

Power Supply
Transformers vs.
SMPS: The Results
PAGE 14

Added Minerals
How some filters are
tricking consumers
PAGE 15

Test Drive
Taking "features"
for a spin
PAGE 10

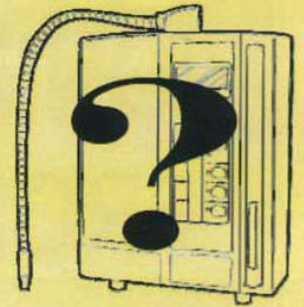
Review Websites
The unbelievable truth
about the Internet buzz
PAGE 13

Consumer Guide

\$9.95 US

Special Edition

Water Ionizers



Which is the best?

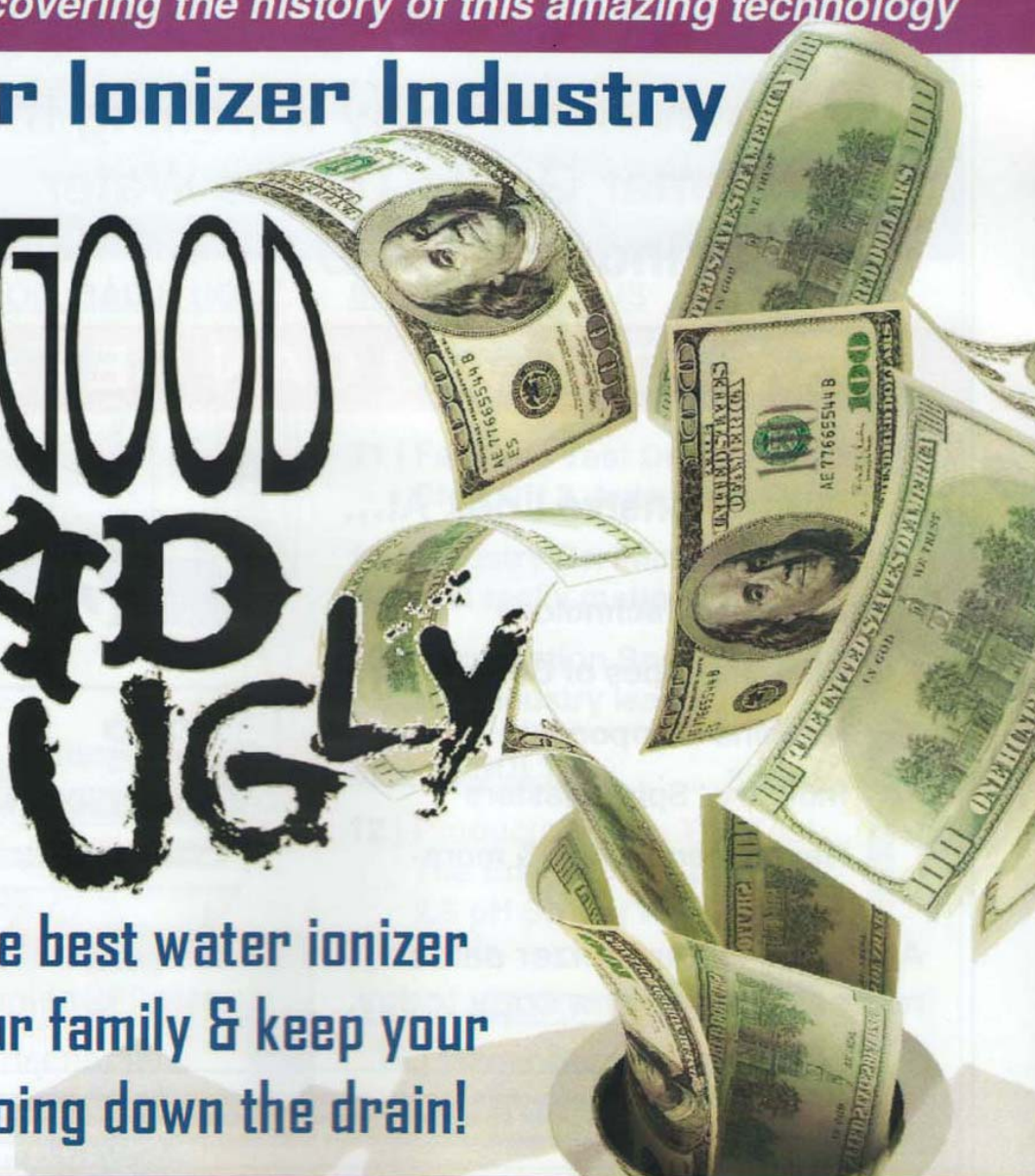
Exclusive: Discovering the history of this amazing technology

The Water Ionizer Industry

THE GOOD THE BAD & THE UGLY

How to pick the best water ionizer
for you and your family & keep your
money from going down the drain!

Value vs. Price: Are You Really Getting The MOST For Your Money?



WANT ADDITIONAL IONIZER INFORMATION FROM CONSUMER GUIDE?

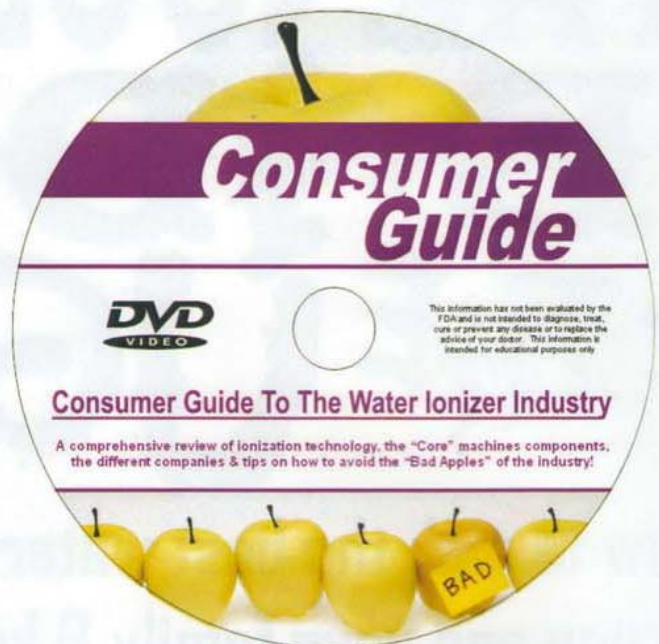
Learn **even more** by watching the
Consumer Guide To The Water
Ionizer Industry DVD

ASK HOW YOU CAN GET A COPY

A Comprehensive Look At...

- ✓ Ionization Technology
- ✓ Different Types of Companies
- ✓ Machine Components
- ✓ Industry "Spin" Masters
- ✓ Recommendations & more

Ask your water ionizer sales
representative for a copy today.



Certain information contained in this booklet has not been evaluated by the Food & Drug Administration. This information is not meant to treat, diagnose, cure or prevent any disease and is intended for educational purposes only. Individuals suffering from any disease or illness should consult with a qualified physician or health care provider. Produced by an independent distributor.

Contents

CONSUMER GUIDE



SPECIAL EDITION
Water Ionizers in the U.S. Market

COVER STORY: GOOD, BAD & UGLY

- 6 | **Water Ionizer Industry:** Best & Worst
- 7 | **Recommendations:** Tips for picking the right water ionizer



FEATURES

- 4 | **Water Ionizers:** Making History
- 8 | **Price vs. Value:** Getting the most for your money
- 13 | **Review Websites:** Not what they appear to be
- 17 | **Adding Minerals:** Filtering out the facts about internal filters
- 9 | **Product Comparisons:** Who does it and the reasons why
- 5 | **Properties Of Ionized Water**



INDUSTRY FOCUS

- 10 | **Features Test Drive:** Plate Construction & Surface Area
- 11 | **Features Test Drive:** Auto Heat Shut Off & Auto Flow Control
- 18 | **Industry Certifications:** The ones that really matter
- 19 | **Certification Spotlight:** Who is the industry leader?

LAB RESULTS

- 12 | **Products Put To The Test:** The Enagic® Super501's 2.5 pH Strong Acidic Water



CG INVESTIGATES

- 14 | **Power Supply**
Transformers vs. SMPS?
The results are in...



