

Book about the  
Phenomenal Elixir of Life  
and Its Revitalisation



Water. Book about the Phenomenal Elixir of Life and Its Revitalisation

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# **Book about the Phenomenal Elixir of Life and Its Revitalization**

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# Introduction

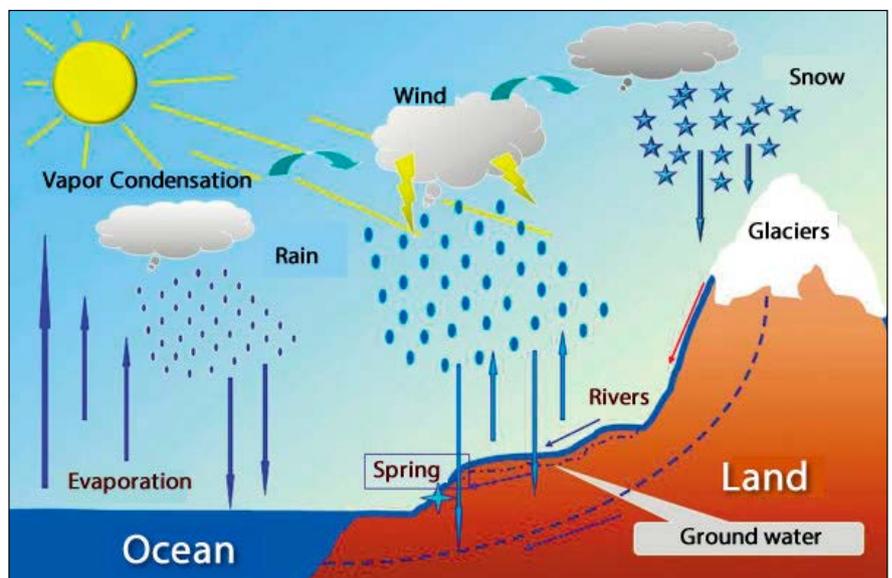


## Water in Macrocosm and Microcosm

Goethe, a very sensitive thinker and observer, was able to immerse into nature and understood that water is the element uniting everything and everyone. Water is correctly described as the “elixir of life”. The water cycle on earth represents the travel of water in the macrocosm. It includes everything that is alive on earth and brings it to the tiniest areas of the microcosm. Every year about 48,000 cubic kilometers of water go through this cycle. Water covers about 70% of the surface of our planet. There are 1,38 billion cubic meters of water on the planet, 97,4% of which is seawater. There is only 2.6% of fresh water, 78% of it is frozen.

1.8 million km<sup>3</sup> of liquid fresh sweet water is ground water, 126,000 km<sup>3</sup> – lakes, 61,200 km<sup>3</sup> – soil water, 1,100 km<sup>3</sup> floats in the atmosphere in the form of vapour.

**48,000 km<sup>3</sup> pass through the global water cycle every year. Life on earth is related to this water macrocosm and also the microcosm, for example, the cells of our bodies.**



# Drinking Water and Technical Water



It is known that 97,4% of the world water cycle belongs to the water of oceans. The major part of what is left is frozen in the polar caps and the drinking water is only a small part of it that we have access to. So optimising and preserving the no. 1 source of food is a very important thing for all of us.

Many people pay little or no attention at all to the quality of their drinking water and their food; they just obey their old habits. High quality water is one of the fundamental elements for maintaining and renewing the power of our body; it is the basis of longevity.

Polluted water is one of the critical problems of the modern world. Bacteria and viruses live freely in our waters and the chemicals used to fight them.

Mountain spring water strongly differs from the water that is usually available for the people living in a city. The water that comes out of the tap contains added chemicals, lime and rust. It has been forced with pressure through the pipes and has been processed with magnetic impulses.

These factors destroy the vital powers of the water and disrupt the water frequencies, which changes its natural vital characteristics. Filtration alone has negative consequences that affect people, animals and nature in general. Exhausted, not alive water cannot recover from this pollution and it becomes a health hazard.



After investigating modern methods of water processing and their deficiencies, it becomes clear, why revitalizing the water is so important for sustaining good health.

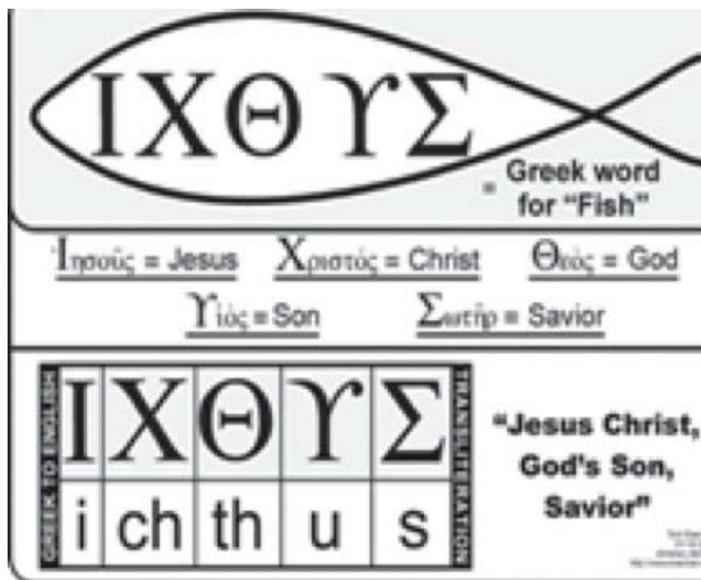
# Importance of Water for General Well-Being

In industrial countries each person uses 150 – 300 liters of water per day and only 2% of this is used for drinking or making food. The rest is used for washing clothes, dishwashing, car washing, cleaning, body hygiene, watering plants and so on.

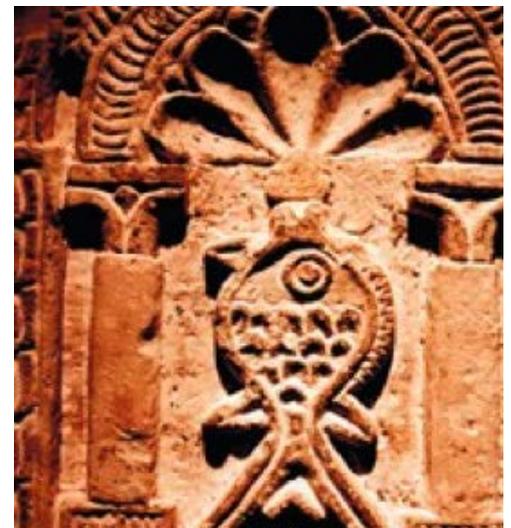
“Water can exist perfectly without humans, but we humans can only live 3 days without water.”

Mankind has been aware of this for thousands of years. E.g. polluting water in Ancient Rome was one of the biggest crimes.

Many scientists believe that life on earth (protein compounds emerging from non-organic compounds) originated in a water environment. Early Christians chose the symbol of a fish as an emblem of Christ and as an emblem of Christians in general. Christian scholars believed that life came from the water, so the fish was chosen to be the symbol of the birth of life. Water as a substance and dissolvent has drawn the attention of people for a long time.



The eyes of the fish were pictured as a solid wheel with a disc in the center that symbolizes water energy.



Ancient philosophers including Aristotle (384–322 BC) considered water one of the fundamental elements of Nature.

Alchemists paid a lot of attention to all kinds of fluids and solutions. They understood early that most chemical changes happen more easily in water than in a solid environment.

In the old days water had that very power to revitalize the whole organism. Nowadays water contains so much chemicals (chlorides, fluorides) that at least scientifically it could be “dangerous to one`s health.”



## The World Health Organization (WHO) has Defined 6 Criteria for the Evaluation of Drinking Water

The WHO discovered some regions (villages) where people live a long life:

Caucasus – former USSR, Fenza – Pakistan, Bama County in the province of Guangxi (Southern China) and Turpan, Xinjiang Province (Northwest China).

In these regions the average life expectancy is 100 years and none of these people suffered from cancer, cardiological or cerebrovascular diseases. Also, most of the people die a natural death, their excrements are bright yellow and don't have an unpleasant smell.

Taking this phenomenon into account scientists began research in these regions. They made numerous studies and came to the following conclusion: the secret of the longevity lies in the water, which has these six characteristics:

1. All villages are situated in remote areas without industry or modern agriculture and therefore not polluted. The water is not polluted with bacteria, organic compounds or heavy metals. The water is pollutant-free.



2. The water has the right balance of mineral substances and microelements that are in the form of ions, well suited for assimilation by the human body.
3. The pH of the water is basic which means that it neutralizes too high levels of acidity in the organism.
4. Small molecular clusters with good osmosis and solubility.
5. The electrically negative potential of the water eliminates unwanted free radicals.
6. The amount of oxygen in the water: 5 mg/l or close to it.

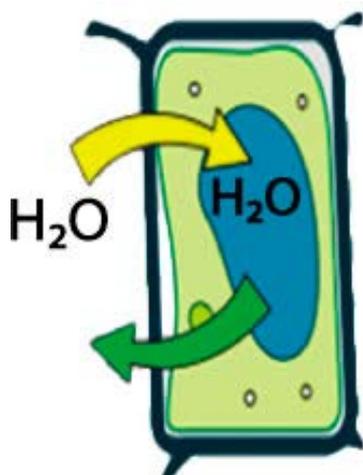
Only water that had these six characteristics had affected the health of these people.

The aging of the organism begins with losing water and aging of the cells. The aging of the cells begins with stagnation and fermentation of water. Fermented water is stagnated water like in a swamp. In a healthy organism water must be in a constant motion. Dehydration (lack of water) means diseases and premature aging.

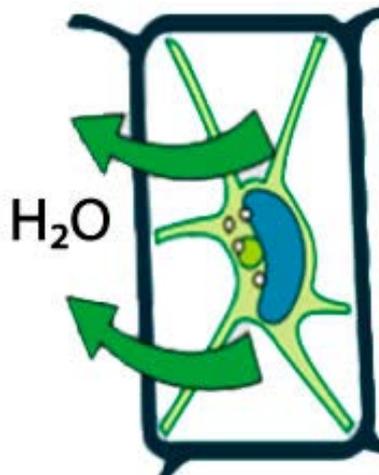
### Dehydration happens because of:

- ◆ Insufficient intake of bioactive water for effective cell activity.
- ◆ Low level consumption of dead water by body cells.

#### Normal water metabolism



#### Dehydration



If dehydrated the organism loses the ability to clean itself of metabolic toxins from the cells.

Deficient water metabolism causes up to 80% of all diseases (according to WHO).

Water participates in all important physiological processes in the human body: breathing, bloodstream, digestion, excretion, metabolism and immunity, etc. The quality of water = the quality of life.

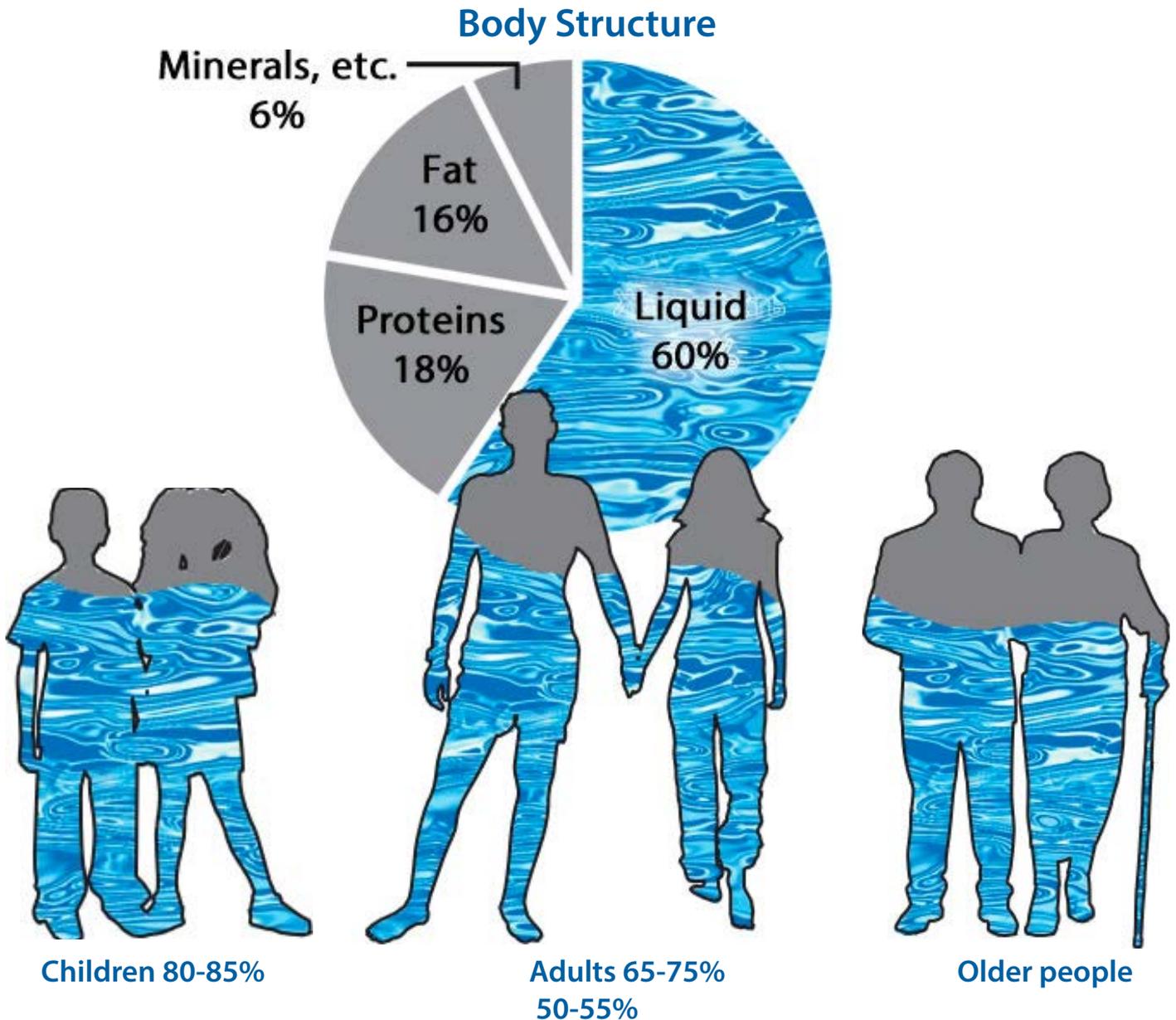
### Very important!

