has generally failed to deliver the cavity-free society it promised. Instead, fluoridation has polarized certain segments of the scientific community and fostered some very vocal anti-fluoridation activists. Among them are a number of physicians and nutritionists who, although in the minority, believe that fluoridation poses a long-term toxic threat to everyone. What makes the issue confusing to the public is that health agencies like the Public Health Service tout the success of fluoridation on the one hand²² and the Environmental Protection Agency lists most forms of fluoride (including the common forms used in our water supplies) as toxic substances on the other hand²³. In addition, while the effect of too much fluoride on the teeth is well documented among dentists, there are little data on the long-term health effects of fluoridation on the rest of the body²⁴.

In addition, misconceptions about fluoridation are common. For example, most people, including many dentists and health professionals, believe that sodium fluoride is the standard form for fluoride to be added to their water. This is a misconception that continues despite the fact that over

²² CDC: "Achievements in Public Health, 1900-1999 - Fluoridation of Drinking Water to Prevent Dental Caries" MMWR 48(41); 933-940 (1999).

²³ ATSDR/USPHS - "Toxicological Profile for Fluorides, Hydrogen Fluoride and Fluorine (F)" CAS# 16984-48-8, 7664-39-3, 7782-41-4 (1993).

²⁴ Health Effects of Ingested Fluoride, Subcommittee on Health Effects of Ingested Fluoride, Committee on Toxicology, Board on Environmental Studies and Toxicology, Commission on Life Sciences, National Research Council, August 1993, p.59.

95% of all US cities use hydrofluorosilicic acid, a direct byproduct of the pollution scrubbers in the phosphate fertilizer industry. While this may not seem to matter to the non-technical reader, some researchers now believe that the toxic results attributed to fluoride by some physicians, may be the result of the contaminants in this compound rather than the fluoride ion itself. It is well documented that this form of fluoride contains environmental toxins like uranium oxide, thorium and radium (all radioactive compounds) as well as certain heavy metals like lead and arsenic²⁵. Although no long-term health studies have been conducted with this compound, anyone who understands its origin and its inherent impurities has to be concerned.

At present there are only two absolute and safe ways to remove fluoride from water, i.e., distillation and reverse osmosis (R/O). Although both processes are effective in removing the fluoride (along with contaminants) both methods suffer the demineralizing effects on the body discussed in the previous section. The Wellness Filter®'s unique purification system will remove the trace radioactive and heavy metal contaminants contained in the hydrofluorosilicic acid. It also reacts with the hydrofluorosilicic acid to produce calcium fluoride – a naturally occurring form of fluoride found in mineral springs. Unlike the other forms of fluoride, calcium fluoride is non-toxic, is not retained in the body and is completely excreted in the urine²⁶. For those concerned about the absorption of fluoride through the skin in the shower/bath (a generally impractical use of distillation and R/O), the Wellness Filter® is also available in both a shower system and a whole house unit.

PRODUCT LINE

The Wellness Filter® is available in five basic types of systems: a residential/office countertop unit, a whole-house residential system, a shower system, a portable unit and various commercial-sized systems. Each patented system contains the proprietary Wellness Filter® media and varies only by the size, capacity, and application. The shower and portable units employ cartridge filters that do require periodic changing.

<p>TO ORDER Call 800-497-9516 The Cutting Edge Catalog™ P.O. Box 5034 Southampton, NY 11969 www.cutcat.com cutcat@cutcat.com</p>
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²⁵ US MINERALS/COMMODITIES DATABASE
<http://minerals.usgs.gov/minerals/pubs/commodity/fluor spar/280396.txt>

²⁶ Kick CH, Bethke RM, Edgington BH, Wilder OHM, Record PR, Wilder W, Hill TJ, Chase SW - "Fluorine in Animal Nutrition" Bulletin 558, US Agricultural Experiment Station, Wooster, Ohio (1935)

APPENDIX

- A. Media**
- B. Purification Specifications**
- C. Water Enhancement Benefits and Applications**
- D. Installations**
- E. Diabetes Seal of Approval**
- F. Science Scramble Article**

APPENDIX A – MEDIA

A. BAKUHANSEKI MINERAL STONE

Bakuhanseki is a proprietary media used in all Wellness Filters®. On October 15, 1995, the Japanese Government’s Ministry of Health, Drug Approval Division, gave their approval as an approved medicine. (*Note: This was the first and only natural mineral stone ever granted the designation of an approved medicine by the Ministry of Health. A copy of the certification is available upon request.*) Bakuhanseki mineral stone is approved for medical purposes in powdered form (oral or skin application), dissolved in water, and for use in water filters for bathing and drinking. This is extremely important to the Wellness Filter® since the Ministry of Health uses Wellness Filter® water in their hospitals and in many of their approved health bathing spas. (*Note: Because the Bakuhanseki mineral stone is designated as a medicine, treatments in their health spas are covered by Japanese Government medical reimbursement. Approval No. 1155.*)

1. **Bakuhanseki Mineral Stone Evaluation.** Prior to any tests on humans, the government conducted an exhaustive evaluation on the chemical/physical makeup of the mineral stone. All were approved at certified levels. Although there are several types of Bakuhanseki found in the world today, their content and therapeutic benefits vary widely. Consequently, only Bakuhanseki stone from certain certified mines/quarries were approved by the Japanese Government. *Note: all Wellness Filter® Bakuhanseki mineral stone media comes from one of these certified mines/quarries. Wellness Filter® is the only water filter in the world with access to this approved form of Bakuhanseki mineral stone.*
2. **Human Tests.** Three hundred (300) people were treated over a number of years at Kitazato Medical School of Public Health in Tokyo to determine the health benefits of treatment with water either filtered through Bakuhanseki mineral stone or with Bakuhanseki powder added (no difference in results from either water treatment method).