Water Ionizers: Making History

Although many think water ionization is new, it actually began over two centuries ago. The invention of water ionizers was inspired by waters with unique properties found in only a few places on Earth, like Lourdes, France; Nordenau, Germany; Tlacote, Mexico; Delhi, India and the Hunza Valley in Pakistan. It was the naturally occurring water properties in these special places that captivated curiosity and eventually motivated scientists to try to replicate these properties.

Over 200 Years In The Making

The earliest recorded ionization experiments date back to 1789 when Jan Rudolph Deiman and Adriaan Paets van Troostwijk used a machine to produce electricity which was discharged on gold electrodes in a Leyden



jar filled with water. During the next 100 years numerous scientists toyed with ionization, but none had more influence to the process than Michael Faraday, who was one of the great pioneers of electrical

energy. One of his inventions was a device used for creating electrolyzed water. Although not used during his lifetime, many years later this invention would help create what would eventually become the modern day water ionizer.

Father Of The Jet Engine An Ionization Pioneer

Dr. Henri Coanda, was a renowned scientist and Nobel Prize winner. He is primarily known for his work in aeronautics; he is known as the Father of the Jet Engine. Less known was his obsession with water and its potential for health and vitality. As far back as the 1930's, Coanda traveled to the Hunza Valley to confirm his belief that the water of the region had properties that had contributed to the long lives of the natives. His conclusion was that the water was, indeed, different. When frozen, the water assumed a crystalline, snowflake formation; it revealed a unique structure, similar to that of the venal system of humans and the vascular structure of plants.



Roots In The Hunza Valley

At the time Coanda traveled to Hunza, their people had the longest lifespan in the world. They were able to conceive and bear children when they were much older than other people throughout the rest of the world. They lived a long and healthy life without cancer, degenerative diseases or even cavities. The unexplained health and vitality of people in such a remote place inspired much debate and research.

Developments In Recent History

Certain aspects of recent research, which led to the subsequent invention of the modern water ionizer, are a mystery to this very day. It is believed that sometime after World War II, there was an attempt on the part of



Russian and Japanese scientists to replicate the properties of the waters that Coanda had investigated. The Japanese improved the new electrolysis technology discovered by their Russian peers, which had no doubt been inspired by the original technology of Faraday.

Japan Embraces Ionization

The first versions of the modern day water ionizer were developed in Japan in the early 1950's. Japanese agricultural universities began looking into the effects of alkaline water on animals and humans and the effects of acidic water on plants.



After several years, researchers in Japan had collected enough data to confirm the non-toxicity of the alkaline water, and its beneficial effects in eradicating or preventing certain disease conditions. In 1958 the first commercial water ionizers were introduced in Japan.

A Health Revolution Begins

The use of water ionizers started in hospitals. In 1960, a group of Japanese medical doctors and agricultural research scientists formed a special medical and agricultural research institute to further study ionized water. In January 1966, the Japanese Ministry of Health, Labour & Welfare acknowledged Japanese-made water ionizers as a legitimate medical device. This technology has become widely used in Japan. In fact, over the last forty years, it is estimated that nearly 30 million Japanese citizens have used these devices. Today water ionizers are used in every developed country and are becoming more popular every day.

The ³ Amazing Properties of Ionized Water & Benefits

An Excellent Read...

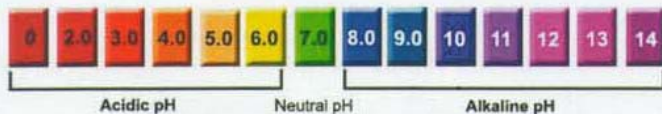
There are three main properties that make ionized water different from any other water in the world: anti-oxidation, micro-clustering & alkalinity. Alone, each of these have tremendous benefits, but when they come together, they create an incredible combination!

Water, usually normal, everyday tap water, enters the water ionizer where it first passes through an internal filter, where impurities and chemicals, like chlorine, are removed. The filtered water then passes through a series of electrically charged electrodes, also known as "plates", where a positive and negative charge physically separates ions of the water into two streams; one is acidic, the "positive" water and one is alkaline, the "negative" water.

ALKALINITY – Property #1

Most people have no idea about the importance of maintaining a balanced pH level in the body. The pH level of the blood is the most vital and sensitive in humans. Balanced blood pH is 7.365, with a very slight margin for change in either direction. A major imbalance of the blood's pH can lead to severe problems, including, in the most extreme cases, death.

Since the pH level of the blood is so vital, when pH values adjust to dangerous levels the body will "steal" pH rich minerals from other less important parts in order to keep the blood balanced. In essence, your body will steal from itself, which is basically killing you slowly, to prevent you from dying immediately.

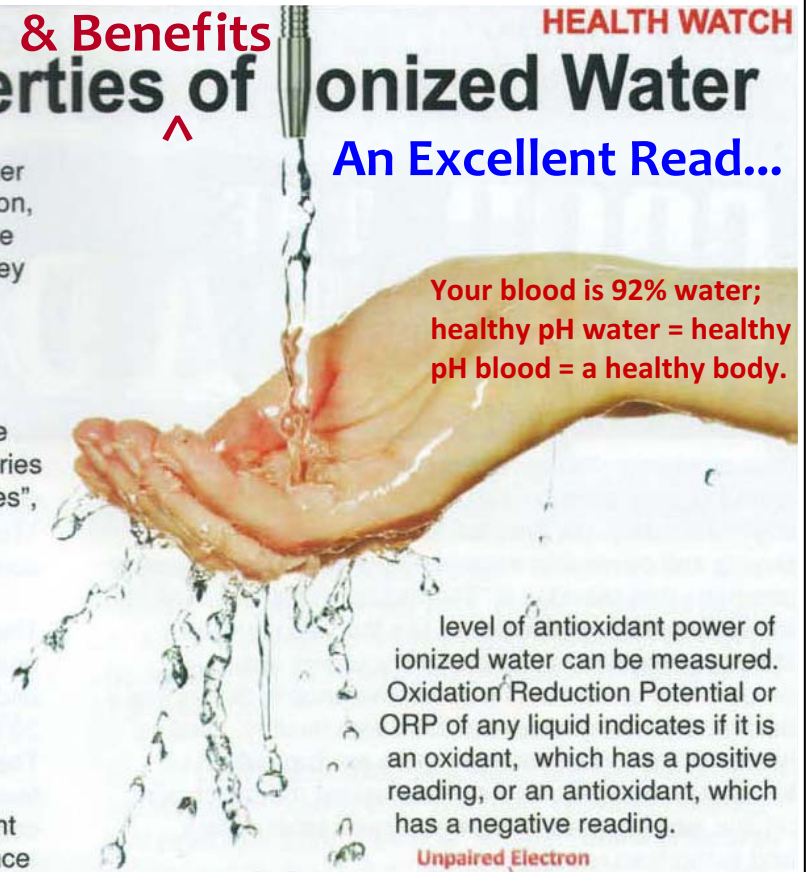


If this happens, the body goes into survival mode, just trying to stay alive, which weakens natural defenses. The body starts using so much energy and resources for basic functions, that the entire system becomes susceptible to disease and degeneration. Unfortunately, the lifestyle choices of most Americans put them in an acidic state of being, known as acidosis.

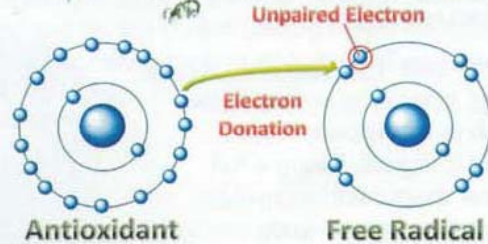
Drinking alkaline rich ionized water helps the body to replenish the necessary alkaline minerals and assists in bringing balance to a body that is overly acidic.

ANTIOXIDANT – Property #2

In addition to alkalinity, ionized water is also loaded with active hydrogen, which serves as an antioxidant when it interacts with the body. Active hydrogen contains an extra electron that it is able to donate to a free radical, which then neutralizes the free radical and renders it harmless. When tested using electronic equipment the



level of antioxidant power of ionized water can be measured. Oxidation Reduction Potential or ORP of any liquid indicates if it is an oxidant, which has a positive reading, or an antioxidant, which has a negative reading.