These few liters of reviving fluid that are necessary for the life and health of people of all ages, should be water of the highest quality.



# We are what we Drink

The body of an adult consists of ca. 75% of water, the brain of up to 85%, blood up to 90%. The body of a child has about 80 – 85% and a senior citizen only around 50 – 55% of water. This means that with age the human body loses the ability to assimilate water, so dehydration begins, partly because water of bad quality cannot be transformed into structural bioactive water, crucial for the cells.



Our health depends on the quality of the water we drink. Scientists have long since come to the conclusion that diseases are related to consumption of bad quality water.

We all take care of our close ones. First of all, we are concerned about the health of our small children and senior relatives. We spare no expense if someone in our family gets sick.

Even if the water quality has improved in general lately, we still do not get all the benefits that natural water can bring. Because of human interference water has lost its original healing powers, it is no longer the elixir of life.

## Why is Water Wet?

What may sound like a silly question from a child is actually the subject of scientific research.

The current understanding is that water is an amorphous substance and a liquid crystal substance at the same time.

Published in "The new Scientist", 15th February 1997: "If you want to hydrate your body with water, make sure that it has cluster groups, which consist of at least 6 molecules". Without 6 molecules that are joined together,  $H_2O$  does not act as a fluid. Clusters have a flat form. When 6 molecules are joined, the group gets a three-dimensional cell structure, which behaves like a fluid.

In general chemistry focuses on the bonds that hold atoms together to form the molecules.

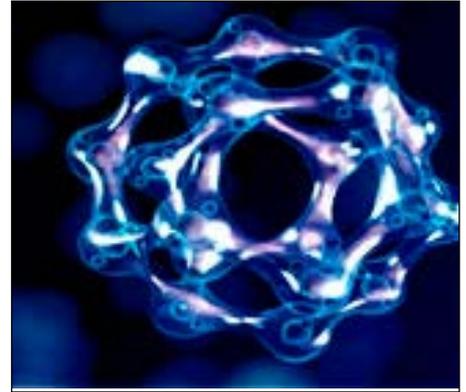
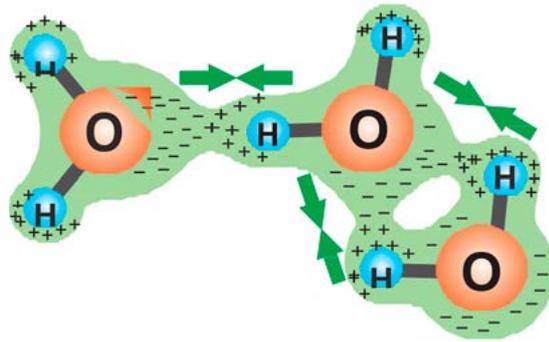
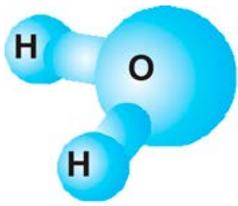
But as regards to the common structure of the molecule, two atoms of hydrogen and one of oxygen, the interesting part lies elsewhere.

"The chemical bonds between the water molecules are actually the key to its characteristics", says David Clary from University College London, Chemistry Department.

"Two water molecules joined with a hydrogen bond which is at least 10 times weaker than the usual chemical bond results in a bond that is strong enough to join and weak enough to be destroyed easily", says Clary. "It helps the water molecules to form any kind of combinations that otherwise wouldn't be possible. If the hydrogen bonds would be a little stronger, water would stay solid even at  $100^{\circ}C$ ". If so, life on Earth would probably not have been possible.



## Cluster Structure of Water



Dipoles

Formation of hydrogen bonds

Hydrogen bonds form clusters - molecule configuration

Although a water molecule generally is electrically neutral, it is a dipole. I.e. one side of the molecule has a positive charge and the other side a negative charge. Dipoles may create bonds among themselves when one water molecule with its negatively charged side attracts the positive side of another molecule. In this way hydrogen bonding (a cluster of water molecules) is created, changing bonding every 1 billion of a second. Water does not consist of separate molecules, but of large compounds formed of 2-3 and up to 900 molecules. These compounds are the clusters.

Also there is a stable water "crystal" that exists for minutes and even hours. According to calculations the most stable hexagon has a cell form looking like two Egyptian pyramids connected at the base.

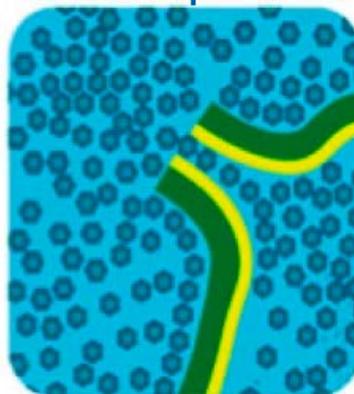
Scientists believe that this hexagon is the key to many secrets of water. This formation has been referred to as the main structural element of water.

Not so long time ago it was thought that clusters are unstable - that they are constantly destroyed and form again. This is true. However, it applies only to water formed chaotically.

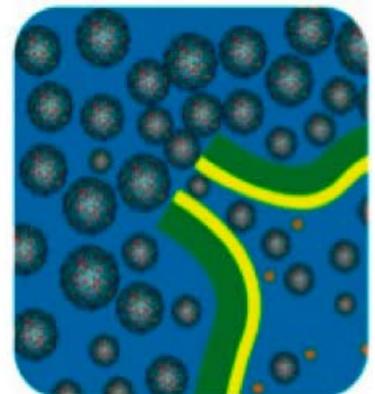
This is true. However, it applies only to water formed chaotically.

Structured water, having a structure analogical to a crystal, has stable clusters consisting of 6 molecules.

### Penetration of water into the cell depends on the cluster size.



Structured water. Clusters with no more than 6 molecules. Water assimilation 100%.



Unstructured water. Clusters from 2-3 to 900 molecules. Assimilation only 10-20%.

Ukrainian physicists have proven that in the midnight from January 18 to 19 the water in rivers, lakes, seas and springs acquires properties of liquid crystal. On Three Kings` Day (Epiphany) the planets are situated in a certain way and this affects water – its molecules create crystal structures similar to those of a human tear.

**This is a complete system of hexagonal crystals and has tremendous positive energy and healing properties.**

The strength of the cluster structure of this water is stored for several months. Penetration of this "Holy Water" into the human cell is ten times greater than that of ordinary tap water that has no solid structure due to different sizes of water clusters.

One of the main activities of Slavic priests (sorcerers) was to "grind water in a mortar" and "write on the water with a pitchfork." Actually, as now revealed, it was a water restructuring process. The sorcerer poured water into the special mortar and ground it with a pestle. In that way the water was de-structured, i.e., the old cluster structure was destroyed mechanically.

Then the sorcerer would say an enchantment and draw runes on the water using a ritual trident caved out of a holy tree, thus restructuring the water. The sorcerer would provide the families living in his village with the holy water by pouring some of the structured water into barrels with drinking water. The structured water transferred its information to the rest of the water.

When consuming this water the human body did not have to use energy for water restructuring and received additional protection from various diseases.



## The Significance of Water for Slavs and Aryans



In ancient times there was a belief that rain water, especially in the spring, had healing powers and gave beauty and fertility. Sick people were advised to drink or bathe in it as a medicine.

At that time the myth about living water emerged. The myth was common to all the Indo-European people. According to

this myth, living water heals wounds, strengthens the human body and even brings back lives. In folklore living water is called the “drink of strong heroes.”

In ancient times Slavs considered spring water as living water. Living water can heal blindness and restore the eyesight like the spring rain brightens the sky and clears the space for the eye to behold the sun.

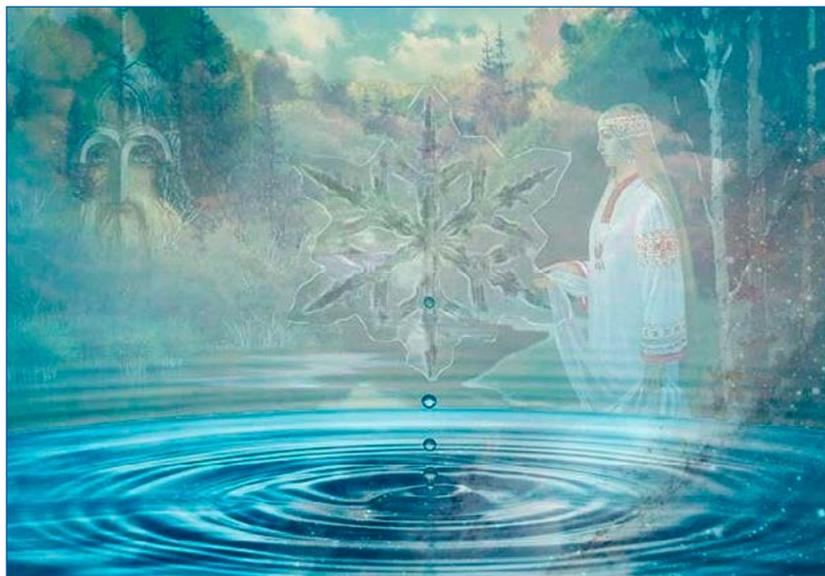
The Slavs did not start their day with ablution, but with a glass of cold water. A glass of water in the morning removed toxins from the body in a natural way. However, according to our ancestors, the water had to be cool, because warm water melts the toxins, gets absorbed together with the toxins into the body and poisons it. Afterwards they started their daily ablution - ablution being one of the main Slavic rituals. The “Book of Veles” keeps mentioning that our ancestors were called “clean” as they used to perform at least five ablutions during the day.

The best temperature for a ablution was considered to be a temperature that does not cause discomfort to the body. Ablution with hot water relaxes the body, makes the muscles flabby and takes away energy. And too cold water is also not good, as it makes the muscles spasm and has other unwanted consequences. The head should be washed only with cool water as it, according to the sorcerers, helps preserve the eyesight.

Therefore the water must be moderately cool. In order to fall asleep faster, one can, however, wash with warm water as it relaxes. In order to refresh the body one can first wash with warm water and afterwards with cold. Our ancestors used to start ablution at the feet and then do the rest of the body.

After ablution they always used to put on clean underwear! Otherwise the ablution was considered not only useless, but also causing new diseases. Ablution had to be done before and after sleep, before and after eating, after sexual intercourse, defecation, shaving and conversations.

If a communication was particularly unpleasant (quarrel, insults), it was necessary to perform a full ablution. It was the simplest protection from evil. Our ancestors thought that negative energy is concentrated in the human feet. Therefore, the more you wash them, the healthier you are.

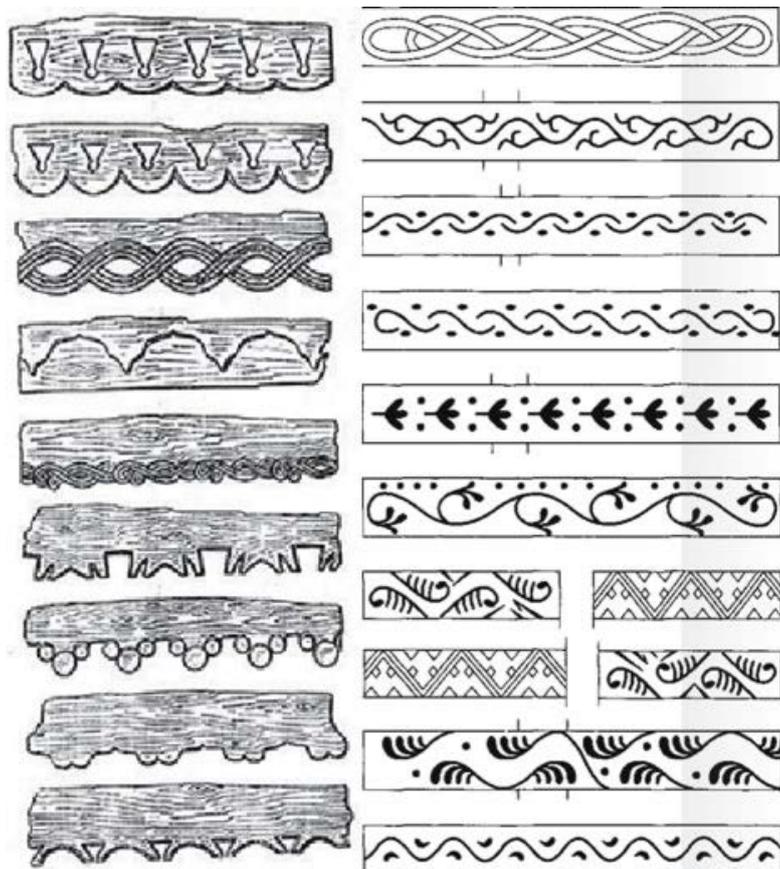


“Live water” has appeared so long ago that the fairy-tales about resurrection with the help of “dead” and “live” water became already a routine. In northern villages this “routine wonder” was used in a following way: young people went to bathe in ice-holes for fun and keeping fit and took some water for sick people and simply for future use. Thrifty men filled their house wells with clean snow so that water stays clear and fresh till spring. The most notable wives soaked the linen in the clean snow so that it stays white and lasting. That’s how Waterblessing Day was celebrated!