Repeated spa treatments of test subjects resulted in the following reported benefits:

- * Fatigue, lethargy—more energetic.
- * Wide range of skin rashes—most were completely cleared up after treatment.
- * Sore muscles—reduction or elimination of aches and pains.
- * Sensitive nerves—reduced sensitivity.
- * Backache—reduced pain and improved flexibility.
- * Arthritis—reduced pain and improved flexibility.
- * Dry and red skin—softer skin and return of natural color.
- * Frost bite (minor)—return of skin viability.

B. TAICHOSEKI MINERAL STONE

Taichoseki is a proprietary media used in all Wellness Filters®. On December 15, 1990, the Kitazato Medical School of Public Health in Tokyo, having found that it greatly inhibits the growth of fungus and bacteria, approved Taichoseki mineral stone as a “natural disinfectant”. The Medical School’s studies found that water treated by Taichoseki mineral stone creates an atmosphere that slows down and even stops the growth of fungus and bacteria.

1. **Fungus and Bacteria Tests** -- A variety of fungi and bacteria were introduced to water containing Taichoseki mineral stone. Test Nos. B8-523 and B8-521, November 1, 1990, conducted by Kitazato Medical School of Public Health, Tokyo. The following were introduced to controlled samples of Taichoseki mineral stone water and displayed **no growth** or minimal growth well within acceptable standards:

Staphylococcus aureus FDA 209P	Sarcina lutea ATCC 9341	Microsporum gypseum
Bacillus subtilis ATCC 6633	Escherichia coli B ATCC 11303	Aspergillus niger
Pseudomonas aeruginosa	Penicillium chrysogenum	Trichophyton mentagrophytes
Penicillium citrinum	Chaetomium globosum	Myrothecium verrucaria
Trichophyton interdigitale	Candida albicans	

APPENDIX B – PURIFICATION SPECIFICATIONS

Tests and Studies Certified by the Japanese Government

The following tests were performed without utilizing the backwash feature of the Wellness Filter® - backwashing significantly extends the life of the filter and increases performance.

Countertop Wellness Filter® :

Test data was stamped and approved by the Japanese Tap Water Association (Japanese Government Agency) on August 4, 1994. Tests were performed in the Japanese Government approved lab, GIFU Public Health Institute in GIFU Prefecture. Approval covered filter design, assembly, components, and water quality. Test Number NBL-01. Filter was certified to meet Japanese Government water standards.

Summary of tests and results:

- (1). **Chlorine Removal:** This test was conducted to confirm effective chlorine removal (test started on July 7, 1994, at 2:20 PM and completed July 28, 1994, at 1:50 PM). After running 114,451 liters (30,238 gallons) of tap water through the Wellness Filter® with an average of 2.0 PPM (parts per million or mg/liter) of chlorine. Readings were taken at 43 separate intervals during the three-week test. *(Note: Wellness Filter® water readings of chlorine level was never above 0.0 PPM (or mg/liter). Results were obtained without any backwashing).*
- (2). **Stagnant Water Test:** This test was performed to ensure water with introduced E. coli could be left in the Wellness Filter® for 24 hours and still be removed after filtration (test performed June 27, 1994). Water was left in the filter for a 24-hour period and then measured for E. coli growth. Readings were 0/ml. A similar test was performed on water filtered through the Wellness Filter®, collected in a lab dish, and infected with E. coli. Tests 24 hours later showed no E. coli growth.
- (3). **Organic Material Removal plus Effect on Taste and Smell.** This test was performed to confirm the Wellness Filter® will remove predetermined concentrations of specific materials from filtered water (tests performed on June 14, 1994). Water was treated with concentrations of organic material, zinc, and phenol according to Government Standard Tests No. 69 and 264 established December 21, 1991.

Organic Material	0.6 mg/l
Zinc	0.01 mg/l
Phenol	<0.005 mg/l
Turbidity	<0.5 degrees
Color	<2.0 degrees
Smell	No detection
Taste	No detection

These tests were carried out on separate days over a week's span with different volumes. Results were similar.

The Wellness Filter® outperformed established standards in all tests.

- (4). **Extractables.** This test was performed to ensure no toxins were introduced into filtered water from filter components (plastic casing, hoses, valve, etc.--test performed November 21, 1993). **No toxins were present.**

Kaneka Wellness Filter®/Water Study (Private Industry).

By far the most exhaustive study and test evaluation to date was carried out in 1994 by the Kaneka Company. Kaneka is a \$4 billion-plus pharmaceutical and medical product manufacturer who evaluated and approved the Wellness Filter® and Wellness Filter® water for use in pharmaceutical and medical product manufacturing processes. Due to the highly regulated nature of this industry, Kaneka invested over \$3 million evaluating the Wellness Filter® prior to approval for their own use.

Kaneka fully analyzed the effectiveness of the Wellness Filter® as a stand-alone product and in comparison to other filters. They tested backwash effectiveness; filter components and media stability (to insure Wellness Filter® components and media do not add any harmful substances to filtered water); viral, fungal, and bacteria growth within the filter; and the water produced by the Wellness Filter® for removal of specific substances, viruses, and bacteria. The Wellness Filter® was selected over competitive filters for use by Kaneka and subjected to additional extensive testing.

Some of the tests and results follow. Note all tests were performed by a Japanese Government certified lab following strict protocols.