Ionized water typically has a negative ORP value of -300 to -700 or lower, depending on variables in the source water and the amount of power being supplied to the electrode.

MICRO-CLUSTERING – Property #3

Water molecules do not just float around, all alone like microscopic drops of water. Instead, they group together in what are known as "clusters". Although there is no actual molecular bond, these molecules stick together and operate as one unit. Most drinking water, including bottled and tap water, is comprised of clusters containing between 16 - 30 water molecules, known as a Macro-Cluster.

During the ionization process these clusters are broken apart, resulting in fragmented clusters containing 4 - 6 water molecules, which is known as a Micro-Cluster. This smaller grouping of molecules is able to penetrate and be absorbed by the body more effectively, which leads to a more rapid and greater degree of cellular hydration.

These properties can be created by virtually any water ionizer, but it is the "staying power" of the properties that is important. Not all water ionizers are created equal, so purchase the one that produces the strongest properties.

Cover Story: The Water Ionizer Industry

THE GOOD THE BAD AND THE UGLY

As a consumer, the company you choose to do business with is equally as important as the product you decide to buy. Ultimately, the product, warranty and even the buying and ownership experience, is only as good as the company that provides it. The ionizer industry is new in the U.S. market and is almost like the wild west, with little to no regulation and predatory sellers acting like modern day outlaws. The main difference is that in this saloon, the shot glasses are filled with healthy, alkaline water. In the ionizer industry there are basically four kinds of companies. Full service ionizer manufacturers; private labeling manufacturers; private label sellers, and authorized resellers.

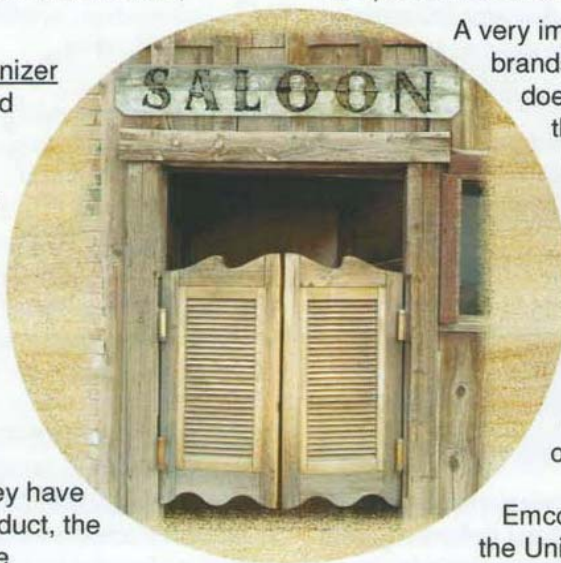
There is only one Full Service Ionizer Manufacturer operating in the United States, which is a company from Japan, called Enagic®. Being a full service ionizer manufacturer means that the company owns and operates their own manufacturing facility and actually manufactures their own ionizer brand. Service and support are handled directly by employees of the company.

Consumers know when a company manufactures a product it means they have made a solid commitment to the product, the industry and, most importantly, to the consumer. Tens of millions of dollars have been invested in research and development; in product tooling and machinery; in facilities and staff; in warranty and support. These are just a few of the things that separate a full service manufacturer, from the rest of the companies in the ionizer industry.

Enagic® uses a direct sales model to bring their products to the United States market, meaning that they sell directly to consumers. They do this through a group of authorized independent distributors. Unlike distributors of other ionizer brands, the Enagic® distributors are only used in marketing their products. The order processing and fulfillment, shipping and receiving, and warranty and support are all done by company employees; not by an independent distributor.

Next are the Private Label Manufacturers. These are companies that make ionizers for other companies. They don't normally build ionizers that reflect their own company name or brand.

The primary private labeling manufacturer is a company based in Korea, called Emco Tech, which also operates under the name Royal Water. Emco Tech builds about 30 models of ionizers for about 20 different brands. There are slight differences in models, based on some features and design, but about 95 percent of the internal components of these machines are exactly the same.



A very important point about the private label brands is that the actual manufacturer does not provide service or support for the ionizers they have made. Service is provided by a company or person that specializes in sales; that typically has no real expertise in ionizer repair or maintenance. In addition to this drawback, in most cases, the private label companies are missing some of the most important ingredients necessary for truly superior and outstanding customer care.

Emco Tech has no branches or offices in the United States, so there is no way to get local support from the company that actually manufactured the machine. Obviously, this is a huge drawback for consumers buying one of these ionizers.

The next group is the Private Label Sellers. These are the companies that purchase the private labeled ionizers from manufacturers like Emco Tech. They put their name on an ionizer and claim to be an ionizer company.

Of the many Emco Tech private label brands, Jupiter Science is probably the most well known. Life Ionizers is another example of this type of company. They purchase ionizers from a Korean company called Galaxy, which reflects the Life Ionizer name, and then sell them to consumers. All they really do is push around products that another company actually created.

The last group of companies are the Authorized Resellers. These are independent sellers who are authorized to sell and distribute here in the U.S. on behalf of a main company, most of which are based in Taiwan, or Korea.

There are quite a few different Resellers operating in the United States and perhaps you've heard of some of them. There is Chanson USA, Tyent USA, Pure Pro, Evontis, KYK and many others. No matter which one is named, there is an important fact that applies to all of them and that consumers should seriously consider! None of these resellers are the actual manufacturers. They are not even official branches of the manufacturing company. They are simply authorized resellers, meaning support and service will only be available while they remain active in the industry.

Of all the different kinds of companies selling ionizers, the Resellers probably have the least to lose, since all they really do is buy limited amounts of wholesale inventory to sell at retail prices. Having the least to lose makes Resellers the most likely to drop out of the industry, so consumers, beware!

These are the main types of water ionizer companies operating in the United States, with some examples of specific brands. There are other brands out there, but, for the most part, an ionizer company will always fall into one of the 4 types we've covered. As a consumer, remember that many of the different ionizer brands out there were actually built in the exact same factory, and that 95 percent of the internal components are identical...they just have a different brand name.



THE GOOD: ENAGIC USA

With an "A" rating with the BBB, Enagic USA has been in the U.S. market for 10 years and has seven offices in North America, including their corporate headquarters in Torrance, CA.

Enagic USA has a stellar reputation and has become the Industry Gold Standard for both their business dealings and product support / service. Enagic USA was recently recognized by the Direct Selling News for their success in business, being ranked #60 of the Top 100 Direct Selling Company in the World.

THE BAD: LIFE IONIZERS

Life Ionizers currently has an "F" rating with the BBB and continues to have their reputation tarnished by doing things like creating false consumer review websites.

Other companies in the Ionizer Industry are warning consumers about Life Ionizers or even boycotting the sales of their products. The Water Ionizer Authority Website recently issued the following "Think Twice" consumer warning: *Life Ionizers has clearly demonstrated a pattern of disregard for both wholesale and retail customers. Before you decide to buy from Life Ionizers you should be aware of the company's history, the number of complaints filed against them and the issues reported by their customers.*

THE UGLY: TYENT USA

Perhaps one of the worst in the Ionizer Industry, Tyent USA has earned an unflattering reputation for creating phony review websites, engaging in smear campaigns against other ionizer companies and generally engaging in questionable business practices.

Tyent USA has received a barrage of negative attention from other companies in the Ionizer Industry, including Water For Life USA and IonWays, for their underhanded dealings and deceptive marketing tactics.

WANTED

8 Tips For Picking An Ionizer

(Consider each point below)

1. The type of ionizer company
2. Length of time in operation
3. Number of locations, offices or service centers
4. Honors and Certifications
5. Check out the company
6. Be cautious with Virtual, Internet based companies
7. Don't be pressured into a RIGHT NOW buying decision
8. Demand your consumer rights and get water samples!

SPECIAL EDITORIAL

PRICE or VALUE

Which is more important in the current economic climate?

Since the majority of Americans do not have sacks of money stashed away in their closets, the price of any product is very important. This is becoming more evident as retail sales figures continue to drop more and more each year.