### What else did our Slavic ancestors know about?

It is rumoured that in the period from Christmas when Young Sun is born till June 22nd, the day of St. John the Baptist, the boundaries between worlds get thinner.

#### Symbols of water, plants and earth in ancient Slavic ornaments



**Water is very interesting from the Slavic point of view as it has many sacred aspects as evidenced in the symbolism.**

Water for the Slavic people first of all means life. It is because of because of life-giving water that the grass and the forests become green in spring and the crop does not dry out, but prospers. Our ancestors were aware of it.

Moreover, according to one of the ancient Russian myths, the Earth was born from water delivered by a duck in its beak.

## Power of the Sea Water

Water is the source of life. The theory that life began in water is rarely doubted. A recently voiced opinion is that life began in the sea – in salt water.

Seawater is unique because of its composition. Its chemical composition is similar to that of the human blood. Maybe that is why we are so attracted by the sea. The combination of seawater and the sun gives excellent healing results. The sea, with the help of the sun, wind and hot sand, gives an effect of being reborn. It dissolves old and ragged energetic sheath of a human body and gives a new life. That is why the ocean is called the cradle of mankind. It is so.



Evaporating in the sun, seawater becomes rain that is free from dirt of this world and is the source of the living water. All the dirt and the pain settles at the bottom of the sea, and, as no surprise, becomes the food for a new life, for plankton. And so on infinitely. Everything in this world is interrelated.

Heating seawater requires huge amounts of solar energy, but once heated it takes a long time to cool down.

Seawater collects energy (solar photons) and radiates it. Various colors of the sea and ocean waters depend on the light stream coming from the water layers. Clean water's maximum permeability lies in blue and blue-green colors of the spectrum. Light blue colour of vast open spaces of an ocean is explained by ocean's ability to scatter and absorb the light. In turbid coastal waters a significant role in the scattering and absorption is performed by suspended particles and dissolved organic matter. That's why the surface of murky seawaters is greenly grey and very polluted water has a yellowish shade.

Due to its small-cluster structure and a high level of solubility, seawater is rich in various minerals, which are well absorbed by the skin cells. It nourishes and strengthens the skin, hair and nails. Doctors recommend not to take a shower right after swimming in the sea, but to leave all the nourishing minerals on the body for several hours.



Seawater contains iodine, which is a necessary trace element for the human body. A bath with sea salt enriches the body with iodine and other beneficial, irreplaceable micronutrients that are found in crystals of sea salt.

Minerals and salts heal wounds and spots on the skin. Sea salt cleanses the skin and intensifies the blood circulation in the whole body. The pores get cleaned, harmful substances are removed and the organism is purified.

After sea salt applications the skin becomes elastic and tight. Sea salt baths help women cope with cellulitis. The hair becomes stronger by absorbing salts and minerals and nails become thicker from potassium and magnesium.

Saltwater supply the body with negative ions, neutralizing the excess of harmful positive ions that urban residents accumulate in the concrete jungle. The sea thus has an anti-stress effect, which is well known to neuropathologists.

Hippocrates knew about the benefits of seawater. He suggested to use it on wounds, fractures and bruises and to treat scabies and herpes. People suffering from nerve disorder and joint pains should swim in the sea. It was recommended to treat headaches with vapor from seawater and use seawater (by ingestion) as a laxative.

Nowadays it is a proved fact that seawater is beneficial for the human body, regardless of the age of the person. Seawater is also beneficial for pregnant women.

Unfortunately, seawater is not possible to transport: the healing microorganisms die after 48 hours. Therefore, do not procrastinate, but go to the blue sea.



## Memory of Water: Ability to Record and Erase Information

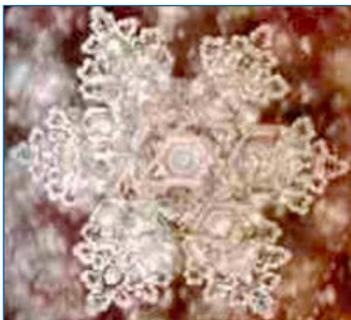
It has long been known that water is a main information carrier, able to record and absorb external information, including negative information.

The Japanese scientist Dr. Masaru Emoto made a film about live structured water and its properties. The film is based on water crystal research and has had a huge success in many countries. In the film it was said that every spoken and written word and every letter has a vibration.

Everything has a vibration. A circle has a circle vibration, a cross has a cross vibration, the word "love" creates love vibration. Water records information from the external world. It absorbs bad energy of rusty pipes with their straight angles that destroy the structure of the water. It also absorbs human aggression.

In the film it is shown what happens to water if it is subjected to quarrels, swear words, destructive music such as heavy metal. Snowflakes (water crystals) "poisoned" verbally are of irregular shape, degenerate and ugly, despite of the fact that a snowflake is, perhaps, the most beautiful geometrical form in the whole universe.

### Different Water Crystals



Spring water



Distilled water



Tap water



Polluted river

Spring water crystals that are formed by freezing have a perfectly ordered structure and a regular geometrical shape. Clean rainwater also makes beautiful ornaments on windows in the winter.

Crystals of the ancient Antarctic ice (created before mankind polluted the Earth) also have a regular shape. Only in such structured state water can create energetic impulses.

Water in our body cells also has a structure: under a microscope you will see snowflakes.

If water has absorbed negative information, it becomes degenerate, loses its structure and is potentially dangerous to consume. If not for the cycle of water in nature, we all would have been dead long time ago. In order to remove all this negative information for water to become energetically clean again and obtain a natural structure, it is necessary to freeze it and unfreeze it again, i.e.



to add melted water. When water is frozen, it rebuilds its original structure and energetic state. The main property of melted water is cleanliness. It means that the Earth itself is able to purify water. When water melts, it gets rid of all the negative information. A magnificent "invention" of Nature.



Strictly speaking the shape of snowflakes does not exactly correspond to the natural structure of water. During the formation of a snowflake there is a partial "exclusion" of natural impurities (segregation) due to crystallization. Snowflake structure is an important component of water structure.

## Is Purified Water Really Pure?

Scientists from the University of Washington have found out that many of the female salmon living in the Columbia River originally were males. The change of gender was influenced by the female sex hormone Estradiol and similar substances, the concentration of which exceeded the allowable concentration in purified effluents from sewage treatment plants.

German scientists found a high concentration of cholesterol-lowering drugs (statins) in the ground water. This drug was also found in lakes and alpine rivers in Switzerland. Also traces of drugs to treat obesity, anti-inflammatory drug (such as ibuprofen and diclofenac), steroids, contraceptives and antibiotics were found in those waters. An Analgin pill that we take, excreted by our liver and sewerred, returns to us in a form of a cup of coffee made with purified water.

It turned out that most medicaments leaving our body do not lose their biological activity for a long time and retain their structure and effect in effluents discharged from sewage treatment plants.

Antibiotics are the worst to decompose. French scientists were terrified when they found out that within fifty years dead bodies from the old cemetery had practically not decomposed because of high contents of antibiotics!

And aside from medication this is caused by food containing antibiotics and poor quality drinking water incapable of getting rid of the residues.

Drinking water must be absolutely clean. It should not contain chlorine and its organic compounds, heavy metals, nitrites, pesticides, parasites, antibiotics, xenobiotics, viruses, fungi, bacteria, common harmful organic materials.

In the end of the 19th century physicists performed the following test: they dissolved caustic soda in water and created chemical solution. The scientists measured the concentration by optical method and diluted it 10 times. Accordingly, the instrument showed a 10 times smaller concentration. Then the scientists took a part of that solution and diluted it 10 times more. After several dilutions the instrument could no longer detect soda. The scientists, however, kept diluting. The instrument did not show anything, but suddenly the “impossible” happened: when the caustic soda solution was diluted 10 million times, the instrument detected the material that was practically gone. Where from? The scientists diluted the solution once again and the phenomenon disappeared. When the solution was diluted 14 million times, the instrument showed the material again. The effect was 3 times stronger than the first time – it seemed that someone had just added soda into the solution. The scientists diluted the solution again and the device did not show anything.

At that time the scientists did not understand what that meant, but it can be explained by recent tests: the water structure became exactly the same as that of the initial chemical solution.

Water has a memory and can adopt the structure of the dissolved material and the degree of dilution does not affect this.



The conclusion is that if water has the ability to remember, it means that it remembers all the pollution it has come across in its existence. If that is the case, not only physicists, but also ecologists and doctors should ask what impact such water might have on the human body.

Yes, the wastewater department would argue that water, which has been treated in their plants, is chemically clean. Yet, what information might there still be in water that has passed through carwashes, toilets and drains?

# Quality of Drinking Water

Nowadays we receive the water through kilometer long pipe systems and purification plants. Often these pipes are not of a good quality. They are too old and contain carcinogens or are clogged with lime and iron oxide sediments.

There has always been a water transport problem. First people used to carry water in amphora and buckets, later they invented canals, trenches and finally pipes. Pipes were made from wood, lead glass. Nowadays, the most popular are steel, copper and metal-plastic pipes. Most houses still have pipes of cast iron and metal.

Water brings all the information about the path it has travelled and the composition of chemical elements to our bodies. Our health depends on the information brought by water.

It has been scientifically proven that water has three groups of parameters – chemical, physical and biological.

According to the chemical composition, water can be either pure (it means that water does NOT contain harmful impurities or their concentration does not exceed the permissible norm) or impure (if concentration of harmful organic and non-organic chemical compounds exceeds the permissible norm). Pure drinking water can be distilled or mineralized with micro and macro elements.

Physical parameters include the number of molecules in a cluster (water structure), ORP (oxidation reduction potential) that shows electro-chemical water activity in our body (i.e., determines if our mitochondria are “charged” or “discharged” with energy), etc.

Biological parameters determine a water’s ability to penetrate into living cells (i.e., water structure, surface tension, viscosity, etc.).



**Transport of water from the spring**



**The largest water tap in the world**

# What Does Tap Water Really Contain?



We drink, bathe, prepare food and clean with water. But what do we actually know about the water coming out of our taps?

Some regions have better water as regards to pollution. However, lead, bacteria and nitrates find their way to the water anyway. When pouring water from the tap it seems **that somebody already drank that water.**

Before drinking a glass of water from the tap, let's find out what comes out of that tap.

Tap water comes to us from two sources: surface water (including reservoirs, rivers and lakes) and ground water (artesian and deep wells). Before touching our lips, the water has to be disinfected in order to destroy harmful bacteria and parasites. Yet, chlorination does not kill all the bad bacteria. Some pathogenic microorganisms (e.g., living in feces of sick animals or people) can pollute surface water as well as tap water. Lead and copper appear in water from pipes with corrosion. Such pipes are found in houses built before 1970, when copper pipes and pipes of lead compounds were normal.



## What a glass of water may contain



Other harmful elements are: nitrates, fertilizers, pesticides, arsenic (from erosion and industry) and even rocket fuel.

Thus, we receive a number of chlorination by-products – some of these are potentially harmful.

## Boiled Water



Boiling water destroys chlorine and chlorine compounds. Colloidal particles of impurities and salts precipitate, the water becomes softer, the number of components that easily evaporate decreases and germs, viruses and pathogens are killed.

So boiling actually helps to purify water. But the method also has side effects:

1. The structure of the water is destroyed by boiling. It goes "dead" and therefore becomes rather useless for a human body.
2. Chlorine is only partially removed when the water is boiled. The chlorine reacts with other organic compounds in water and creates trihalomethanes that are even more harmful than the initial chlorine.
3. Together with the chlorine oxygen evaporates as well.
4. Boiling does not remove iron salts, cadmium, mercury and nitrates.

According to scientific test results continual consumption of boiled tap water may cause immune deficiency. Several hours after boiling, bacteria start to multiply in the water making it potentially harmful to drink.



## Filters and Bacteria



Filters help to improve water quality. However, it should be noted that filters remove not only organic impurities, rust and heavy metals, but also mineral salts.

It is necessary to be careful with filters that have silver as a purifying agent. This precious metal is not tolerated by everybody.



Carbon, the main component of a filter, increases its acidity. One should not drink water from the filter that is used up! Filter cartridges are usually of the absorptive-accumulative type and how long a filter cartridge lasts is determined by the quantity of water passing through it. When the filter expires, the cartridge becomes a breeding ground for bacteria. Besides, simple domestic water filter pitchers are not capable of eliminating chlorine.