- (1). **World Health Organization (WHO):** The WHO established 46 standard guidelines against which water must be tested. Many of these guidelines are more stringent than those recommended by the American Water Works Association (AWWA) or NSF. Wellness Filter® water was compared to both WHO standards and water from the City of Kobe, Japan's Municipal supply. Wellness Filter® water was equal to or better than all WHO standards. Best performance areas were removal of chloroform, trihalomethanes, herbicide 1 and 2, pesticides, zinc, iron, copper, sodium, manganese, chlorine, non-volatile solids, detergents, 1,1,1 trichloroethane, KMnO₄, and improvement in overall color and turbidity. The Wellness Filter® demonstrated an improved performance over the established standards by a minimum of 10 percent with most greater than 100 percent. In addition, 13

standards for “pleasantness of potable water (taste, smell, hardness, color, turbidity) were established. Wellness Filter® water met or exceeded all Standards.

- (2). **Heavy Metal Emissions from Filtration Media:** This test was performed on all Wellness Filter® media to insure no unwanted heavy metals were added to the filtered water. Purified water without the presence of lead, arsenic, cadmium, or mercury was filtered. Heavy metals were not present. Tests were performed on August 4, 1994.
- (3). **Pesticide Removal.** With concentrations of .010 mg/l and 0.016 mg/l of pesticides, filtered concentration was less than 0.0006 mg/l (WHO standard 0.006 mg/l).
- (4). **Bacterial (Microbe) Growth in Filter:** Most water filters provide an ideal environment for bacteria growth – Wellness Filters® contain bacterial-static media that controls the growth of bacteria within the filter. Water was left in the Wellness Filter® for 24- and 48-hour periods and showed no bacteria growth. After 96 hours, minimal bacterial growth resulted. Fifteen minutes of backwashing restored water to zero bacteria count. The Wellness Filter® does not promote bacterial growth for long periods and backwashing controls bacterial growth.
- (5). **Open Container Microbe Test:** Measures microbe growth in filtered water. Wellness Filter® water was left in an open container and tested regularly for bacteria growth. Growth was nearly undetectable until eighth day. After 10 days, measured at 1E + 0.5 (counts/ml). Competitive filter water measured 1E + 3 to 1E + 4 by the second and third test day!
- (6). **Trihalomethane Removal:** The filter demonstrated 95-100 percent removal if backwashed every five days of use (measurements taken on countertop filter).
- (7). **Comparisons Made Between US Filters, Hurley and Seagull IV:** The other tested filters failed to control microbe growth while water remained in filter and had expensive cartridges to replace. As these filters approached replacement time, flow rates were reduced. (Wellness Filter® backwashing kept flow rate relatively constant.) Additional comparative studies were halted when Wellness Filter® was chosen as primary filter to be tested due to economics and the Wellness Filter®’s ability to control microbe growth.

Japanese Ministry of Defense Potable Water Test: The Japanese Ministry of Defense was concerned with the problem of accessing potable water for their Peace Keeping Forces (PKF) while on duty in foreign countries. They experimented on all types of filters to include reverse osmosis, sand/charcoal only, and boiling to name a few. Many were eliminated due to high cost and complexity. Using the PKF Chiba (Platoon) for test coordination, the Ministry of Defense conducted filtering effectiveness of a Diatomaceous Earth Filter and a Wellness Filter®. Water was taken from a river and mineral spring for comparison. The test was completed on May 23, 1997.

Results were as follows:

Test Criteria	River Water Test			Spring Water Test			Standards
	River Water	Diatomaceous Filter	Wellness Filter®	Spring Water	Diatomaceous Filter	Wellness Filter®	World Health Org. Standards
Suspended Solids (mg/l)	18	4	1	6	2	2	2
Color	8	6	6	8	6	5	5
Odor	N/O	N/O	N/O	N/O	N/O	N/O	N/O
Organic Material (mg/l)	27.2	17.7	3.2	6.6	5.7	1.8	10
Bacteria Count	100	46	N/D	340	147	10	100
24 hours	N/T	N/T	12	N/T	N/T	1	N/T
48 hours	N/T	N/T	N/D	N/T	N/T	1	N/T
E. coli count	Present	Present	None	None	None	None	None
24 hours	N/T	N/T	None	N/T	N/T	None	None
48 hours	N/T	N/T	None	N/T	N/T	None	None

KEY: *N/T = Not Tested* *N/D = None Detected* *N/O = No Odor*

Bacteria and E. coli growth were only tested in the Wellness Filter® as prior tests showed unacceptable growth in river water, Diatomaceous Earth Filter water, and spring water. The test confirms the Wellness Filter®’s ability to filter out bacteria and E. coli along with providing an environment that will not encourage growth.

The Ministry of Defense chose the Wellness Filter® for use by the PKF to produce potable (drinkable) water.

Bakuhanseki Mineral Stone (an essential part of Wellness Filter® media): On October 15, 1995, the Japanese Government Ministry of Health, Drug Approval Division, gave their first approval ever of a natural mineral stone for designation as an approved medicine. Bakuhanseki mineral

stone is approved for medical purposes in powdered form (oral or skin application), dissolved in water, and for use in water filters for bathing and drinking.

This is extremely important to the Wellness Filter® since the Ministry of Health uses Wellness Filter® water in many of their approved health bathing spas. Because the Bakuhanseki mineral stone is designated as a medicine, these treatments are covered by Japanese Government medical reimbursement. Approval No. 1155.