While price is always a consideration, so is getting a good value for the money that you are spending. In fact, with the uncertainty of the current economic climate, getting value for your money may actually be even more important than simply paying a lower price.

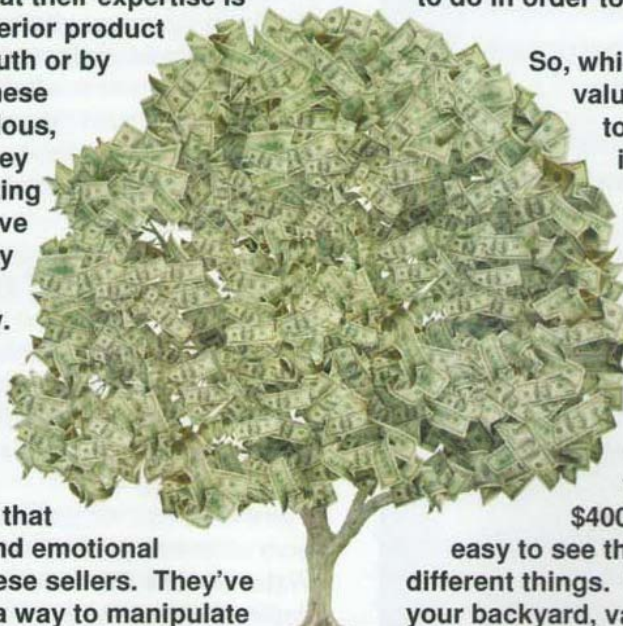
More and more people are discovering that many low priced items come with an unseen cost, which usually means giving up a lot of quality. It seems that the disposable mindset that is taking over this country is inspiring a flood of low priced, and equally low quality, products that wouldn't last for very long, even if we wanted or needed them to. This is particularly prevalent throughout the ionizer industry, where some are selling price over benefit.



information and utilize emotional response in order to sway people to purchase their products. If a person took a no-nonsense, common sense look at these companies from the perspective of an informed consumer, there would be no way that they would purchase their products, and these sellers know it! This is why they engage in spinning their product features, redirecting emphasis on price instead of benefit, and attacking method of market introduction instead of product quality and performance. They know that this is what they have to do in order to effectively sell their machines.

Like vultures waiting in the tree tops, predatory Internet based ionizer sellers are engaging in calculated campaigns to convince consumers that cheaper is somehow better. Most consumers know that cheaper is nothing more than cheaper, but when people are worried, they will listen to people that they normally would not listen to and they will do things that would not normally do. The discount ionizer sellers are banking on it.

Consumers need to realize that their expertise is convincing people that an inferior product is superior by spinning the truth or by redirection. You see, while these predatory sellers may be devious, they are not dumb. In fact, they are very cunning and calculating in their approach and they have a systematic process that they use to separate a consumer from their hard earned money. This is literally what they do for a living, which is why it is so important that consumers be cautious.

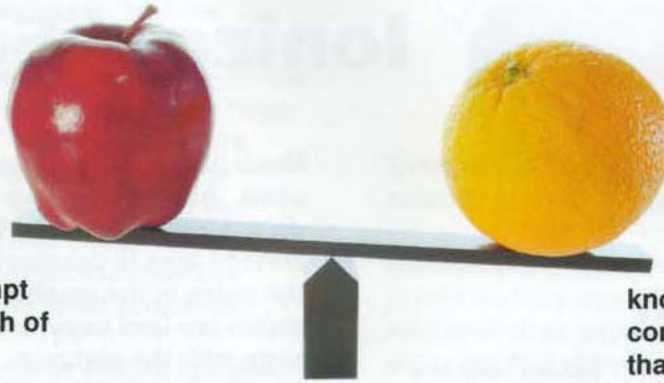


Consumers must understand that there is a lot of psychology and emotional manipulation employed by these sellers. They've worked very hard to develop a way to manipulate

So, which is more important, price or value? Unfortunately, price has little to do with value. If you have 2 ionizers and #1 is \$1500 and #2 is \$4000, which is a better deal? The \$1500 ionizer, because it's cheaper? No, to determine a good deal, you need to know the value. If #1 lasts 2 years and #2 lasts 10 years, then to get the same benefit, the customer would need to buy 5 of the #1 ionizer, costing \$7500 to one of the #2 ionizer, costing \$4000. Based on this example, it is easy to see that price and value are two very different things. Unless you have a money tree in your backyard, value should be the top priority!

Ionizer Industry Product Comparisons

Using comparisons to sell merchandise is nothing new. In almost every case selective aspects of an overall inferior product will be compared to those of a superior product, in an attempt to elevate the perceived worth of the lesser product.



lower quality products comparing themselves to higher quality products. The real difference is that some consumers seem to forget what they already

know about a product that compares themselves to another: that product is inferior and they are comparing themselves to a superior product. Do the basic consumer rules somehow

The biggest problem for a company that compares their product to another product is that by making the comparison, they are admitting that the other product is better than their own. Obviously a company would never compare their product to an inferior one, so it stands to reason that when a product is being compared to another, the one doing the comparing is the inferior product.

Who does it & why?

change just because it is a new product to the marketplace? Savvy consumers know that this rule applies to ANY consumer product and that water ionizers are no different.

We know why these comparisons are being made, to try to elevate an inferior product to the level of a superior one, but who in the ionizer industry is actually doing it?

The automobile industry is probably the most well known for making comparisons to try to elevate the quality or status of a lesser make or model to that of a superior one. We have all seen the commercials that start off with the newest import from Korea zipping down a winding road, with the announcer saying "corners like a Mercedes" as the car comes out of a sharp turn.

For the most part it is the Private Label Sellers and the Authorized Resellers representing Korean made water ionizers. They have targeted the higher quality Japanese manufactured ionizers and are engaging in Internet based comparison campaigns right this very minute.

As a consumer in the United States, seeing a commercial like this should come as no surprise, but what if the roles were reversed. What if a Mercedes commercial came on and the announcer said, "...the all new 2013 F-Class, as quiet as a Hyundai, but handles like a Kia." Won't happen! Comparisons are to elevate, not the other way around. True industry leaders will never compare themselves to anyone else.

Identifying one of these ionizer sellers should be pretty easy for consumers. As soon as they read something on a website or watch an Internet video discussing water ionizers and a comparison is made to some other brand, that's one of them!

If they haven't already, consumers will soon discover that the ionizer industry is no different from the automobile industry when it comes to

As a savvy consumer, if you really want to find out which water ionizer is the best, make notes about who the other guys are comparing themselves to. They will lead you right to the doorstep of the best water ionizers on the market. You don't have to take our word for it...you can take theirs!

The Automobile Advertisement That Backfired

This 1968 AMC Javelin advertisement is a perfect example of an inferior product trying to elevate themselves through a comparison to a superior product. Ironically, the ad says that it would be unfair for the Mustang to be compared to the Javelin, because the Javelin was so much better. The AMC Javelin was produced from 1967 - 1974, then discontinued. In 2014 the Ford Mustang will celebrate their 50th Anniversary, with over 8 million sold globally since 1964. Comparing yourself to a better product, does not make you better!





Test Driving Ionizer "Features"

Plate Construction

Mesh or Mess? The electrodes or "plates" are the heart of an ionizer, the engine. Their construction is very important, as they work the hardest and have the most important job in the ionization process. They provide the electrical charge that makes everything happen.

For best results plates should be solid construction, creating the greatest amount of surface area, another important aspect of the ionization process.

Some of the discount ionizer brands promote and use *Mesh or Slotted Plate Electrodes*, which are plates with holes in them, saying that they somehow create a greater amount of surface area.

In theory, a flat surface with holes in it could have a greater amount of total surface area than a solid surface. The plate would have to be very thick in order to accomplish this, which is not the case when it comes to the mesh plate electrodes in the majority of the discount water ionizers. In fact, most mesh plates are practically paper thin and the connection that passes electricity to them is just a flimsy post wedged into some of the mesh screen and sticking off of the plate.

Mesh plates are touted as being superior and more efficient, when nothing could be further from the truth.

Mesh plates reduce cost, which is why they are used. At the thickness of these plates the holes do not increase the surface area. If anything, the surface area is drastically decreased as a result of the holes in the mesh plates. These types of plates are less expensive to manufacture and to plate with the platinum, which is the only reason they are used! Mesh plates reduce costs. They do not increase performance.