## Bottled Water



Bottled water is an alternative for tap water (except for the price). It is important to know that not all bottled water comes "directly from the spring". Some of that water is simply filtered water from the tap containing all information of the pollution and some bottled water is not even purified.

Water transported and stored in plastic bottles tends to accumulate negative information. It leads to destruction of the water structure and deterioration of the quality, even if the water was taken from a clean natural spring. The energetic properties of such water often do not differ from that of the tap water.



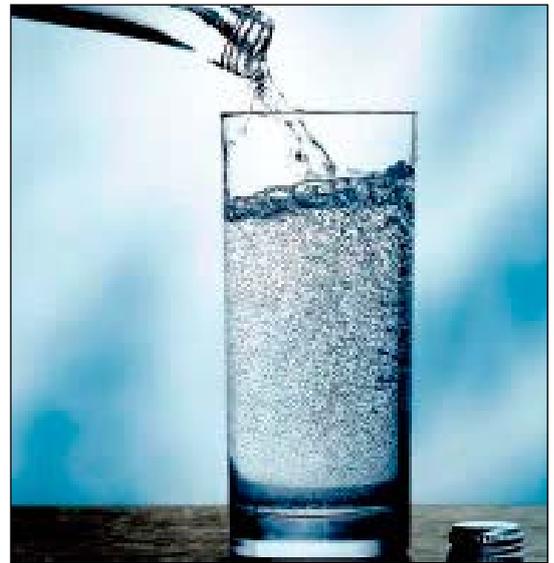
## Carbonated (Sparkling) Water



Water is carbonated to increase its shelf life. The water is carbonated with carbon dioxide, which acidifies body fluids. Drinking such water eventually leads to acidification of the blood. This is creating conditions for the development of various diseases, first of all cancer.

Another type of water that should be avoided is various sweet drinks such as colas, sprites, etc. The pH of those drinks is significantly lower than that of our body. When you drink these, it seems that the thirst is gone. But 5 minutes later you are again thirsty. Instead of providing the body with water, these drinks remove water from the organism. The body tries to restore balance – it gives away its water in order to neutralize the liquid. Manufacturers make it intentionally to increase their sales.

It should also be remembered that the sugar from carbonated drinks dehydrates the cells of vitally important organs such as the liver and the brain, blocks enzymes inhibiting the activity of beneficial bacteria and promotes the growth of fungi. All this is bad for the body.



## Water After Microwave



Microwaves “bombard” the water molecules of the food, making them spin a million times a second. This causes molecular friction, which then heats the food. This friction causes significant harm to the water and food molecules by pulling them apart and malforming them. Eventually this leads to structural isomerism.

Simply put, microwaves create new compounds that do not exist in nature. They are called radiolytic compounds. Radiolytic compounds create molecular disintegration, similar to the effect of radiation. When affected by microwaves natural proteins fracture and intermix with water molecules creating carcinogens. The minerals in raw vegetables are altered into free radicals when cooked in microwave ovens. Free radicals can cause cancer and other illnesses.

Russian scientists have found that the nutritional value of food (containing 60-95% of water) after microwaves decreases from 60% to 90%!

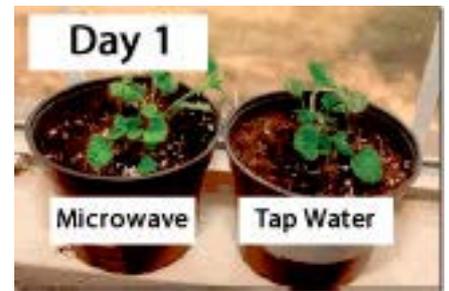


**Photo of a drop of water under the microscope after exposure to microwaves**

Here is an experiment a girl made at school. She divided filtered water in two parts. She boiled one part on the stove and the other part in the microwave oven. The girl cooled the water and for several days she watered two identical plants to check if there would be a difference in the growth of plants. The girl wanted to find out if microwaves change the water structure or energy. She was surprised by the results.

Based on scientific clinical research performed by the Swiss, Russian and German scientists, we provide the following results:

1. Continually eating food cooked in a microwave oven causes long term permanent brain damage by "shorting out" electrical impulses in the brain, de-polarizing or de-magnetizing the brain tissue.
2. The human body cannot metabolize the unknown by-products created in microwaved food.
3. Male and female hormone production is shut down and/or altered by continual eating of microwaved foods.
4. The effects of consuming microwaved food by-products are permanent within the human body.
5. Minerals, vitamins, and nutrients of all microwaved food is reduced or altered so that the human body gets little or no benefit, or it absorbs altered compounds that cannot be fermented.
6. The minerals in vegetables are altered into cancerous free radicals when cooked in microwave ovens.
7. Microwaved foods cause stomach and intestinal cancer tumors. This may explain the rapidly increased rate of colon cancer in America.
8. The prolonged eating of microwaved foods causes an increase of cancerous cells in the blood.
9. Continual ingestion of microwaved food causes immune system deficiencies through lymph gland and blood serum alterations.
10. Eating microwaved food causes loss of memory, concentration, emotional instability and a decrease of intelligence.



# About Soft and Hard Water

Salts are dissolved in water in the form of ions. Salt ions give the water its taste: chloride ions give a salty taste; sulphate, calcium and magnesium ions a bitter taste; potassium gives sweetness; bicarbonates are tasteless.

When the ion concentration in a water is increased, interaction between ions also increases. Calcium and magnesium carbonates dissolve partially and create bicarbonates  $\text{MgHCO}_3^+$ ,  $\text{CaHCO}_3^+$ . Presence of such salts make water tasteless.

Water hardness is a set of chemical and physical properties of water connected with a content of dissolved salts of alkaline-earth metals, mainly calcium and magnesium. Water containing large amounts of such salts is considered hard and water containing a small amount of these salts is considered soft.

There are two types of hardness: temporary hardness caused by bicarbonates and constant hardness caused by other salts (sulphates, chlorides, phosphates and etc.)

Temporary hardness is called temporary because, when boiling water calcium bicarbonate dissolves and precipitates as  $\text{CaCO}_3$  (calcium carbonate). Hard water is undesirable for both internal and external usage. The human body does not absorb it well: sediments appear in various organs and tissues (joints, blood vessels), and their normal functioning is impeded. Hard water also speeds up wear and tear of household appliances and pipes.

## Impact on Health

### Kidney stones:

Kidney stones are formed for various reasons, but the main reason is drinking water that contains too much calcium and magnesium bicarbonate.

Hard water containing too many bicarbonates becomes the main reason for the formation of crystals that stick to the renal pelvis walls and ducts. These crystals gradually form concretions.

Kidney stones can both cause heavy pains and renal failure.

### Skin irritation:

When “hard flakes” get onto the human skin, they start to erode the natural fatty layer that protects the skin from undesirable environmental impact and clog pores.





An indication of such negative impact is “creaking” of the skin or hair after taking a shower. In fact, a “sudsing” feeling on skin after using soft water is a sure sign that the protective fatty film on the skin is unharmed.

If you use hard water, you have to compensate the breakdown of the layer with lotions and moisturizing creams and other tricks to restore the skin protection, which we are already equipped with by nature.

### Skin and hair:

The main component in hair washing is actually the water, not the shampoo. The effect of the best shampoo may be increased or decreased with hard water. The water for hair washing must be soft and pleasantly warm (38-40° C).

If the water is hard, the salts in it will start reacting chemically with the shampoo and create insoluble sediments that will cover the hair as a sticky layer. If you constantly wash your hair with hard water, it may get a strange discoloring – pale orange or even greenish. Hard water also causes dryness of skin and hair, dandruff and irritation.



### Overdosing Detergents:



Residues are formed in hard water from ordinary soap (in the presence of calcium ions).

The residues are insoluble compounds having no beneficial functions.

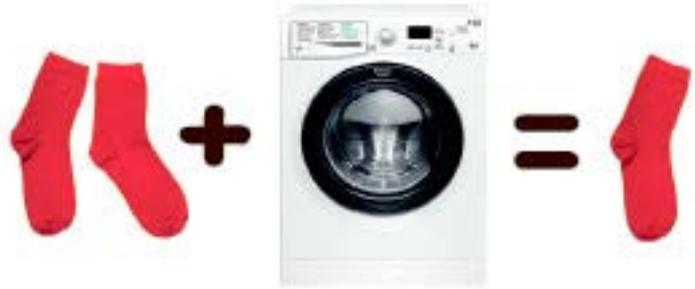
No foam will appear until all calcium hardness is removed from the water. It is a waste of detergents.

## Negative Effect on Clothes:

Hard water is not suitable for laundry and cleaning. Why?

When soap and washing powder get in contact with hard water, hardness salt cations ( $\text{Ca}^{2+}$ ,  $\text{Mg}^{2+}$ ,  $\text{Fe}^{2+}$ ) react with fatty acids anions of the soap.

This results in formation of compounds that do not dissolve easily, for example calcium stearate  $\text{Ca}(\text{C}_{17}\text{H}_{35}\text{COO})_2$ . These sediments gradually clog the pores of the fabric and it stops letting air and humidity through. The clothes become rough and loose elasticity. The colors of the fabric become pale and get a grey yellowish hue. "Calcareous soaps" settle on the fabric and take away its strength.



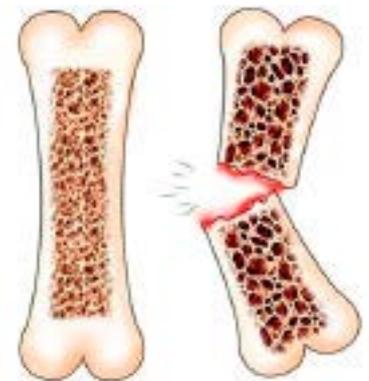
## Impact on Pipes and Plumbing:

Calcium carbonate settles on the inner walls of boilers and pipes. Because of that the diameter of old heating pipes can be reduced 50-75%. Also calcium carbonate is a porous compound and serves as a heat insulator. As a result, pipes of central heating cease to heat properly increasing expenses. If there is a fracture in the layer of sediments, hot water may leak into the wall of the pipe. If this happens in the winter the pipe may burst due to the difference of temperatures and time needed to heat the water.

## On the Other Hand:

It is better to use soft water for swimming, bathing, hair washing and in healing procedures. Soft water neutralizes the effect of hard water and reduces harm it may have caused to the human body.

However, it is not good to use only soft water. Lack of mineral salts may cause bone fragility, decrease the body's resistance and increase tooth decay.



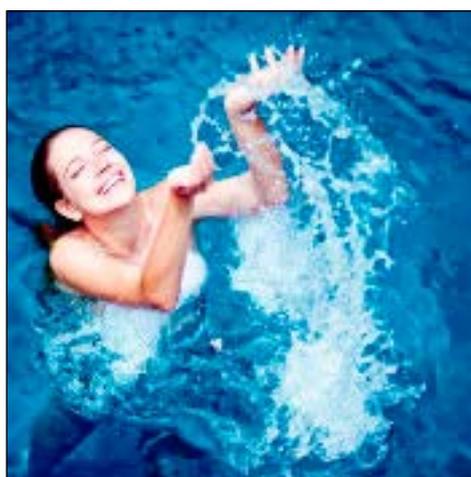


## Improving Water Means Improving Life

The human body contains more than 70 % water. The water that we have in our body cells is initially structured water. As we grow old, the supply of structured water in our bodies decreases. Structured water helps to renew the intercellular fluid, which slows down the aging process. Also structured water helps the body remove toxins more effectively.

Structured water saturates with moisture faster and more efficiently than simple water and less is therefore required. Since structured water molecules have no impurities attached to them, structured water removes toxins from the organism more effectively.

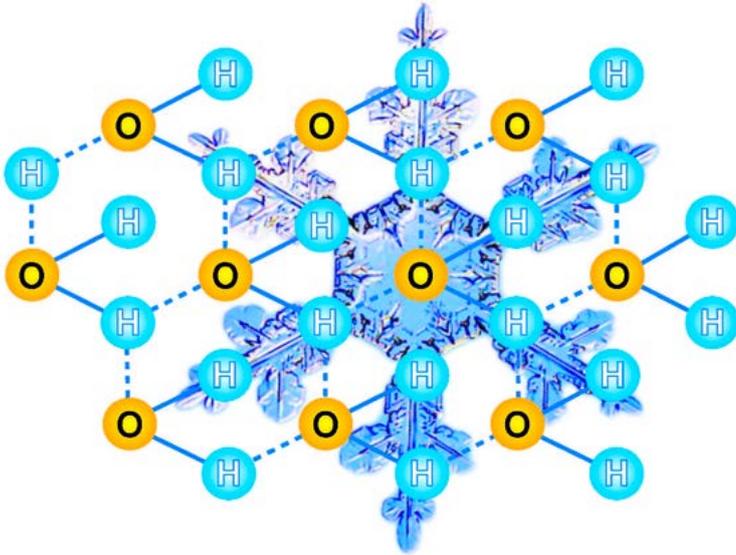
The process of structuring acts as a quantum effect. Water retains an emotional “memory” about everything it meets on its way. The process of structuring purifies the water releasing its memory and emotions and allowing it to be water in the form and with the purpose for which it was created by nature, namely nourish our bodies without polluting subtle energies.