- (1). **Bakuhanseki Mineral Stone Evaluation.** Prior to any tests on humans, an exhaustive evaluation was carried out on the chemical/physical makeup of the mineral stone. All were approved at certified levels. However, only Bakuhanseki stone from certified mines/quarries were approved. **All Wellness Filter® Bakuhanseki mineral stone media comes from one of these certified mines/quarries. We are the only water filter company in the world with access to this approved form of Bakuhanseki mineral stone.**
- (2). **Human Tests:** Three hundred (300) people were treated over a long period at Kitazato Medical School of Public Health, Tokyo, to determine the health benefits of treatment with water either filtered through Bakuhanseki mineral stone or with Bakuhanseki powder added (no difference in results from either water treatment method).

Repeated spa treatments of test subjects resulted in the following reported benefits:

- * Fatigue, lethargy—more energetic.
- * Wide range of skin rashes—most are completely cleared up after treatment.
- * Sore muscles—reduction or elimination of aches and pains.
- * Sensitive nerves—reduced sensitivity.
- * Backache—reduced pain and improved flexibility.
- * Arthritis—reduced pain and improved flexibility.
- * Dry and red skin—softer skin and return of natural color.
- * Frost bite (minor)—return of skin viability.

Taichoseki Mineral Stone: On December 15, 1990, the Kitazato Medical School of Public Health, Tokyo, approved Taichoseki mineral stone as a “natural disinfectant” that greatly inhibits the growth of fungus and bacteria. Water run through Taichoseki mineral stone creates an atmosphere that slows down and even stops the growth of fungus and bacteria.

Fungus and Bacteria Tests. A variety of fungi and bacteria were introduced to water containing Taichoseki mineral stone. Test Nos. B8-523 and B8-521, November 1, 1990, conducted by Kitazato Medical School of Public Health, Tokyo.

The following were introduced to controlled samples of Taichoseki mineral stone water and displayed **no growth** or minimal growth well within acceptable standards:

- * Staphylococcus aureus FDA 209P
- * Sarcina lutea ATCC 9341
- * Bacillus subtilis ATCC 6633
- * Escherichia coli B ATCC 11303
- * Pseudomonas aeruginosa
- * Penicillium chrysogenum
- * Penicillium citrinum
- * Chaetomium globosum
- * Microsporum gypseum
- * Myrothecium verrucaria
- * Aspergillus niger
- * Trichophyton interdigitale
- * Trichophyton mentagrophytes
- * Candida albicans

APPENDIX C – WATER ENHANCEMENT BENEFITS AND APPLICATIONS

The Japanese Ministry of Health, much like the US Food and Drug Administration, cannot give endorsements to specific products. They can give approvals for specific products and their applications. Although not considered a formal endorsement, the Ministry gives tacit approval when they use medical products they have already certified in their own facilities. Such is the case with the Wellness Filter®/Wellness Filter® water.

Tests Performed for the Japanese Ministry of Health to Confirm Effectiveness of Spa Skin Treatments. Due to patient privacy considerations and Government regulations, we cannot release documented records of treatments. We do, however, have very dramatic color pictorial evidence of these studies/treatments with the subjects identity masked. Tests were carried out by the University of Okayama Medical School by five specialist physicians at medicinal spas during 1997 using Wellness Filter® water. Pictures are on file and available for the following studies (treatments involved daily bathing in heated Wellness Filter® water). Pictures taken at Kosei-Sho (Ministry of Health) Kyuka (rest) Center in Okinawa – the largest Ministry of Health-sponsored spa.

Summary of commonly occurring results:

- (1). Infant with Severe Total Facial Skin Condition. Treatment started June 16, 1997. By September 12, 1997, after daily spa treatments in Wellness Filter® water, the infant's face was clear of all skin conditions.
- (2). Adolescent Male with Total Body Fungal Infection. Treatment started June 16, 1997, and finished October 24, 1997. Fungus was completely gone with some skin discoloration remaining due to severity of infection.
- (3). Four-Year-Old Child with Fungal Rashes at Arm and Leg Joints and Neck Area. Treatment began on July 10, 1997, and finished on September 22, 1997. Minimum skin redness remains; fungus growth arrested.
- (4). Adolescent Male with Fungus on Hands, Back of Legs, and Face. Treatment started June 16, 1997, and finished November 12, 1997. Fungus completely gone from hands and face and growth arrested behind knee joint.
- (5). Additional Studies. More pictorial studies available for babies with skin rashes, "ring" fungus, and isolated fungus on hands, feet, and arms.

Reductive Ion/Negative Redox/Wave Motion (Far-Infrared Ray) Tests. (Numerous studies have been documented to show the positive, extensive health benefits of reductive ions/negative redox potential.)

- (1). Japanese Water Science Research Lab Test. Tests were conducted by the Japanese Water Science Research Lab on December 9, 1998. Test No. 99F-230. Results were certified by the Japanese Government. Ion Tester KST-900 was utilized. Results showed a reductive ion measurement of 4,199/cc in Wellness Filter® water mist spray. Tap water (Municipal) usually has a reading of around zero and spring water reads from 200-400/cc. Wellness Filter® water was determined to have a very high and desirable reductive ion rating.

To confirm test accuracy, Wellness Filter®'s were tested with progressively less ceramic stones in the filter media. Readings dropped to 3,585 (Test No. 99F-232) and to 2,609 (Test No. 99F-231). The evaluation demonstrated that the special ceramic stones used in Wellness Filter®'s have a dramatic effect on the increase of reductive ions in filtered water. The healing properties (cancer and degenerative diseases) of media that emit far-infrared rays are gaining more and more recognition. Wellness Filter®'s have an added plus in this category as Taichoseki mineral stones are also known far-infrared emitting media.