The following is a quote from a discount water ionizer website talking about mesh plate electrodes: "...five of the most advanced mesh platinum-titanium electrodes in the world...the electrodes are covered in a "super fine" mesh with very distinct high points and valleys..."



Pictured above are the actual mesh plates being described. After extensive investigation and exhaustive research it was discovered that the "distinct high points and valleys" were, in fact, nothing more than the holes in the mesh!

This ionizer took the fact that their plates have holes in them and turned it into an impressive sounding feature that would fool even the savviest of consumers!

Surface Area

Bigger IS Better!

In order to fully appreciate the role the surface area plays, consumers need to understand some water ionizer basics. These machines ionize water as a result of the water coming into physical contact with the positively and negatively charged plates. Having a greater surface area allows the water to come in contact with the plates for a longer period of time, creating a stronger, more stabilized ionic charge. More surface area means better water.



Examples of solid, slotted and mesh plates.

Since total surface area is a very important factor in the creation of ionized water, it is vital that consumers consider the dimensions of the plates and their construction: solid, mesh or slotted. If they are mesh or slotted, find out if the reported surface area includes the "negative space" created by the holes / slots. In most cases the advertised plate surface area did not include the negative space, which was providing consumers false information.

Test Drive continued...

Auto Heat Shut Off. This particular “feature” is typically found on the discount water ionizers and is known by slightly different names, depending on the brand. It may be an “over heat detector”, or a “high temperature overload switch” or a “temperature sensor / auto shut off”. On the website of one discount water ionizer brand it is advertised that their ionizers come equipped with “High Temperature Overload: Automatic transthermal temperature sensor shutoff and reset protection”.

Sounds impressive! But no matter what it is called, they all do the same thing, which is shut down the flow of electricity to the electrodes if the machine starts to overheat. The bottom line is that this “feature” is included because the ionizer is prone to overheating, which any reasonable consumer would see as a design flaw, not a beneficial feature!



Typically this sensor is programmed to automatically activate after about 10 minutes of use. Many low end models then require a “resting” period before the ionizer can be used again. Without this sensor, some of the lower quality components of these discount ionizers could literally melt!

Auto Heat Shut Off



Even worse than melting, they could combust, and actually start to burn, creating a fire hazard.

If consumers consider this in terms of other products they use everyday, they should quickly realize that an automatic shut down of a product after 10 or 15 minutes of using it is not a feature, but instead a major design flaw. Imagine other products having this “feature”.

Would you purchase a computer that was designed to shut down after 15 minutes of use, and then had to sit for 30 minutes, before you could start it back up? Or maybe a refrigerator that could only run for 15 minutes, and then it would shut itself off.

If another product were equipped with this so-called “feature” it would be exposed for what it is: a major design and mechanical flaw. Consumers should carefully consider purchasing any ionizer equipped with an automatic heat shut off sensor.

Automatic Flow Control

This is another masterfully spun “feature” of many of the discount water ionizers. Again, in order to truly appreciate the spin, consumers have to understand some basics about ionization.

There are three main factors that influence the quality and effectiveness of the water produced by an ionizer: power, plate size, and length of time the water is in physical contact with the plate.

The designers of the discount ionizers work with lower power and much smaller plate surface area, so they devised a way to manipulate the physical flow of the water in order to force longer contact with the plates. This “auto flow control” is nothing more than a regulator that limits the amount of water that can pass through the machine at any one time.

With an auto flow control sensor it would not matter how high you were to turn on the faucet, because the valve



would control the flow once the water actually entered the machine. With the flow reduced, the water pressure is less and the water passes over the plates slower and in less volume.

This results in the water having a higher “out of the machine” pH and negative ORP reading. However, because the electrical charge being used is not very strong and the electrodes being used have a smaller surface area and are not solid, these properties are very unstable and dissipate very quickly.

The auto flow control is one of the main reasons that many of the discount water ionizers take so long to produce any real amount of ionized water. The flow rate is typically one third, to one half, that of a quality ionizer not using a flow control sensor.

This is just one more poorly designed component, that the lower quality ionizer sellers spin, in order to try to convince consumers that it is a feature, instead of a flaw.

Consumer Guide highly recommends that, once again, consumers exercise careful consideration when purchasing a discount water ionizer equipped with an auto flow control sensor.

LAB RESULTS

PRODUCTS PUT TO THE TEST



STUDY TITLE: Germicidal and Detergent Sanitizing Action of Disinfectants
PROJECT NUMBER: A09385 / A11304
TESTING LABORATORY: ATS Labs

The 2.5 pH Strong Acidic Water produced by the Enagic® Super501 Water Ionizer* was tested for effectiveness in killing five different types of bacteria: Staph, E-Coli, Salmonella, MRSA & CRKP.



Enagic® Super501



SUMMARY OF ANALYSIS

STAPH: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Staphylococcus aureus*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

E-COLI: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Escherichia coli*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SALMONELLA: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of *Salmonella typhi*, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

MRSA: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Methicillin Resistant *Staphylococcus aureus* – MRSA, following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

CRKP: Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000, demonstrated a >99.999 percent reduction of Carbapenem Resistant *Klebsiella pneumoniae* – CRKP following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF EFFICACY RESULTS



STAPH: Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Staphylococcus aureus*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

E-COLI: Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Escherichia coli*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SALMONELLA: Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against *Salmonella typhi*, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

MRSA: Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Methicillin Resistant *Staphylococcus aureus* – MRSA, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

CRKP: Enagic Super 501 Strong Acidic Water 2.5 pH demonstrated efficacy of two lots against Carbapenem Resistant *Klebsiella pneumoniae* – CRKP, and therefore, meets the requirements set forth by the U.S. EPA for sanitizer label claims following a 30 second exposure time at room temperature (20.0°C) in the presence of a 5% fetal bovine serum organic soil load.

SUMMARY OF PROTOCOLS

Test Substance:

Enagic Super 501 Strong Acidic Water 2.5 pH, Machine 1 (Serial #: 87100333) Lot # 1 and Machine 2 (Serial #: 87100339) Lot # 2 with pre-filter C-1000

Test Organisms:

Staphylococcus aureus (ATCC 6538)

Escherichia coli (ATCC 11229)

Salmonella typhi (ATCC 6539)

Methicillin Resistant

Staphylococcus aureus – MRSA (ATCC 33592)

Carbapenem Resistant *Klebsiella pneumoniae* – CRKP (ATCC BAA-1705)

Exposure Time:

30 seconds

Exposure Temperature:

Room temperature (20.0°C)

Organic Soil Load:

5% fetal bovine serum



* No other water ionizer brands were tested because the Enagic® water ionizers were the only ones capable of producing 2.5 pH Strong Acidic Water.

Review Websites

Uncovering the unbelievable truth behind the Internet buzz



an unbiased review website, is quietly revealed in the fine print at the bottom of the website as being owned and operated by Earth Trade Water, the parent company of California based Life Ionizers.

Promoting the features or benefits of their own machines would be one thing, but to expect consumers to believe that the reviews of the ionizers of a competing company in the industry are going to be completely objective would be ridiculous!

While not as predominate as the phony review websites, it is important to address the so-called "laboratory test" results that surface online every now and then. If you run into a document or video on an ionizer website that is about comparative product testing, they are only for marketing purposes. They are not for actual scientific purposes, documenting an ionizer's effectiveness.

No legitimate, unbiased product comparison laboratory tests have been conducted by any water ionizer company. While there have been laboratory tests run by companies regarding aspects of their own products, there have been no tests run for the purpose of comparing water ionizers. There have been instances when water samples have been sent to independent labs and they were tested for things like pH value and ORP. The labs then went on to draft a report on their findings, even though they did not even know where the water samples came from. This does not constitute proper comparative testing and the findings are useless.

On one website a very scientific, official looking man takes viewers through a series of tests that were designed to convince them one ionizer brand is better than another. To an untrained eye, most of these tests seem legitimate. Unfortunately the testing is not following even the most basic protocols necessary to truly come up with conclusive, accurate results.