# Water as the Elixir of Life

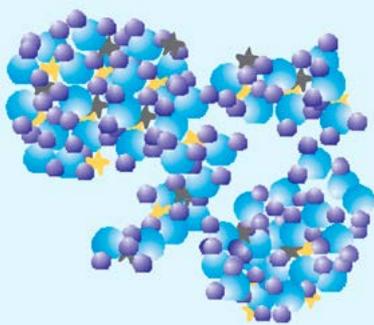
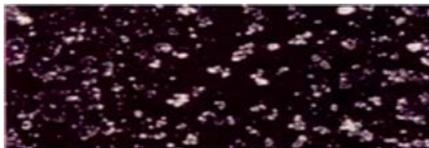
It is known that every healthy cell contains structured live water, while sick cells contain dead water without orderly molecular structure in sick cells. Thanks to the organized molecular structure, toxins can be removed and negative information (negative memory) is erased. Structured water is live water preserving health.

## Proper Drinking Water – live, crystal clear water



Proper drinking water should have vitality and a perfect structure. Ideal water is beautifully organized water. Meltwater is crystal clear and has a hexahedral structure. Ice contains crystal clear water with beautiful hexahedral structure. Melt water retains the memory of pure water and hexagonal structure of a snowflake.

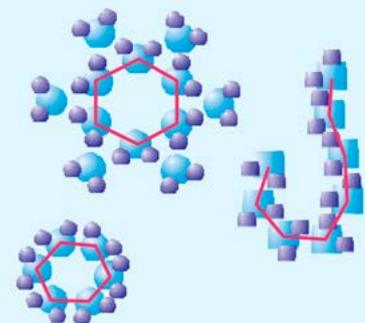
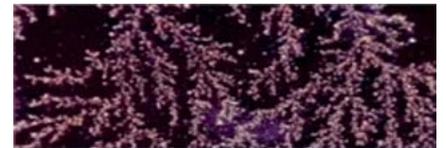
The structure of meltwater is very similar to the structure of the liquid in the cells of living organisms and plants. That's why fresh fruits and vegetables are so beneficial to health: they bring the body structured biologically active water.



**Dead water  
(tap water)**

## Structured, bioactive water has its own parameters:

- ◆ hexagonal structure
- ◆ cluster size is not more than 6 molecules
- ◆ pH: 7.2 – 7.4
- ◆ negative charge (ORP): 40-70 mV
- ◆ low viscosity
- ◆ low surface tension: 43 dyn/cm<sup>2</sup>

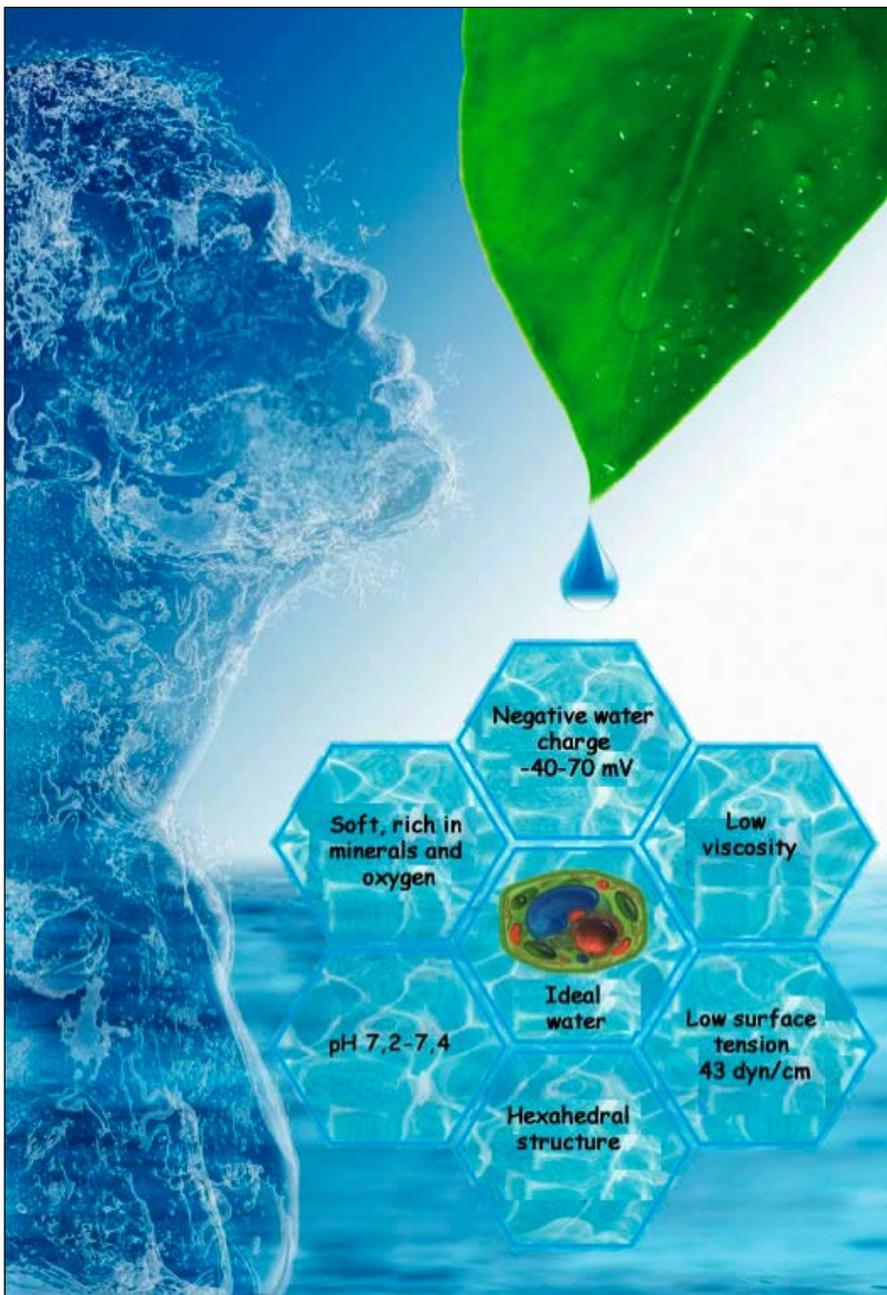


**Live water  
(spring water)**

Australian rock bees (stingless) prefer to drink structured water: cold when it's hot and warm when it's cold.



Hexahedral matrix of meltwater has an orderly molecular structure and assures not only the purity of the water, but also maximum energy accumulation, similar to a honeycomb.



Structured water is biologically active as opposed to tap, rain or mineral water. It has special properties that allow it to get easily into the cells bringing oxygen, nutrients, protein chains and enzymes, and to remove waste products and toxins. That is why it is important to drink only bioactive water.

Biologically active structured water is a guarantee for long-term beauty and health. It feeds the cells and fills them with vital moisture. For this reason the skin looks elastic and young and the whole body is full of positive energy.

Unfortunately such water is becoming increasingly rare in nature.

# The Structure of Ideal Water is Similar to the Structure of the Clay Minerals in the Soil

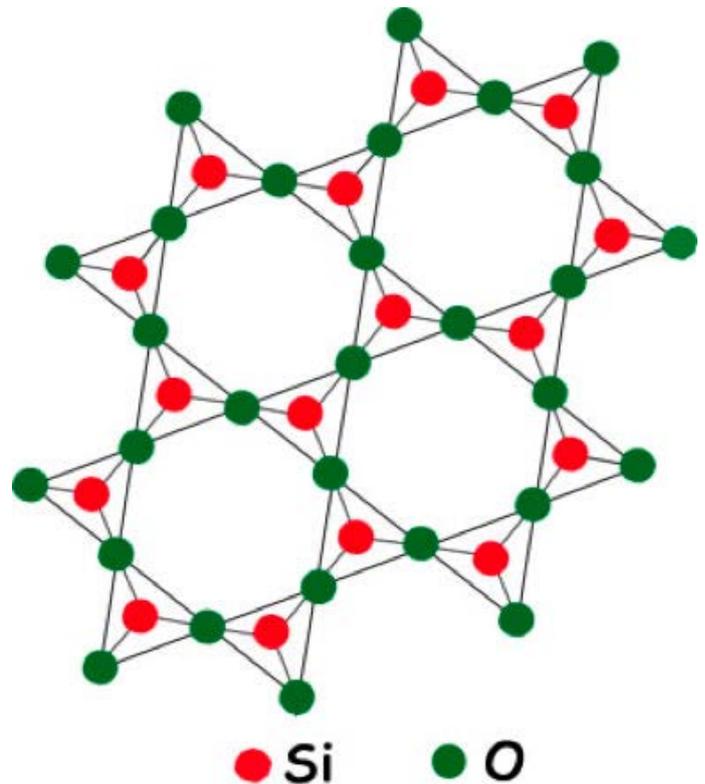
The content of silica ( $\text{SiO}_2$ ) in soils varies widely from 30-40% in ferralitic tropical soils and up to 90-98% in sandy soils. The average is 60-70%.

Quartz is the most common silicon compound in soils. Silicon is the constituent part of various clay minerals (silicates and aluminosilicates).

Flint is a black, dark-grey or bright mineral. It has played an important role in the development of civilization. For many centuries flint was used for making tools and starting fire.

Ancient philosophers mentioned flint in their treatises, pointing to its healing properties. Flint was used to cut warts and line the walls of rooms used for storing meat. Flint powder was sprinkled on wounds in order to protect them from gangrene. Flint millstones helped produce high-quality flour. Flint was also used to line the bottom and internal surfaces of wells. It was noticed that people who drank water from such wells got less sick. Back then it was noticed that flint water was clear, delicious and had healing powers. It appears that interacting with water, the flint modifies its properties.

Water activated with flint suppresses bacteria causing rotting and fermentation. The water becomes very clean and smells pleasantly. This is because flint rebuilds the hexahedral structure of the water and makes heavy metals precipitate.



So the best water in nature is water from springs that flow through a clean or stony ground rich in silicon that protects from its decay. Good water is in a spring that is open to the sun and wind and flows in a clay riverbed as clay (silicon) cleans the water from impurities, makes it clear and bioactive. However, the clay in the riverbed must be clean without impurities and salt.

Beware of drinking water that come from unchecked boreholes, wells or springs.



Any source can be in the same aquifer as nuclear waste storage, a cemetery of plaque victims or storage of other toxic substances.

According to recent data, no spring water in Moscow satisfies even the lowest quality standards. Contents of heavy metals exceed the maximum allowed concentrations by 5-10 times. People, however, think that the water is ecologically clean.

As a result of weathering and soil-formation processes flint enters into the soil solution as anions of orthosilicic and metasilicic acids. Later it settles as gel – amorphous precipitate. Losing its water, amorphous silicon gel turns into opal, chalcedon or crystalline quartz.

This group also includes rhinestone, carnelian, all kinds of jasper, agate or amethyst. Silicon dioxide creates the basis for those minerals and also makes it possible to use them for water structuring and activation.

Why is a person attracted to his birthplace or places where he has lived? Probably longing for one`s birthplace is related to the bioenergetics of the water that a person used to drink for a long time and to structure of the soil through which the water was flowing gaining its unique characteristics.

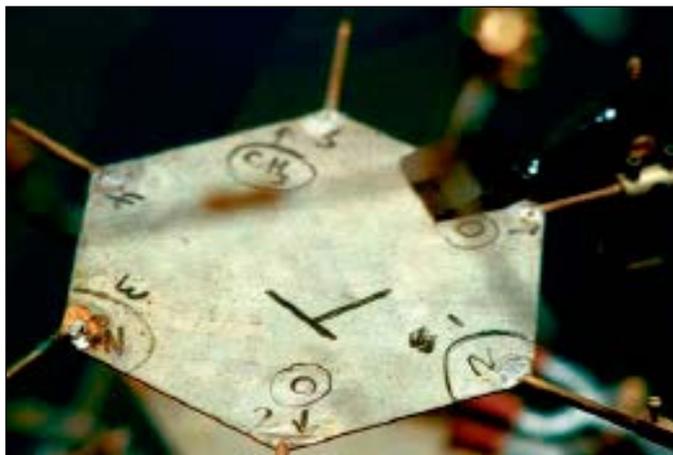
As water constitutes 65-80% of the human body, it probably also determines the energetic code of every individual during the first year of his life or even when he is still in his mother`s womb.

According to oriental medicine, biological, natural, cosmic conditions for a healthy and happy human life are created only if the energies of water and body correspond to each other. If a person leaves his country and uses different water that has an energy which does not correspond to his, he suffers as he misses the water of his birthplace that has conditioned his bioenergetics. That`s what wise oriental men say.

Using his „own“ water makes it easier for a person to acclimatize to alien geography and climate. It is not without a reason that 80 types of birds living in the South come back to the North (the place where they were born) every year in order to give birth to their progenies. They teach them to fly and come back together to their second homeland. It is the water of our homeland that is so sweet and pleasant to us.