- (2). Wave Motion (Reductive Negative Ion) Tests Conducted by Dr. Tadahiro Hotta (Private Physician). Dr. Hotta operates the Hotta Hospital in Kyoto, Japan. He is a noted cancer specialist and strongly believes in the healing powers of reductive negative ions. Dr. Hotta used an independent certified lab to perform a Magnetic Resonance Analyzer (MRA) wave motion test on the Wellness Filter®, an AMWAY filter, and a Japanese filter. Dr. Hotta wanted to be confident in which water filter he should recommend to his patients. The special MRA test apparatus and ratings were developed by Dr. Omura while serving as a Professor at the University of Chicago in the Department of Physics. Dr. Omura’s MRA apparatus and rating are recognized and utilized by physicians and professionals throughout the world.

Dr. Hotta (a former student of Dr. Omura) assisted Dr. Omura in developing unique test criteria for wave motion ratings on five related medical categories. The highest rating possible is 21 with the lowest desired rating approximately 15.

Test results were as follows (highest allowable rating is 21):

Medical Category	Wellness Filter®	AMWAY Filter	Japanese Filter
Immune system (improved resistance)	21	14	15
Kidney (better function)	19	13	16
Stress (lessen effect)	21	11	14
Metabolism (increased function)	19	12	16
Skin (healthier, softer, and removed rashes)	21	11	13

Dr. Hotta now recommends only the Wellness Filter® to his patients.

- (3). Dr. Tadahiro Hotta (Kyoto, Japan—Hotta Hospital). In a speech given on September 10, 2000, to employees of Nippon Electric Company (NEC), one of Japan’s largest and oldest companies, Dr. Hotta discussed a comparative test he performed to emphasize why the Wellness Filter® water is so healthy. He said the major contributors to cancer, brain function disorders, and general sickness is bad water. He believes that water must be treated to remove (or reduce to minimum levels) the chemicals tested below.

In addition to Wellness Filter® water, he tested other commonly consumed liquids. Due to the high cost of some tests, all liquids were not tested for every category.

(Nanogram measurements)

	Mercury	Lead	Aluminum	Dioxin	Btsphenol*	Niniphenol*
Tap Water (Kyoto)	550	880	400	P	300	210
Wellness Filter® Water	5	8	10	N/D	9	9
Bottled Water A	200	200	300	P	N/T	N/T
Bottled Water B	300	150	340	N/T	N/T	N/T
Japanese Canned Tea A	70	330	380	N/T	N/T	N/T
Japanese Canned Tea B	60	340	340	N/T	N/T	N/T
Vegetable Juices A	45	350	N/T	N/T	N/T	N/T
Vegetable Juices B	300	50	N/T	N/T	N/T	N/T

KEY: P = Present at some level N/D = None Detected N/T = Not Tested in this study

*Dr. Hotta calls these “environmental hormones.” High levels can negatively effect male sexual functions.

Dr. Hotta said this test dramatically confirms that Wellness Filter® water is better for his patients to drink than water and other liquids they consume.

APPENDIX D – INSTALLATIONS

The Japanese Ministry of Health, much like the US Food and Drug Administration, cannot give endorsements to specific products. They can give approvals for specific products and their applications. Although not considered a formal endorsement, the Ministry gives tacit approval when they use medical products they have already certified in their own facilities. Such is the case with the Wellness Filter®/Wellness Filter® water. Currently over 100 hospitals and thousands of Japanese physicians use the Wellness Filter® in their practices.

Prominent Hospitals, Health Spas and Physicians who recommend the Wellness Filter®

- (1). Dr. Tadahiro Hotta, MD; Hotta Hospital; 28 Hukenotsubo-cho Hukakusa Hushimi-ku; Kyoto-shi; Japan; Phone No. 81-75-645-1730 – Dr. Hotta is one of Japan's most famous physicians specializing in cancer and general health treatment. He treats thousands of patients each year at his hospital in Kyoto.

Through Dr. Hotta's many years of research and treatment of cancer patients, he determined that environmental conditions have as much impact on the cause of cancer as heredity. In his opinion, combining negative environmental conditions with individuals who have a high family incidence of cancer dramatically increases the potential for developing cancer.

Dr. Hotta chose to concentrate on the one controllable environmental condition that can cause the most harm ... water.

Dr. Hotta's tests have shown that certain ingredients in water can increase the incidence of cancer. They are lead, mercury, aluminum, dioxins, chlorine, and two chemicals with a phenol base he calls "environmental hormones." In addition, Dr. Hotta has tested the value of products with high reductive ion (negative ion/negative redox) properties and found them to be essential for cancer treatment and prevention.

Dr. Hotta contracted for tests to be conducted on a number of water filters available in Japan (some built in the US). He tested for the removal of his targeted cancer-producing elements and used wave motion studies to determine the presence and effectiveness of reductive ions (negative redox).

He found the Wellness Filter® to be the only one that removes the carcinogenic materials he targets and simultaneously provides water with extremely high reductive ion (negative redox) properties. Dr. Hotta attributes his findings to the effectiveness of Wellness Filter®'s unique media. He is especially pleased with the far-infrared ray emitting properties of the Wellness Filter®'s Bakuhanseki mineral stones and ceramic stones.

In a speech to the Nippon Electric Company (NEC) officials on September 10, 2000 (transcribed by Mr. Yuasa of NEC), Dr. Hotta said, "The Wellness Filter® (Naturalizer in Japan) is the best water filter I've ever seen. The wave energy (negative ions) is also the highest I've ever seen."