While all of these websites might seem like they were created to help, they were actually only created to sell. Every word they say is centered around this objective.

It has been discovered that some of the predatory water ionizer sellers have created elaborate websites that are promoted as and appear to be independent, unbiased reviews of water ionizers.

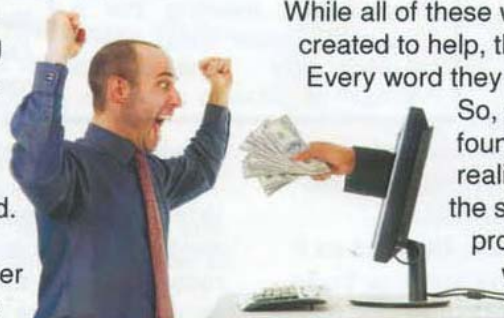
For the record, there are NO independent, unbiased water ionizer review websites anywhere on the Internet. Every so called independent water ionizer consumer review website that you come across is nothing more than a marketing website, created with the specific intention of selling a particular brand of ionizer. These sites have not been created to provide information that will help protect consumers. They have been created to specifically influence a consumer buying decision.

There are a few very simple ways to identify a fake review website. The first, and most obvious, is when a review website lists their "Top Pick" or top brand, and then that machine or brand is the only ionizer on the website available for sale. A real review website typically has all or nothing. Either they provide links for purchasing all of the reviewed products or none of them.

A real review website is for providing information. They have no vested interest in which product comes out on top, so they will not pick and choose which products can be purchased. This even applies to the sites that review 10 different brands of ionizers, but only have purchase links for 5 of them. What this indicates is that the owner of the site is actively selling just those 5 brands, which does happen.

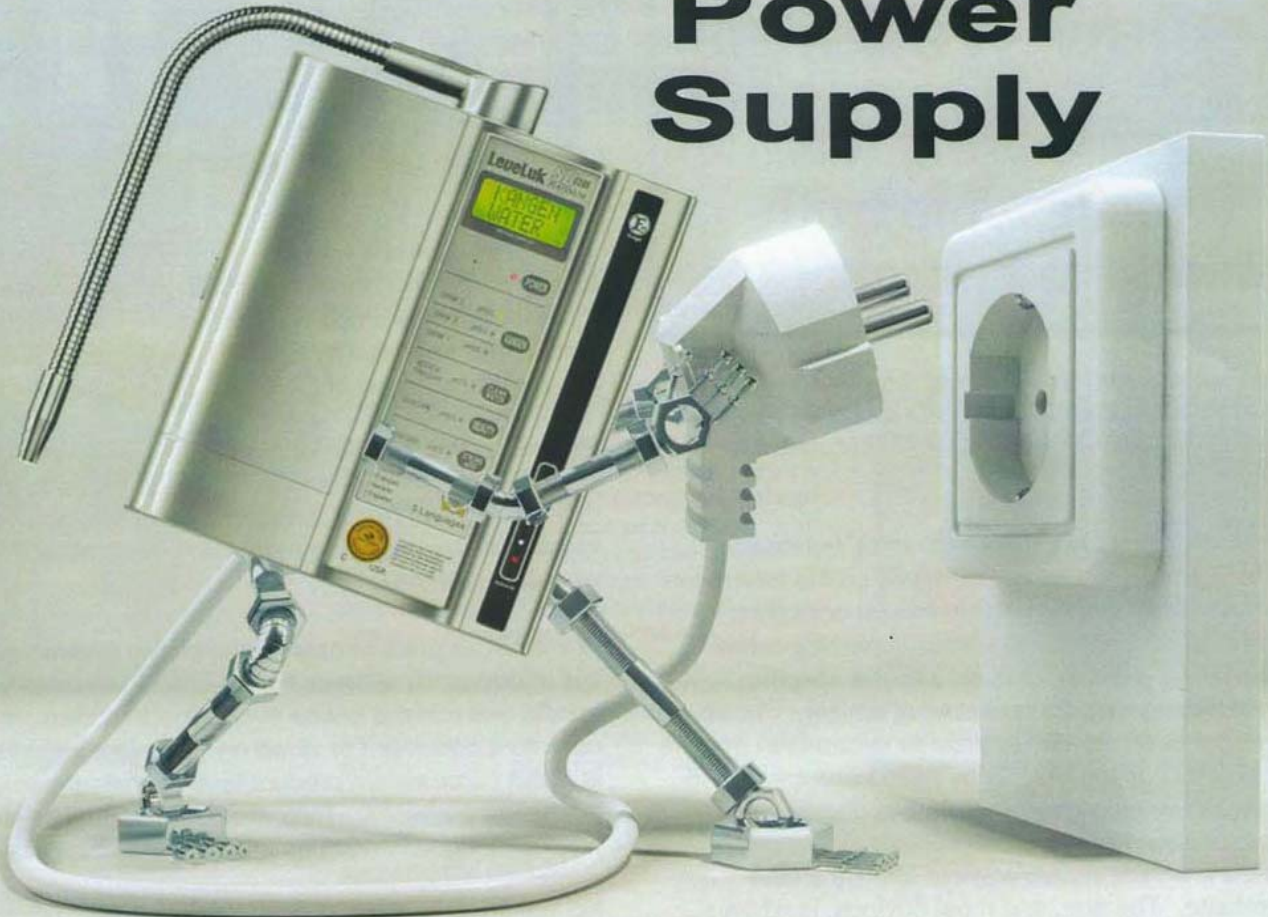
Another way to identify a phony review website is to check the Contact information. Legitimate websites provide detailed information on how consumers can contact them. Listing their company or organization name, address, phone numbers, hours of operations, etc. When you click on the Contact Us link and it directs to a page with nothing more than an email link or a short form, you are most likely on a phony review website. These fake sites don't want you contacting them, which is why no real contact information is ever provided.

There are some exceptions to this. Water Ionizer Expert, a site that appears to be



So, when it comes to ionizer reviews found on the internet, your best bet is to realize that they are not objective and that the sites were created to sell you a specific product. If you really want to find out if a water ionizer is really worth it, demand water samples and try it for yourself.

Power Supply



Transformers vs. SMPS: The Results Are In

The amount of power surging through the plates of an ionizer is one of the most important aspects of ionization! It is the amount of power, coupled with the size, construction and number of plates, that will ultimately determine the strength of the properties and the stability of the ionized water.

There are 2 primary types of power supplies used in water ionizers: Transformers and SMPS, which stands for Switched Mode Power Supply. Many of the discount ionizer companies, promoting mesh or slotted plates, heavily promote SMPS. They promote it as the most advanced technology available for electronics and that even the newest plasma screen televisions use this type of power supply. SMPS does have at least one positive selling point, which is that it incorporates a switching regulator in order to make the conversion of electrical power more efficient.

Traditional transformers are the best form of power supply to handle continuous electrical usage, as well as higher wattage. Ironically, many discount ionizer companies actually attack the use of transformers, saying that it is out dated technology and that what they offer is much more modern, which supposedly makes it better. They act as if the transformers being used today are the same as those invented by Michael Faraday back in 1831.

SMPS creates an average of power output, meaning that a "300 Watt" ionizer using SMPS actually only produces a maximum of 150 watts of power.

Contrary to these attacks, the transformers that are used are the most advanced available and are one of the key components to the success of these products. It allows a higher wattage water ionizer to run for long periods of time, while producing stable ionized water.

Research conducted by Emco Tech, a Korean based manufacturer of private label water ionizers that primarily uses SMPS, was recently discovered after one of their distributors published the findings regarding the use of SMPS in water ionizers on their website.