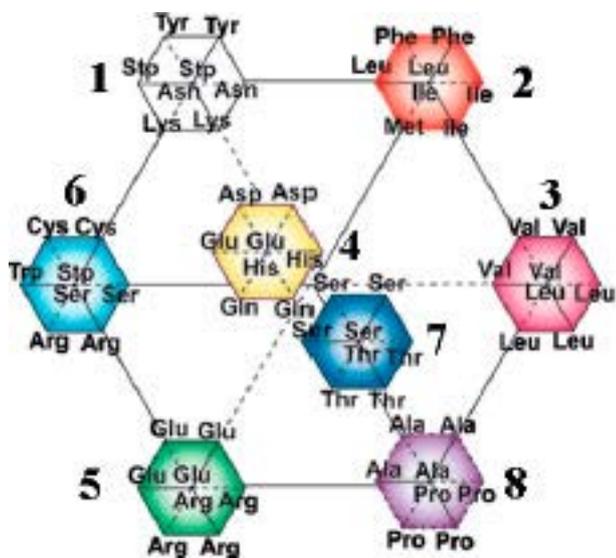
# DNA Structure is Identical to the Ideal Water Structure

The picture shows a reconstruction of the first DNA molecule model with some original elements used by Francis Crick and James Watson in 1953.



Their breakthrough made it possible to understand the process of gene transfer and cell life.

DNA is made of structural chemical units that, being in a fixed sequence, form genes. Genes are storages of information.

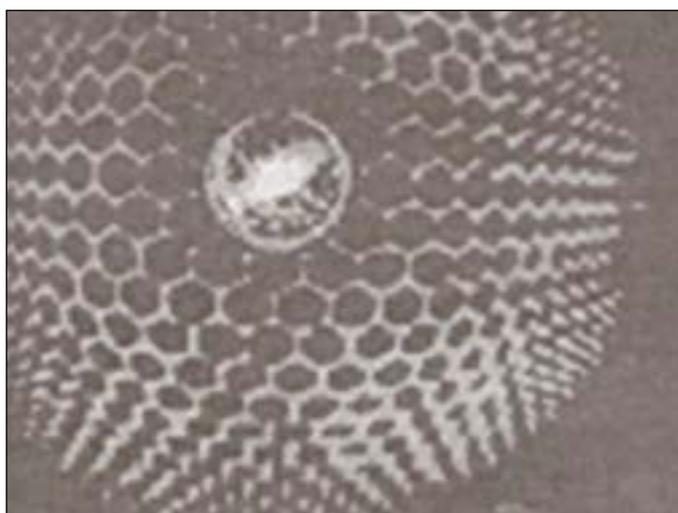


The information storage has the form of a hexagon.

Scientific discovery. Galaxies are surrounded by energetic spheres that look like a mesh of hexagons. Similar energetic spheres surround the human being as well. They form the energetic framework.

The shape of the hexagon is a form for collection and storage of energy. It exists in both macro and micro worlds. Hexagons form energetic frames of the subtle energy. The structures of these frames are the same. This is one of the main proofs of the unity of the world.

It is suggested that water, being the informational basis for all biological life processes, served as the basic matrix for the first DNA synthesis.



**Energetic spheres of a galaxy.  
A photograph from "National Geographic"**

## The Fourth State of Water – Live Nano Water

Usually water is considered only as solvent or as an environment in which biochemical reactions take place. It is thought that water found in living systems does not differ from ordinary water. But take for example a jellyfish. 99% of its weight is water.



Undoubtedly the water inside jellyfish is made of the same molecules as the water the jellyfish lives in. However, the “living water” inside the jellyfish is basically different from the “ordinary water” as no sea water salts can penetrate into the body of the jellyfish. It is obvious that the condition of the water inside the jellyfish is determined by biopolymers even though they constitute only a very small part of its weight.

Water molecules serve as building blocks for various constructions; the materials in contact with the water determine the variety of architecture and dynamics. And the opposite is true, “buildings” made of water molecules determine the structure and dynamics of biologically significant molecules, especially biopolymers (proteins, nucleic acids, polysaccharides and their supramolecular complexes) assuring that they perform their biological functions.

How is the water in the blood organized? In the extracellular liquid (plasma) of an adult human body there is about 3 liters of water. Erythrocytes constitute about 5,000 m<sup>2</sup> of the surface area. Then, even excluding the surface areas of all other blood cells and plasma proteins, which also absorb water, the thickness of the water layer on the surface of red blood cells may not exceed 0.6 microns. And if you take into account all the other surfaces that may hold water in the blood, it turns out that almost all the water in the blood adheres to the surface of biopolymers.

Many biologists of the last century paid attention to the special properties of water in contact with biopolymers.

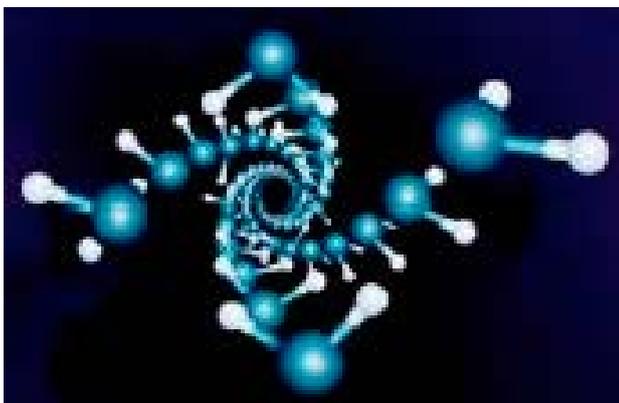
However, only recently American biophysicist Dr. Gerald Pollak has proved that water hydrating hydrophilic surfaces is so different from the “content” that it can be considered liquid crystal or nano-water. The thickness of such water may be hundreds of microns at hydrophilic surfaces.

This water differs from “normal” water by its viscosity, density, freezing temperature and dielectric properties. Most substances that dissolve well in water do not dissolve in this water. Therefore Pollak called this water (in contact with hydrophilic surfaces) “Exclusion Zone Water” (EZ water). EZ water is therefore considered the fourth state of water. Different from solid, liquid and gaseous, this state characterizes water inside living organisms.

Three properties of EZ water indicate that it may play an important role in bioenergetics: firstly, EZ water is negatively charged (its potential reaches 150 mV); secondly, it showed a peak UV light absorption rate of 270 nm; thirdly, the thickness of EZ-water increases when illuminated with visible light, and particularly in the absorption of infrared radiation. This implies that electrons in EZ water are stimulated more than electrons in ordinary water, i.e., it can play the role of a rebuilder: light energy increases the volume of electrons and it can practically serve as an inexhaustible source of electrons when in a liquid state.

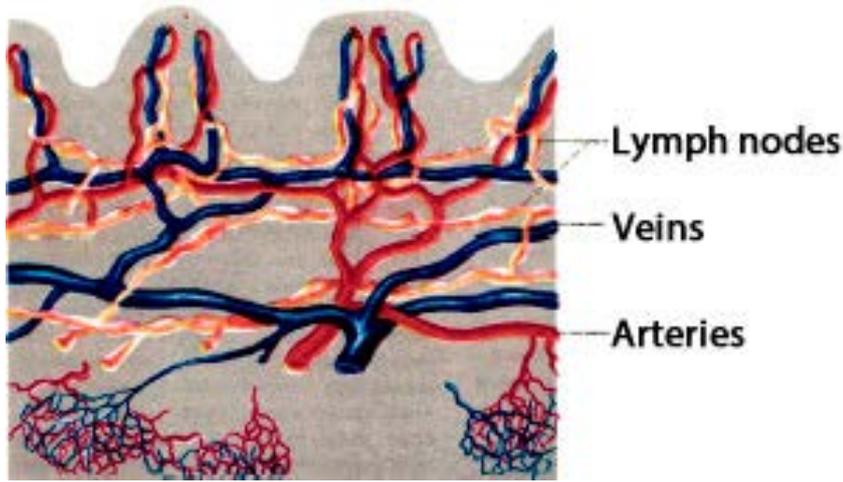
EZ water can appear on any hydrophilic or humid surface when light energy is available. Adding EZ water layer by layer, light can create millions of molecular layers. It happens in nature. For example, before becoming ice, water turns into EZ water. Accordingly, when ice is melting, it first becomes EZ water and later turns into simple water. EZ water is an intermediate state.

Recently scientists have discovered that water in thin nanotubes flows faster when subjected to light. It means that light has a significant effect. It accelerates the flow due to distortion of the hydrogen bonds and the formation of the helix with a double wall. The inner wall of this structure is a twisted quadruple helix and the outer consists of four double helices, similar to the structure of the DNA molecule.



This latter fact affects not only our perception of water, but also the evolution of early life and the DNA molecule itself.

If it is assumed that the origin of life in the era of cryolite argillaceous rocks had the shape of nanotubes, the question arises: could the water absorbed by these rocks have served as a structural basis (a matrix) for DNA synthesis and information reading?



Perhaps for this reason, spiral DNA structure repeats spiral water structure in nanotubes. This is a very important question, because the operation of the capillaries causes bewilderment.

They are very small. Some of the capillaries are smaller in diameter than the red blood cells that pass through them.

Any competent engineer would never build a tube that is smaller in diameter than the material, which is supposed to pass through it. But nature has done just that ...

In order for the blood to flow, it is necessary to move erythrocytes through capillaries. It is possible that the energy of sunlight influences the flow in capillaries. It is also possible that the radiant energy of EZ water has the same influence on the cardiovascular system as it has on the flow of water in tubes.

As our body is made up of cells, let's analyze the consequences at the cellular level.

If the arterial capillaries are closed, the cells do not receive nutrients (building materials) and they gradually deteriorate and get sick.

If less than 10% of the organ is sick, it cannot be determined with ordinary tests, only with specialized tests or computer bioresonance diagnostics.

If 10-30% of the organ is sick, it can be determined by simple analysis. HOWEVER, THERE ARE NO SYMPTOMS YET! And the person does not feel any pain YET.

If 30% of the organ is sick, the person feels minor ailment.

If 50 % of the organ is sick, the person may feel severe pain that forces him to rush to the doctor.

When half of the organ is not able to function, the disease is considered advanced and it forces doctors to prescribe strong chemical substances in order to eliminate symptoms and stabilize the condition of the organ. However, this often leads to complications and side effect on other organs.

If venous capillaries (that move waste products and toxins) are closed, the cell can „eat“ normally, but the waste products excreted by the cell stays in the extracellular environment. This causes acidification of the extracellular environment. The cells start to degrade faster and can even mutate (chemical mutation, oncologic diseases).

EZ water is therefore very important for our bodies and its impact on premature aging is obvious.

# When the Body Stores Water in Fat

There is a reverse dependency between water consumption and build-up of fat reserves in our bodies. The less you drink, the more you have to eat in order to restore energy. The more you eat, the more fat you accumulate.

## Here are the facts:

- ◆ Water is the main source of energy for all the physiological body functions
- ◆ One of the products of fat oxidation is water.
- ◆ Consuming unstructured water (only 10-20% of the total volume of this water is used by the body) does not satisfy all the body's needs for water. Therefore the body is forced to accumulate water in the form of fat

All food that needs to be metabolized requires chemical action of water (hydrolysis) before the body cells can use its energy.

In cell membranes water is used as glue connecting structural membranes. In case of dehydration cholesterol consolidates and isolates cell membranes. This causes a gradual increase of cholesterol level in the dehydrated body.

Metabolic (reserve) water is very important to the residents of deserts. The fat inside a camel's humps is firstly not a source of energy, but a source of water. A number of animals accumulate water for the future by storing fat inside their bodies.

Under unfavorable conditions they use their fat reserves in order to stay alive. Humidity, that is the constituent part of the fatty tissue, fulfills the animals' needs for water. Among such animals are small rodents, insects, bears and others.



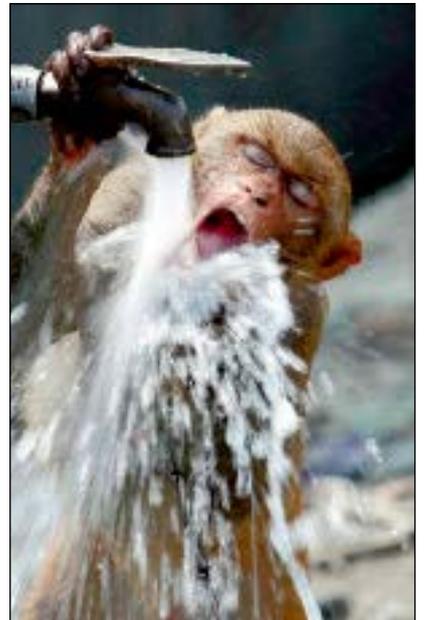
**Fat accumulation as the source of energy and water**

The speed of absorption of structured bioactive water is 5 times greater than that of unstructured water.

Therefore the body obtains energy 5 times faster and at the same time the need to accumulate fat reserves is eliminated.

# You Should Drink Live Spring Water Regularly

Otherwise your body will start creating reserves of bad water in the fatty tissue.



# No-calorie Energy – Biophotonic Energy

A calorie is the basic unit of energy provided by food. But there are other energy sources where the energy is not measured in calories. Such energy can be received subconsciously; however, the strengthening effect takes place anyway. Warm sun rays, a beautiful landscape, man and woman in love, a pleasant word or perception of any achievement gives us the feeling of "joy of existence". Such feelings are the energy of life.

**Here is a simple question: can a little bird fly across the ocean?**



## Photonic solar radiation – the source of energy for everything alive

The results of research performed by a large international group of biologists were published in „Nature“ in 2003 (Wiklsky M., 2003).