He went on to say that he asks every patient what kind of water they drink. For those with filters at home, he asks them to bring them in for testing. Although he has tested most filters currently available and can show patients past data, every once in a while he'll find a new one to test. "None come close to the Wellness Filter®." He also said reverse osmosis units may produce clean water, but it is "dead water" and not healthy.

Dr. Hotta has also performed many successful studies with Wellness Filter® water for treatment of colon cancer, skin cancer, and skin rashes. He intends to release this data soon.

- (2). Hippocrates Health Institute; West Palm Beach, Florida – "Since the full application of the Wellness Water Filter® system has been attained by our patients here at Hippocrates Health Institute, there have been significant scientific signals that the antioxidant effect is greater than any other we have yet observed. The majority of this knowledge comes through the dark field blood profiles, which clearly indicate that the user's cells increase their electron frequency causing electromagnetic shield effects. This deters free radical damage causative of immune weakening and dysfunction. Further, we have noted an increase in red blood cell counts and a slight increase in hemoglobin levels through the medical blood profile.

Approximately 40% of the patients describe a heightened level of energy after three to five days through the exclusive ingestion of Wellness water and the raw juices applied in our program. Our observation and research will continue and in the future we hope to utilize Wellness filtration in our therapeutic pools allowing us to observe outer membrane (skin) effectiveness of the water."

Brian Clement, Executive Director
Hippocrates Health Institute
West Palm Beach, Florida
(The number one rated medical spa in the world... SPA Magazine)

- (3). Dr. Leonard Smith; Gainesville, Florida – Dr. Smith is a Board Certified Surgeon who recommends the Wellness Filter® to his patients for cancer prevention and treatment as well as treating Gastric Reflux Disorder.
- (4). Dr. Higashimaya; Higashimaya Hospital; Tokyo, Japan – Dr. Higashimaya is a prominent cancer treatment specialist with a concentration in intestinal cancer. He has performed extensive tests on white blood cells after patients drink Wellness Filter® water. Dr. Higashimaya has found that drinking Wellness Filter® water increases white cell count and “activates” them into becoming more aggressive at fighting disease. Dr. Higashimaya has developed a unique private method of testing the energy that surrounds white blood cells.
- Dr. Higashimaya has produced a video about this unique phenomenon. He recommends all patients consume Wellness Filter® water.
- (5). General Use by Physicians and Hospitals
- a. Dr. Senoo Keaki, MD; Senoo Circulatory Organ, Cardiac, and Vessel Surgery; 7-8-38 Nishihara Asaminami-ku; Hiroshima-shi; Japan; Phone No. 81-82-874-8080 – Wellness Filter® water is used to treat rashes from medication administered in the hospital, assist in healing scars, drinking water (promotes rehydration and a desire to eat food), food preparation, and bathing.
 - b. Dr. Takashi Tobioka, MD; Tobioka Internal Medicine Clinic; 2-8-30 Nakasange; Okayama-shi; Japan; Phone No. 81-86-233-1188 -- General use of Wellness Filter® water in patient treatments.
 - c. Dr. Toshikazu Okamoto, MD; Private Clinic/Office; 42 Kenai Kouzuki-cho Sayou-gun; Hyougo; Japan; Phone No. 81-790-88-0605 -- General use of Wellness Filter® water in patient treatments.
 - d. Mr. Tatsuo Kawada, CEO; Hunabashi Central Hospital (Ministry of Health Hospital); 6-13-10 Kaijin; Hunabashi-shi; Japan; Phone No. 81-474-33-2111 – General patient use.
 - e. Okinawa Health Center; Kosei-sho [Ministry of Health Kyuka (rest) Center] – This is the largest Ministry of Health sponsored spa treatment center in Japan. They use baths and Jacuzzis to treat nearly 1,500 patients per day—mostly geriatrics. Extensive use of Wellness Filter® water for drinking, cooking, and bathing. Primary treatment for skin rashes, back and shoulder aches, intestinal problems, and joint and knee arthritis.
- This Health Center conducted the successful 1997 skin rash studies that helped convince the Ministry of Health to expand their therapeutic spas with Wellness Filter® water throughout Japan.
- Since the Bakuhanseki mineral stone (part of Wellness Filter® water media) is designated a medicine by the Japanese Ministry of Health and has been proven an effective treatment for the above ailments, therapy in Wellness Filter® water are covered by Government Health Insurance.
- f. Funabashi Byion (Hospital); Kosei-sho (Ministry of Health); Funaba-shi; Japan – A 1,500-bed hospital for all ages. They discovered that increased hydration from drinking Wellness Filter® water helps patients to feel better faster. Since they also prepare food and beverages with Wellness Filter® water, they have found that the improved taste has resulted in patients eating more food. Used for intestinal and skin rash treatment.
 - g. Takanawa Byion (Hospital); Kosei-sho (Ministry of Health); Takanawa; Japan – Similar uses to Funabashi Byion
 - h. Matsuo Byion (Hospital); Private Hospital in MIE Prefecture – Women’s health and maternity hospital. General treatment primarily promotes pregnant women to drink Wellness Filter® water and treat rashes.
 - i. Chiropractors – Recently recognized benefits of drinking Wellness Filter® water. Find patients to be looser and easier to treat if they drink Wellness Filter® water before treatment.