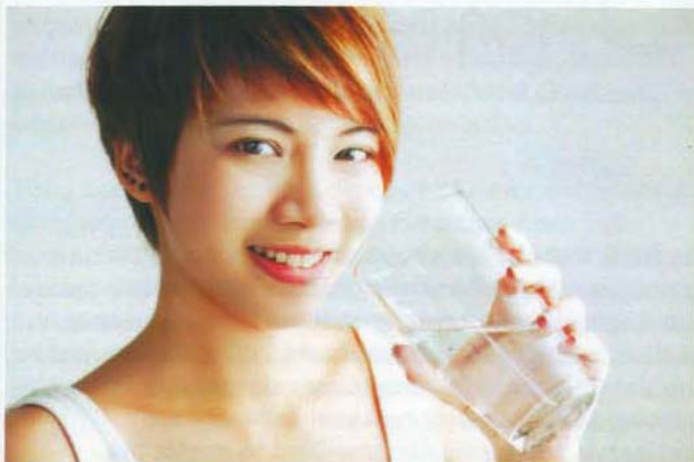
The following are from these findings: *SMPS is lighter weight and typically less expensive to manufacture, however it has been shown to respond more slowly, and be less stable overall, than the Transformer system.*

One clear advantage of SMPS has nothing to do with its performance, and this is that its lighter weight results in lower shipping costs. The Emco Tech research summarized SMPS as having an overall lack of stability and long-term reliability in the systems currently available.

While SMPS is employed in some electronics, due to the weight and cost advantage, transformers remain the most prevalent, durable and most stable power system for water ionizers and many high end home electronics.

Lifestyle: Health Through Hydration

Have you ever thought about how much water impacts your life? Have you ever really paid any attention to how much water you drink each day? Are you aware of how much your water intake and hydration levels affect your overall health? As a general rule, your total daily intake of water should be equal to half your body weight in ounces.



We are all aware that water is essential to life. Most people believe their sense of thirst is the key indicator of dehydration. The fact is, by the time you feel thirsty your body is already feeling the effects of dehydration. When you suffer from dehydration it affects every aspect of your body. Creating a daily routine of water intake that fits into your lifestyle may reduce future health risks.

Many people believe that they drink enough liquids each day to stay properly hydrated. However, drinks such as coffee and tea actually steal water from your body because they are diuretics. If you drink one cup of coffee you need at least two additional cups of water per day to replenish your daily requirement of H₂O.

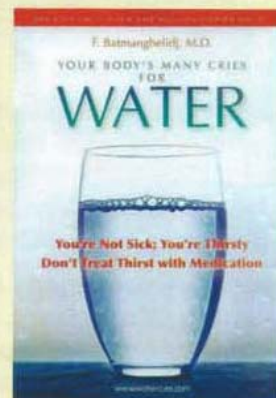
Many people think that drinking any fluid is the same as drinking water, because, let's face it, the main ingredient in most beverages is water, right? Even if the main ingredient is water, once you add something to it, the properties of the water are altered and the interaction between this altered water and the body changes. So guzzling barrels of soda is not the same as drinking water! And remember, your body is 0% soda!

The body is made up of approximately 70% water. Water is essential for proper digestion. It helps remove toxins, improve circulation and regulates the cooling system.

Consuming your recommended water intake is essential for living a healthy life. We can go weeks without any food, but we can only survive for 3 or so days without any water. The bottom line is: drink more water! It is the key to a healthier life!

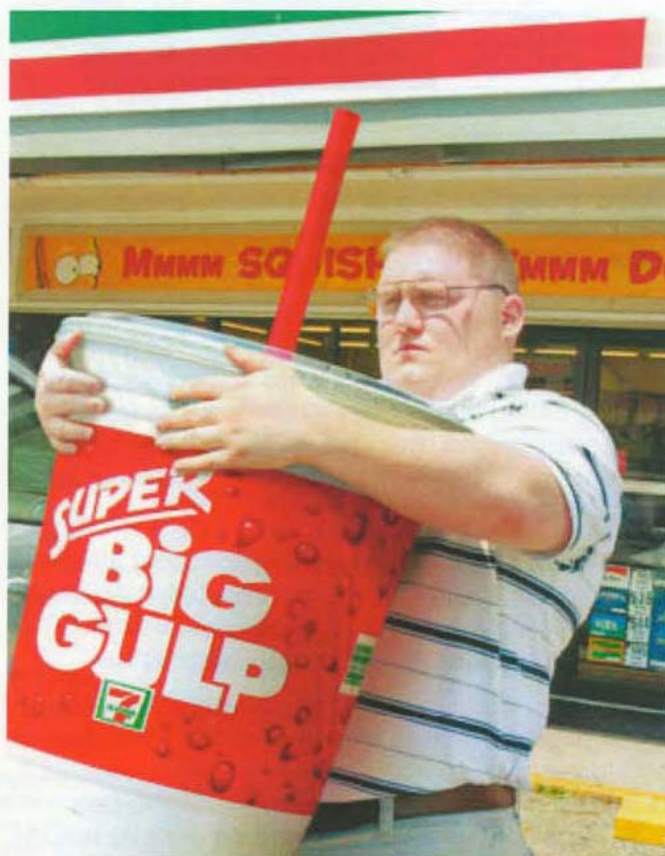
Book Review: *Your Body's Many Cries for Water*

There are many resources that talk about the effect of not drinking enough water. One of the best books written on this subject is "Your Body's Many Cries for Water" by Dr. Batmanghelidj. This book focuses on the belief that "many degenerative diseases could be prevented and sometimes cured if we drank more water daily."



Dr. Batmanghelidj states: "The body poses many different thirst signals. A dry mouth is not a reliable indicator of your body's water needs."

He also describes more reliable indicators of thirst and helps you understand when your body needs water before you get dehydrated. Dr. Batmanghelidj believes that water is nature's miracle medicine. He claims that you can prevent, treat, and cure health related illnesses through WATER!!! Dr. Batmanghelidj's book teaches us how much water one needs to drink to stay healthy and why tea, coffee, and sodas are not good substitutes for water.





Eye On The Industry Investigative Report



There have been many inquiries from consumers regarding Life Ionizers, aka Earth Trade Water, Inc., so Consumer Guide launched an investigation to uncover what we have titled *The Facts of Life*.

CG conducted a very extensive investigation, using numerous resources, however, this published report contains information that was primarily found on the Better Business Bureau (BBB) website.

The investigation started with a simple BBB search using the name Life Ionizers. The search returned 1 result, "Life Ionizers aka Earthtrade Water". As of the date of the search* the rating for Life Ionizers was an "F", which is the lowest BBB rating possible.



* Information collected during a search conducted on February 1, 2013. Visit www.bbb.org for the complete BBB Life Ionizer report.

The BBB website provided a detailed report explaining why this former BBB Accredited company had their accreditation rescinded and are now receiving the lowest BBB rating possible.

It started with a summary of consumer complaints, which included 47 in the past 3 years, 19 in just the past 12 months. While there were some complaints regarding billing issues, advertising / sales issues, and warranty issues, the vast majority, 42 of the 47 complaints on file, were listed under "Problems with Product / Service".

In addition to specific information regarding all 47 complaints, the website also included more details in the "Additional Complaint Information" section. The following information was found in this section:

"Consumer complaints most frequently allege there being significant misrepresentations or misunderstandings regarding the company's refund policies." This seems to completely contradict the "60-Day Money Back Guarantee" promoted on the Life Ionizer website.

The BBB website also reported "Consumer complaints allege having significant difficulty reaching company representatives who are able to resolve their issues". It went on to say, "Consumer complaints claim receiving poor customer service, claiming that company representatives were dismissive, unhelpful, or unwilling to assist the consumer to resolve their issues. Some consumer complaints further allege that the company's customer service representatives were rude, unprofessional, or offensive during phone conversations about their issues." This, once again, seems to completely contradict the Life Ionizer "100% Satisfaction Guarantee" promoted on their website.

The most shocking information was discovered in the "Advertising Review" section of the BBB website. Fueled by consumer complaints, the BBB launched an internal undercover investigation of Life Ionizers in September 2012 for alleged violations the California Business and Professions Code advertising laws for companies selling water filtration systems. The BBB investigation concluded that some of these laws were being violated.

Life Ionizers has stopped promoting their affiliation with the BBB on their website since their rating fell to an "F" and they are now using a different "Consumer Protection" company called the Online Business Bureau (OBB), where they are a "Recommended" company. A search of the "Online Business Bureau" on the BBB website revealed that OBB, just like Life Ionizers, also has an "F" rating with the real BBB.