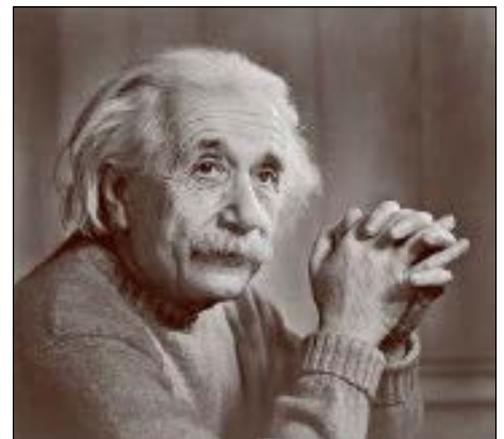
They measured energy consumption of Catharus thrushes travelling 4,800 km from Panama to Canada in 42 days. It was established that birds weighing 30 g use 4,450 J or 130 kJ a day. During the flight the thrushes practically do not lose weight (only 6,0 % or 1,8 g). Where does the energy from 30 up to 68 kJ come from?

Only about half of the energy used for the flight is obtained from burning of food resources.

This applies even more to birds that fly across the Atlantic – at least 3,300 km without landing. Such flights do not seem possible from a classical point of view; the birds would be doomed to die from exhaustion. Nevertheless, they have been flying across the Atlantic for thousands of years ...

Albert Einstein discovered that light is a photonic energy.

Biological life is based on the use of solar photons.



This energy is turned into the energy of electrons and, after a series of changes, into the energy for vital activity of living organisms.

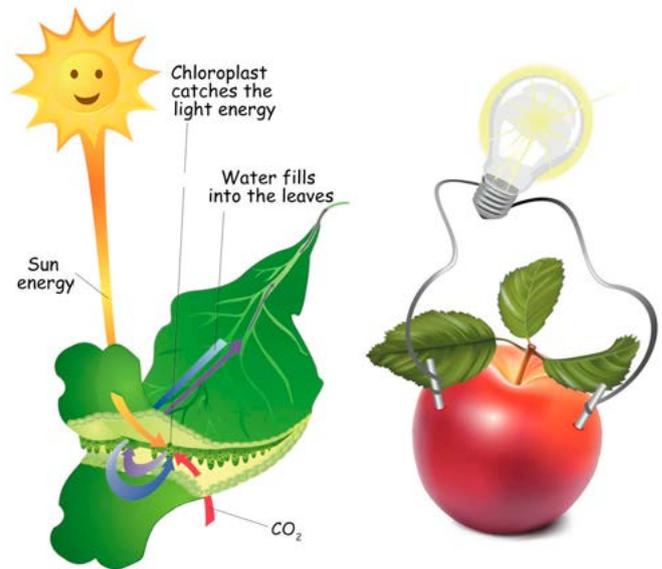
Photonic energy stimulates water electrons in the chloroplasts of leaves, bringing about the formation of carbohydrates in the cells of the leaves from  $\text{CO}_2$  and  $\text{H}_2\text{O}$ .

Structured cloud water accumulates photonic energy from the sun. Lightning is the flow of electrons accumulated in the clouds of structured water molecules. It is known that every lightning transports up to 20 coulombs of charge!

Therefore, structured, bioactive water and light is the source of photon energy used by plants, animals and humans in biochemical processes. It has long been observed that plants absorb the moisture from rain, enriched with photon energy, better than the water of artificial irrigation.

In 1949 Semyon and Valentina Kirlian, scientists from the Krasnodar Territory (Southern Russia), got a patent on a method to photograph the biophotonic glow of living organism based on radiation from the water energy that is inside the body cells.

### Plants convert light energy and water into chemical energy and accumulate it in the fruit



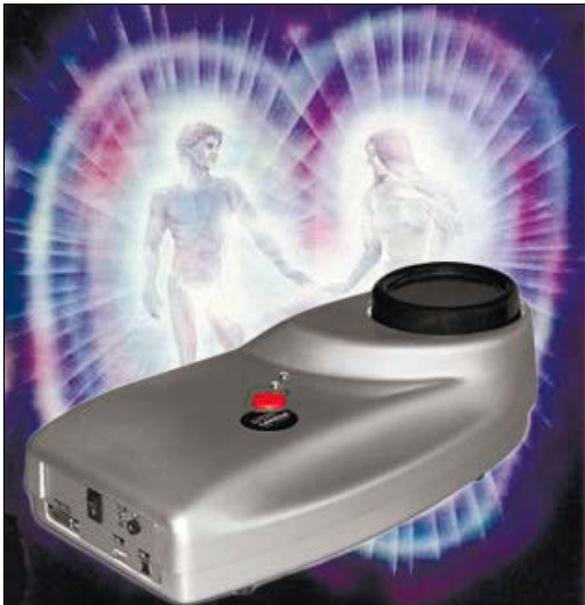
### Structured bioactive water – source of energy

# Kirlian Effect

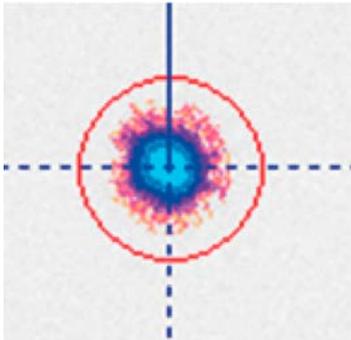
This radiation is known to the world as the "Kirlian Effect".

Later in 1996 professor K. G. Korotkov invented a portable device – GDV (gas discharge visualization) camera - which allows making biophotonic glow photos not only of living organisms but also of water.

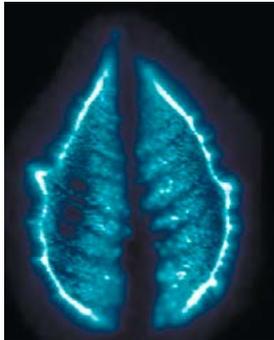
The invention of this camera marked a new era in the study of Nature.



## Photos of Biophotonic Glow of Water and Plants

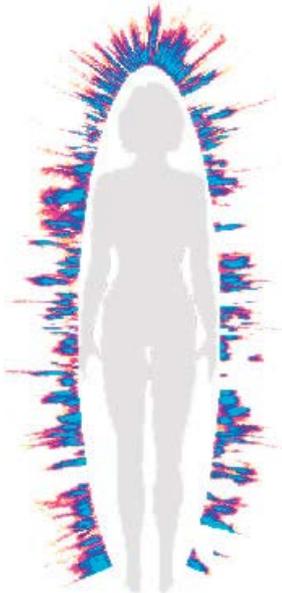


Water



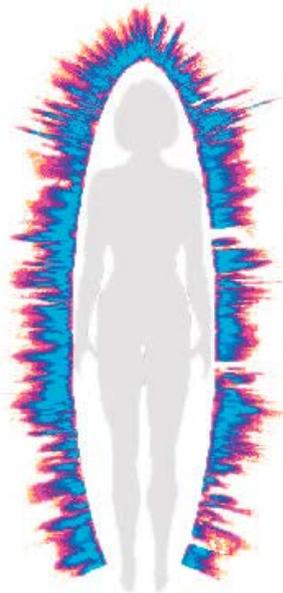
Plants

## Photos of Biophotonic Glow of Human Being



Area 10381

Symmetry 59%  
After intake of regular water



Area 19278

Symmetry 90%  
After intake of structured water



Glow of water in living organisms (biophoton emission) shows the energetic state of the cells. Dead tissue, where there is no water, does not emit light.

Weak tissue, where water energetics is low, has a very faint glow.

Healthy cells containing structured bioactive water emit a powerful glow.

## Water as the Saviour of the Nation



Water as the source of life is particularly important in pregnancy.

The health of newborn babies has become a problem in our modern age: 80-85% of the newborns have various health issues.

Regular consumption of contaminated water during pregnancy can be the cause of premature births. Among the problems that worry pediatricians is slowing down of physical, neuropsychological and reproductive development of the children. In the last 10 years in our country (Russia) the number of stunted children increased by 4 times and the number of handicapped children by 2 times. Many congenital anomalies of the newborn are caused by malnutrition of the expecting mother, deficits of certain nutrients and, of course, poor water quality.

According to doctors around the world, the child's health is strongly related not only to the nutrition of the pregnant and breastfeeding woman, but also to what kind of water she consumes and in which quantities. If pregnant women drank only pure spring water, child morbidity in our country would decrease 2-3 times.

### Increased Need for Water during Pregnancy

The organism of a pregnant woman, just like that of a growing child, is actively affected by various metabolism processes, which are simply impossible without water. During pregnancy the need for water is greatly increased. Liquid is required to maintain metabolism and remove toxins and neutralize free radicals. The norm is considered consumption of one liter per day. But there are factors that increase this amount: heat, early toxemia of pregnancy, fever and digestive disorders. On the other hand, late toxicosis, swelling, pathologies of kidneys make it necessary to adhere to the amount of liquid prescribed by the doctor. This also applies to the last months of the pregnancy.

Recent discoveries show that the benefits to the organism from the consumption of high quality water exceed the benefits of milk. To give birth to a healthy baby, a woman should switch to consumption of pure structured bioactive water saturated with energy, minerals and oxygen six months before conception.

Ecologically clean structured bioactive water is able to ensure normal development of the fetus and strengthens the health of newborns. And even though it is an additional expense, treating fetal abnormalities caused by poor quality water will cost a lot more. One should not save on the future health of the child and its mother.

## Water for the Baby Bath

An equally important question: in what kind of water should the baby be bathed? We bathe children everyday not only for hygiene. The lungs of the baby are fully formed just before birth. When the baby is born, his lungs start to work gradually. Of great importance in this period is skin "breathing". That is why the skin has to be kept clean. However, impure water for bathing cannot ensure cleanliness.



Solid salts, which are quite harmless for an adult, are not that harmless to a baby. They can create a membrane on the baby's skin, which irritates it and prevents the skin from breathing. And chlorine that is added to the water for disinfection is recognized as an allergen. Also, tap water has to be boiled or treated with potassium permanganate in order to destroy pathogenic microorganisms that might have been left alive because of insufficient amounts of chlorine in the water. This is also a potential risk. Potassium permanganate itself is not useful for the baby's organism.

Being soft and very pleasant to touch, structured bioactive water is a friendly environment for the soft body of the little human. Bathing goes quicker and more pleasant for both parent and the child. Unlike tap water structured water does not cause dryness or flaking of the skin. And it does not require boiling. Indeed, it is better not to boil it, thus keeping the dissolved oxygen, which speeds up metabolism, digestion and is also involved in skin breathing during bathing.

# Good Health - the Ability of the Cells to Exchange Water

Good health depends on the ability of the cells to constantly replace "bad" water with "good" water. Once this exchange is broken, the intracellular water stagnates and the cell walls weaken. From this moment on health problems and aging start.

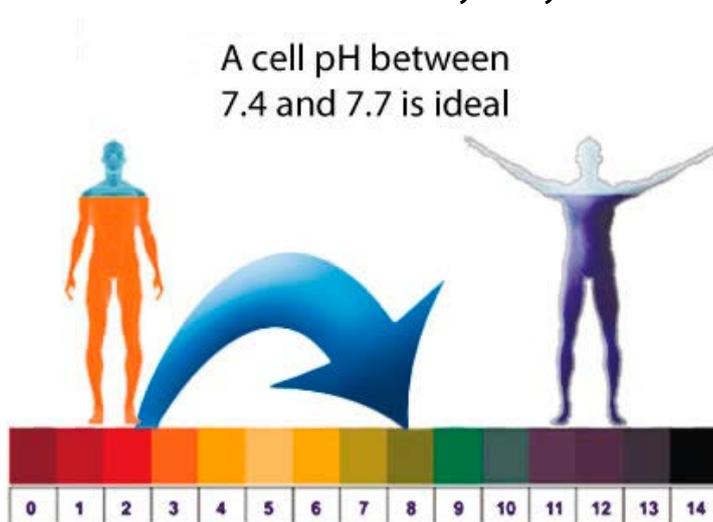
Intercellular liquid capacity depends on the available oxygen (redox). Liquid capacity inside the cell depends on hydrogen. This is why it is so important to control pH and water Eh.

The surface tension of the water determines its ability to penetrate into the cell, measured in dyne / cm<sup>3</sup>. In order to enter the cell freely water must have a value of less than 46 dyne / cm<sup>3</sup>. Distilled water has 72-78 dyne / cm<sup>3</sup>. Alcoholic liquid enters the cell quickly and aggressively, because it has a value of 28 dyne / cm<sup>3</sup>. Structured, micro-clustered, bioactive water has 43 dyne / cm<sup>3</sup>. This is the optimum value allowing the water to penetrate into the cell, to restore order and to promptly flush out waste products.

Have you noticed that old people smell rather bad? The smell is somewhat sour. This is not because they are sick and do not wash. A weak organism has problems processing (structuring) drinking water. This is because their cells do not saturate with multi-cluster water, which is formed due to the positive values of the oxidation-reduction potential of the water (ORP) because of increased acidity (in the figure the yellow spectrum). While using multi-cluster tap water, even if boiled, the biological structures of the organism - cell membranes, organelles of cells, nucleic acids and others - are destroyed by oxidation.

If the drinking water that gets into an organism has a similar ORP value to the inner environment ORP (-40-70 mV), the energy of the cell membranes, i.e. the vital energy of the body, is not used for electronic correction of the water and the water is assimilated immediately since it has biological compatibility.