APPENDIX E – DIABETES RESOURCE CENTER



Press Release

“Next to Air, water is the substance most necessary to life. All Chemical and biological processes take place in water. Without water there would be no life. By consuming a proper balance of water naturally purified and filtered through the Wellness Filter™, which removes many harmful pollutants, while leaving valuable trace elements and minerals that are necessary to life, regulation of the body’s pH balance, increased oxygen circulation, improved digestion, and better blood glucose control can be achieved, and some illnesses prevented leading to a healthier life. The Wellness Filter™, which is much more than a filter, purifies and enhances water the way it is naturally filtered through the earth’s geographic strata. Consuming contaminant free water is of paramount importance for the diabetic and non-diabetic. The Wellness Filter was recently awarded our U.S. Seal of Approval as a safe and beneficial product for diabetic use.”

Sandy D. Corlett, President
Diabetes Resource Center, Inc.

APPENDIX F – ALKALIZER ARTICLE

The following is translation of a Japanese article that appeared in *Science Scramble* (a Japanese consumer oriented magazine) in 2000. The article reviews both the alkalizer and the Pi-Mag filters. Copies of original Japanese text version are available upon request.

Science Scramble

Are “alkaline ionized water” and “p water”, in fact, merely “regular water?”

As a result of the tests conducted by the National Life Center and Hokkaido Consumer Association, the effects described in the pamphlet were not verified. Is it possible to create “miracle water?”

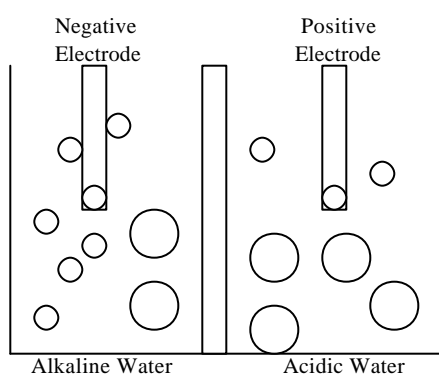
The common phenomenon occurring as a result of electrolysis of water is the secret!

Since the future of drinking water has become our serious concern, an odd boom can be easily triggered. One of the finest examples is the water purifiers which produce “alkaline ionized water” or “ π water.” They claim that merely by running tap water through this device, you can create water, which not only tastes good but also is good for your health.

The structure of the alkaline water ionizer can be simply explained as follows. The wall (film) located in the middle divides the water tank into two sections in each of which an electrode is placed. By running a current, the positive ions of the ingredients of tap water, such as calcium, potassium, and manganese, are collected on the cathode side. At the same time, by taking electrons from the negative electrode, hydrogen ions become hydrogen molecules (hydrogen gas), which then escape into the air. As a result, water will turn alkaline due to the hydroxide ion overload. Thus, you can obtain the alkaline mineral (ionized) water, which contains more calcium than tap water.

On the anode side, negative ions such as chlorine and sulfuric acid are collected. Hydroxide ions give electrons to the positive electrode and become oxygen molecules (oxygen gas), which then escape into the air. As a result, water turns acidic because of the hydrogen ion overload. (See the figure below.)

Principle of Alkaline Ionizer



Ions moving from + to –

- Calcium ions
- Sodium ions
- Potassium ions
- Manganese ions

Ions moving from – to +

- Chlorine ions
- Sulfuric acid ions
- Hydroxide ions (alkaline ions)
- Hydrogen ions (acidic ions)
- Electrons

When current is run, positive mineral ions are attracted to the cathode side while negative ions such as chlorine and sulfuric acid are attracted to the anode side. On the cathode side, hydrogen ions take electrons from the negative electrode, become hydrogen molecules (gas), and escape into the air. As a result, hydroxide ions increase, and the water becomes alkaline. On the anode side, hydroxide ions give electrons to the positive electrode, become oxygen molecules (gas), and escape into the air. Thus, hydrogen ions increase, and the water becomes acidic.

How valid are the claimed effects of this alkaline water such as “It is a good source of minerals,” “Calcium is good for your body,” “It can improve your health by alkalizing your body?”

The National Life Center conducted a test on these ionizers to find out the actual performance and validity of the above advertised efficacy.

According to a report on the test results, the concentration of minerals is indeed higher than the original tap water, and most notably, the increase in calcium is high because a calcium tablet is added.

However, their analysis points out that “as mineral water, it is almost the same as bottled mineral water regularly sold on the market which contains high concentrations of minerals,” and “as a source of calcium, milk contains twenty times more calcium” (see the figures below).

No Difference Found in a Comparison With Tap Water - No difference relative to calcium ions & acid control

Category	Product Name	Ca ion concentration (ppm)	pH		Acid Control Index
			Alkaline Water	Acidic Water	
New	Minebalance	19-20	9.7	6.5	13-18
	Miomco New Pot	15-21	9.6	4.6	12-16
Used Product	Natural Minera Asahi	24-41	9.7	4.8	12-17
	Trim Ion	21-24	9.7	6.5	14-18
	Ionica Hion	24-32	9.8	5.8	9-18
	Tap Water	13-15	6.3-6.9		11
Ref	Milk	330-410	---	---	710
	Mineral Water	200	---	---	51

The Used Products are those which had been utilized by consumers. The calcium ion concentration is low for mineral water. Alkaline water's acid control property against gastric hyperacidity and abnormal gastro-intestinal fermentation is also not very different from tap water's. Acidic water is said to be antibacterial and said to be an astringent to tighten skin and improve cosmetics adherence. Although its pH is temporarily low, because it is easily neutralized, it has no significant effects.

As for the effect of "alkalizing your body," the readers of "Quark" should know that "since the main organs are naturally slightly alkaline and have their own pH adjustment function, your body does not become more alkaline as you drink more alkaline water."