Before making any major purchase, \$1000 or more, Consumer Guide strongly encourages consumers to thoroughly investigate the company, before making a buying decision. Based on the information found on the BBB website, many consumers have discovered, the hard way, how Life Ionizers conducts business. Unfortunately, this discovery was after the purchase, which was simply too late! Investigation Summary: When it comes to Life Ionizers, buyer beware!

Filtering Out The **FACTS**

Filters That Add Minerals? How some internal filters are tricking consumers!

Every electronic water ionizer has an internal filter to remove impurities from the source water. This allows the water to be as pristine as possible, before actually entering the electrolysis chamber, where it is ionized. Most filters contain activated charcoal, which is excellent for removing chlorine.

They can also contain a number of other substances that help remove undesired chemicals from the source water. It is important to note that **NO** water ionizer available in the U.S. Market contains any component that releases anything harmful into the water, even though several ionizer companies make this claim against competitive brands.



If the internal filter is high quality, a single filter should be sufficient to do the job. However, some ionizers have dual filters. It would seem that, in this case, two would be better than one. It makes sense, until you understand why there are two filters. The reason may surprise you. The second filter is to put stuff into the water, not take it out. To fully appreciate why this is being done, you need to understand some of the basics of ionization.

The main thing you need to know is, in order to ionize water through electrolysis, there must be minerals present. These act as conductors for the electrical charge. More minerals in the water creates greater conductivity; the greater the conductivity, the greater the ionization.

Because the makers of many of the discount ionizers know that the power surging through their machine is not sufficient to ionize with the normal mineral content found in most tap water, they add additional minerals into the water from the second filter, which helps create a slightly stronger charge.

Some of these minerals also have a higher pH level, so, when tested with pH drops or other pH testers, the water will appear to have a higher alkaline level, than if it solely went off the pH created during ionization. An example of dual filter configuration appears below.



Using additives to boost the pH level is a deceptive way to make consumers think their water is more alkaline than it really is. One more issue that can be created by the introduction of these added minerals is over calcification. One of the most popular minerals used in the filters to increase the mineral content of these dual filter machines is calcium.

When water passes through the second filter, additional calcium is released into the water. While this will increase the conductivity of the source water, it will also allow even more calcium to build up in the machine. In case you did not know, one of

the biggest **KILLERS** of a water ionizer is mineral build up on the electrodes. The slight benefit that may be created from the added conductivity does not justify the potential harm being inflicted on the machine by adding more minerals.

Using additives to boost the pH level defeats the whole purpose of ionizing the water, because all it does is give an illusion of the higher alkalinity which is good for the body. This will only result in the illusion of improved health! So look for a machine that is able to effectively filter the water using only one filter and that does not need alkaline rich minerals added from a second filter in order to make the water appear more alkaline.

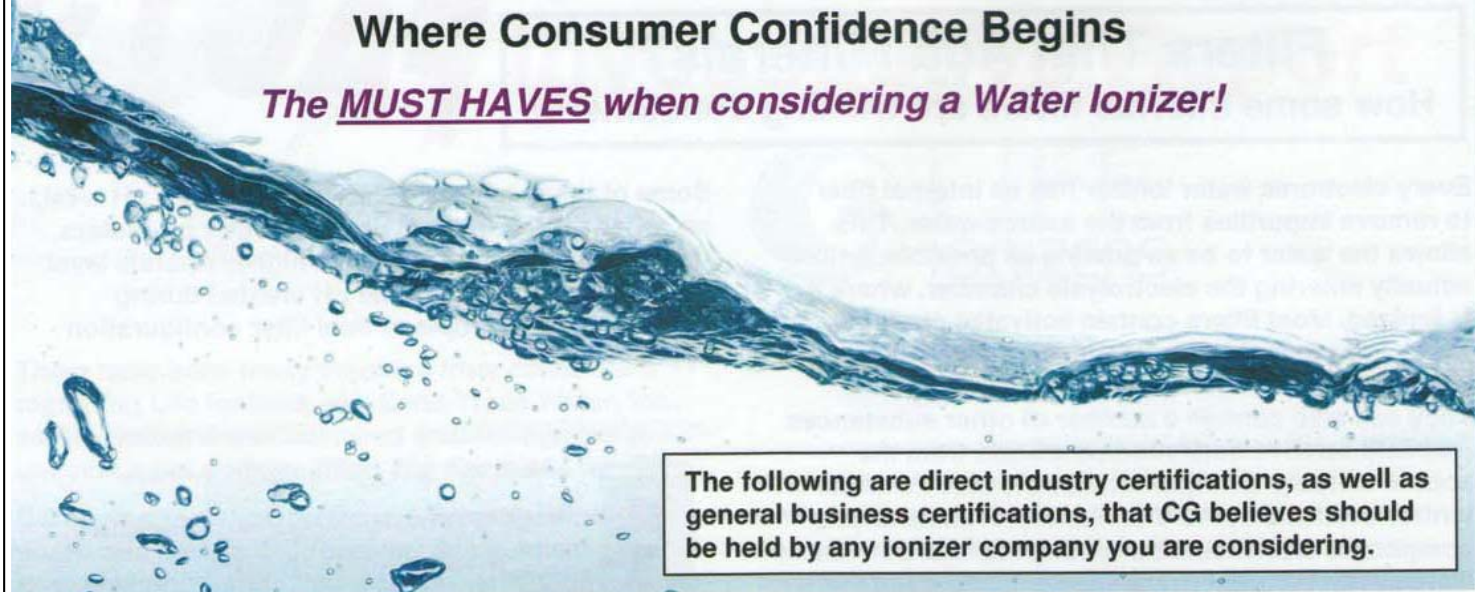


Above is an example of an ionizer internal filter containing alkaline rich minerals; in this case it is Tourmaline.

Water Ionizer Industry Certifications

Where Consumer Confidence Begins

*The **MUST HAVES** when considering a Water Ionizer!*



The following are direct industry certifications, as well as general business certifications, that CG believes should be held by any ionizer company you are considering.



"A" rated Membership in the Better Business Bureau is expected and Accreditation is preferred. BBB Accreditation is an honor and not every company is eligible. Businesses meeting BBB standards are presented to local Boards of Directors for acceptance as a BBB Accredited Business.



ISO certified manufacturing is an absolute must! These are certifications that affect the quality of the product as it is being made. Obviously, to get a great end product, you must use the highest quality materials and employ the highest levels of craftsmanship during the production process.

The International Organization for Standardization, or the ISO was founded in 1947 and is the world's largest developer of voluntary International manufacturing standards. International manufacturing standards give state of the art specifications for products, services, and good practice, helping to make industry more efficient and effective. Having ISO certification means that a company adheres to the highest manufacturing standards in the industry.



**DIRECT SELLING
ASSOCIATION**

If you are buying your ionizer through a direct seller, meaning NOT in a traditional retail establishment, then the seller should be a Member of the DSA. The DSA is the national trade association of the leading firms that manufacture and distribute goods and services sold directly to consumers. DSA members go through a lengthy and rigorous application process, and only the very best in the direct sales industry are selected for membership.

The Association's mission is "To protect, serve and promote the effectiveness of member companies and the independent business people they represent. To ensure that the marketing by member companies of products, and or the direct sales opportunity, is conducted with the highest level of business ethics, and service to consumers." The cornerstone of the Association's commitment to ethical business practices and consumer service is its Code of Ethics. Every member company pledges to abide by the Code's standards, and procedures as a condition of admission, and continuing membership.



Membership in the Water Quality Association is expected and Gold Seal Certification is preferred. The WQA is a not-for-profit, international trade association representing the residential, commercial and industrial water treatment industry. The WQA is dedicated to promoting the highest principles of honesty, integrity, fair dealing and professionalism in the water quality improvement industry. It is equally dedicated to preserving the consuming public's right to quality water. Their Code of Ethics sets standards of conduct for industry members in their dealings with their customers, among themselves, with members of related industries and the public at large.

CERTIFICATION SPOTLIGHT

In this Consumer Guide edition the Certification Spotlight is on Japanese ionizer company Enagic®. During research into the certifications held by this nearly 40 year old company CG discovered numerous examples of certifications and honors not held by any other company in this industry. While Consumer Guide knows that the big blue "E" represents the name "Enagic", based on our findings, it could very easily stand for EXCELLENCE!