Although the selling point of an ionizer is that "it is a medical device approved by the Ministry of Health and Welfare," its specific efficacy is limited (chronic diarrhea, abnormal gastric-intestinal fermentation, indigestion, acid control and gastric hyperacidity). Mainly, its efficacy is related to the expectations based on the alkalinity of water.

Nevertheless, the report by the National Life Center suspects that "slightly alkaline ionized water cannot be expected to control acidity of gastric fluid, and milk and foreign-made mineral water are more effective." It also insists that the efficacy has to be re-evaluated so as not to bring about unreasonable consumer expectations.

Unfortunately, it is impossible to expect water purifiers to cause a dramatic change in tap water. Even the advocates of the theory are concerned about out-of-control "Divalent Trivalent Iron".

When it comes to the performance and efficacy of "π water," another boom product, there are many more doubts than those which just concern alkaline ionized water. This is not a medical device approved by the Ministry of Health and Welfare, and the mechanism of the device which produces π water has not even been offered to the public.

Its theory is, in short, "because divalent trivalent iron controls the basis of life activities, feeding your body with a small amount of divalent trivalent irons which contain proper information will naturally make your body healthy." However, although in iron ions divalent iron (II) and trivalent iron (III) do exist, nobody and no manufacturers can clearly answer even a basic question such as whether or not this phenomenon is the same as the divalent trivalent iron described in the π water theory.

The first advocate of this "theory" was Dr. Shoji Yamashita, a Ph.D. in Agriculture who is a former assistant in the Agriculture Department at Nagoya University and had been researching flowering matters. You cannot miss statements like "discovered by Dr. Yamashita..." in any pamphlet or book recommending this product. Nonetheless, his thesis and explanatory articles do not answer the question, "what is divalent trivalent iron in π water?"

Therefore, the author tried to arrange an interview with Dr. Yamashita. But the interview was rejected, and a note containing a message roughly summarized as follows was forwarded: "Although my name has been appearing on products and in advertisements of π water, it annoys me, and I am concerned that this might mislead consumers. It is not easy to test product quality because the amount of divalent trivalent iron in π water has to be a very small amount, which is almost unanalyzable. It is necessary to repeat long-term and rigorous experiments and a verification process in order to apply a theory to practical use..."

The National Life Center also conducted a test on the claimed efficacy of π water in comparison with regular tap water. The results indicate that there were no differences between π water and the regular tap water in terms of both growth-promoting effects (checked with white radish sprouts) and freshness-preserving effects (checked with cut flowers). In addition, it did not increase the crop yields of white radish sprouts (see figures below), it was not proven to have more bacteriacidal or bacteriostatic (inhibition of bacterial growth and reproduction) properties. Furthermore, in comparison with regular tap water, no difference was found regarding the efficacy of "being easier to boil bath water because of its lower boiling point at 85°C." A similar comparative experiment was conducted by the Hokkaido Consumer Association. It was also reported that there was no difference between regular tap water and π water.

Would you still like to be part of this boom?

The effect of preservation of freshness of produce was not verified.

	Number of Beautifully Blooming Flowers of <i>kikuimo</i>			Average crop yield of hydroponically grown white radish sprouts
	Day 3	Day 5	Day 7	
π water	4	1	0	5.8g
Natureturn	4	2	1	5.9g
Tap water	5	5	1	5.6g
Adjusted test water	5	2	1	5.8g
Boiled water	3	3	1	6.0g

This table shows the duration and number of 5 already-blooming “kikuimo” flowers which were arranged in a vase. Additionally, the durations and numbers of blooming and withering of lilies, roses, and chrysanthemums whose buds were arranged were checked but no differences were found. [Based on the information from the National Life Center]

Cultivating Test of White Radish Sprouts

Tap water



π water



In order to test the growth-promoting effects on produce, white radish sprouts were grown hydroponically while spinach, radish, and honeywort were grown from seeds in pots. In comparison with those fed with tap water, no differences were found. The pictures above show the growth of white radish sprouts on Day 8. [Hokkaido Consumer Association (2)]

[Alkaline Ionized Water]

Although there have been many health remedies concerning water since ancient times, “alkaline ionized water” has become the center of attention since four or five years ago. It has been advertised that by drinking the water that was run through an alkaline water ionizer, your body will become alkaline, your gastric-intestinal condition will improve, and atrophy will be cured.

However, the truth of this “alkaline ionized water” has been revealed. The National Life Center conducted a test on the performance of the water purifier last year. Their results pointed out that the pH was around 9.7, and its effects for gastric hyperacidity and abnormal gastric-intestinal fermentation were not significantly different from those of tap water. Moreover, the calcium concentration improved only to 20 ppm compared with 13 to 15 ppm of tap water; in comparison, by drinking milk, you can take in 20 times more calcium.

That is not all. There have been some opinions against it, claiming adverse effects. Aiyoshi Kawabata, director of the Japan Water Hygiene Research Institute, states, “Alkaline water was originally developed for therapeutic purposes for patients of gastric hyperacidity. To be honest, if a healthy person drinks it, it is nothing but harmful because it weakens the function of your stomach and worsens the activity of pepsin, a digestive enzyme. Stomach acid has an important role because it kills bacteria which invades from outside.”

The alkaline ionized water purifier is a medical device, which was approved by the Ministry of Health and Welfare, but it was originally approved 30 years ago. It was developed based on then-existing medical knowledge, and the Ministry of Health and Welfare has been re-examining its current approval.



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