Ideal (spring) water improves water metabolism and preserves good health, which is the basis of longevity.



# Water Transparency

Humic material and complex compounds of trivalent iron cause the colours of water. Turbidity is caused by the presence of fine insoluble or colloidal impurities of non-organic or organic origins. These substances enter water bodies as runoff during periods of flooding and rain falls. Often the increase in turbidity is due to influx of wastewater, development of bacteria and other reasons.

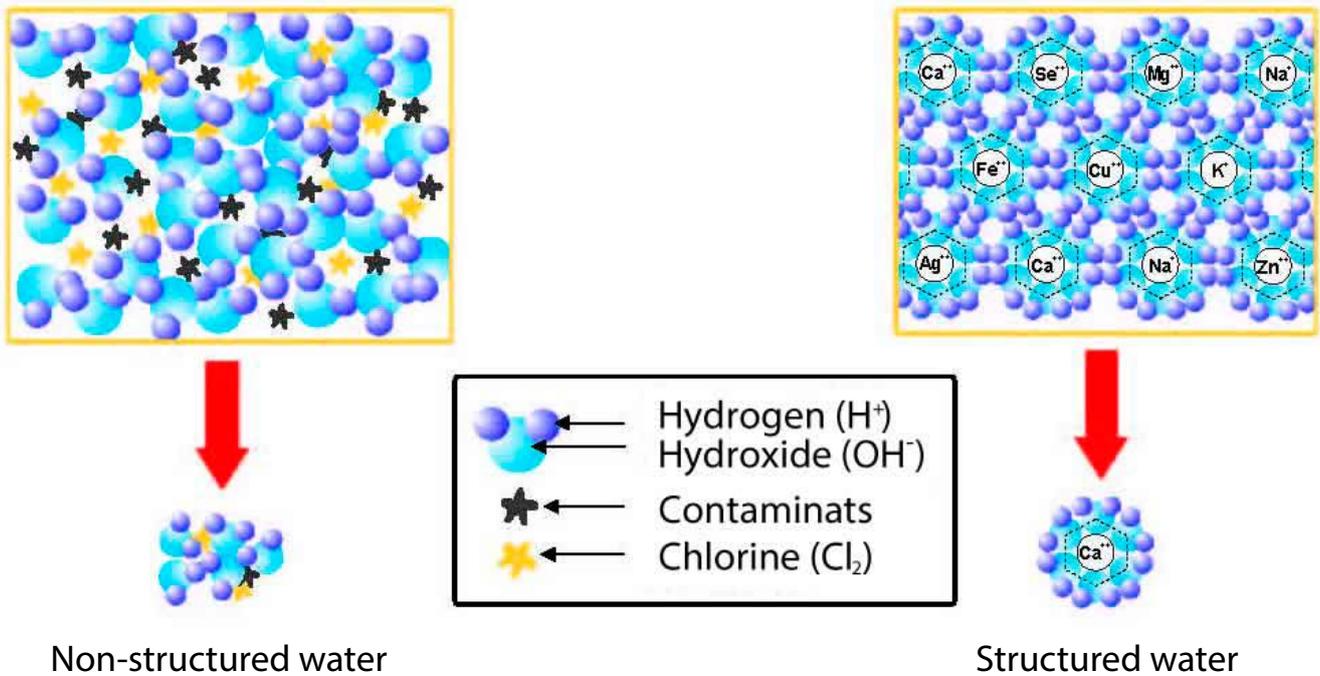
Non-structured water with its chaotic molecular compounds firmly retains mechanic and chemical pollution, which reduces saturation of the water with oxygen. The oxygen concentration in the water is an important index. It determines the value of the redox potential and to a large extent the direction and speed of the processes of chemical and biochemical oxidation of organic and inorganic compounds.

Structured bioactive water has the correct six-edged molecular form, which dissolves the salts to ions at a maximum rate. It creates a hydrated shell around each ion.

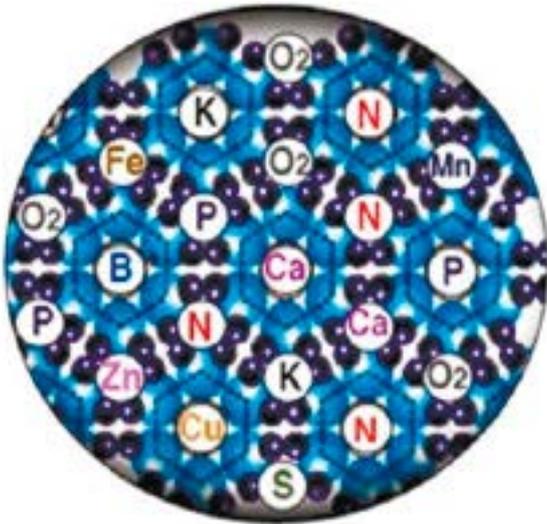
The free space between the water molecules consists of dissolved oxygen in which the chlorine ions are released more rapidly and evaporate.

The relative oxygen content, expressed as percentage of its normal content, is called the degree of oxygen saturation. This value depends on the water temperature, atmospheric pressure and water mineralization.

The oxygen concentration in the water determines the oxidation-reduction potential (redox) and to a large extent the direction and speed of the processes of chemical and biochemical oxidation of organic and inorganic compounds.



## Oxygen Saturation



This is why the control of the oxygen content of the water is a very important problem that all industrial branches are interested in solving, including ferrous and non-ferrous metallurgy, chemical industry, agriculture, medicine, biology, fish and food industry, environmental protection services.

The amount of dissolved oxygen is related to the water temperature. At 0°C, the normal amount of oxygen is 14,7 mg/l (100% saturation). For each degree (1°C) the temperature increases, the amount of oxygen decreases by about 0.3 mg/l. Hence, knowing the temperature of the water, you can get an approximate idea of the content of

oxygen with the following formula:  $O_v = 14.7 - 0.3T$ , where  $O_v$  is the amount of oxygen at a given temperature, mg/l; 14.7 – the normal amount of oxygen at 0°C; T – water temperature, °C. The accuracy of this calculation (in the absence of water pollution) = 0.5 mg/l.

**Optical water density** is a measurement, which indicates the decrease or reflection of light. It relates to water transparency, colour and turbidity. The basis of spectroscopy, as the subject is called, is the property of the elements atoms to absorb the light of a certain wavelength.

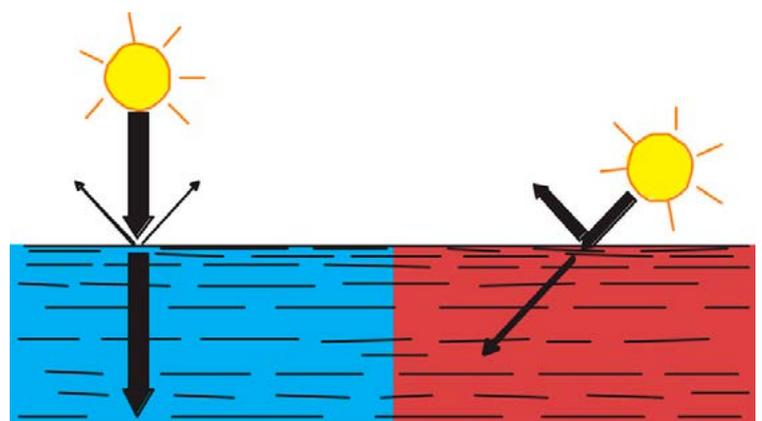
Structured bioactive water, in contrast to the common structureless water, has a greater number of small clusters, a more orderly structure and a larger amount of dissolved minerals. The increased amount of dissolved mineral increases the optical density. The speed of light in an optically denser medium is greater than in a less dense medium. Such water absorbs light better, is so to speak "saturated with light."

The increased optical density and the amount of the absorbed light give the clear structured water a more bluish tint.

Suspended particles and impurities prevent absorption of light.

That is why wastewater has the unpleasant brown colour (it absorbs light in the yellow-red part of the spectrum).

### Effect of optical density on the transparency and color of the water



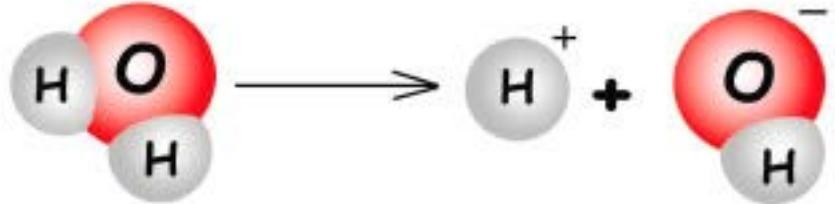
# pH Value – Acid-Base Balance

Hydrogen index (pH) is a measure of the activity (in very dilute solutions equivalent to concentration) of hydrogen ions in a solution, and it quantitatively expresses its acidity, calculated as a negative (taken with the opposite sign) decimal logarithm of hydrogen ion activity, expressed in moles per liter:

$$\text{pH} = -\lg [\text{H}^+]$$

pH is determined by the quantitative ratio of  $\text{H}^+$  and  $\text{OH}^-$  ions, formed during water dissociation.

If the water has a low content of free hydrogen ions ( $\text{pH} > 7$ ) compared to the  $\text{OH}^-$  ions, it will have an alkaline reaction, and with a high content of  $\text{H}^+$  ions ( $\text{pH} < 7$ ) an acidic reaction.



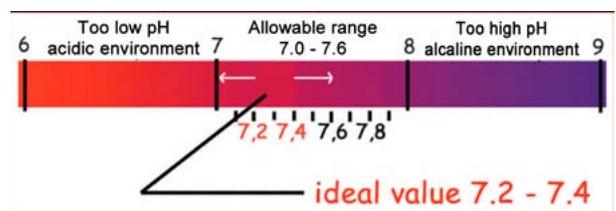
In pure distilled water, these ions will be in balance. If that is the case the water is neutral and its pH is 7. When various chemicals are dissolved in the water, this balance can be disrupted which leads to a change of the pH.

## Normal pH of various body fluids:

- Arterial blood 7.35 – 7.45
- Venous blood 7.26 – 7.36
- Lymph 7.35 – 7.40
- Intercellular fluid 7.26 – 7.38
- Synovial fluid 7.3

The pH of the blood is one of the most important parameters of the organism. Shifting the pH with just 0.1 can cause severe pathology. Shift of blood pH of 0.2 develops a coma, if shifted 0.3 the person dies.

According to anthropologists, the diet of ancient man consisted of 1/3 of lean meat from wild animals and of 2/3 of plants. Under these conditions, the food was of a very alkaline nature.



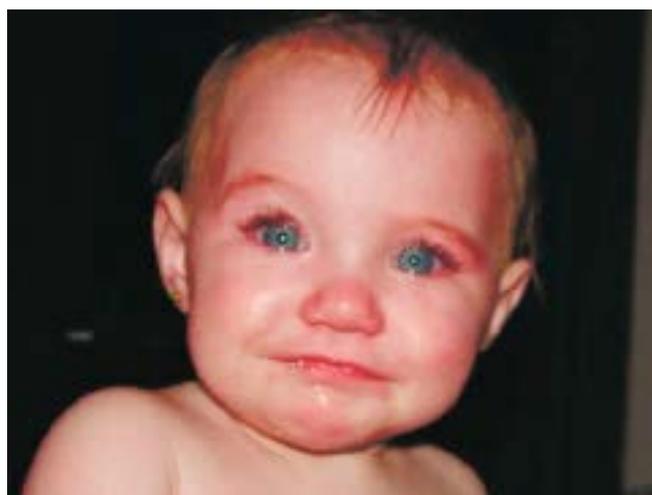
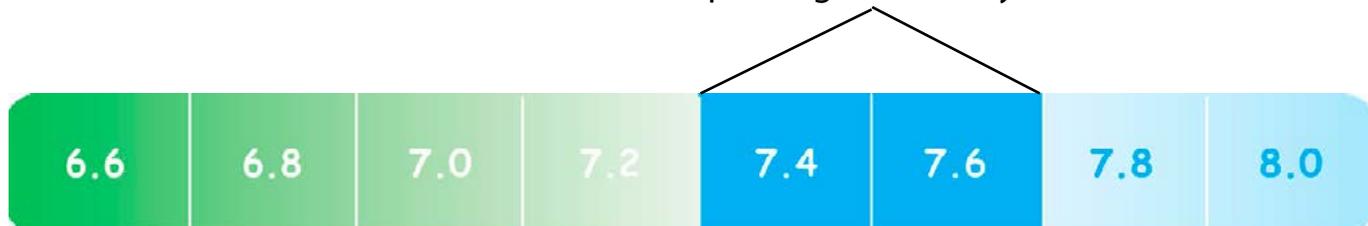
The diet of modern man is rich in saturated fats, sugars, sodium chloride and poor in fiber, magnesium and potassium. It is dominated by refined and processed foods, sugar, flour products, all sorts of semi-finished products. Pizza, chips, different “miracle” dairy products, confectionery and sugary soft drinks – all this food is acidic.

A daily “acid” diet leads to chronic acidification (acidosis) of the internal environment of the organism.

The pH of “structureless” water differs from the pH of cellular water disrupting the acid-base equilibrium in the cells.

The pH of intercellular fluids can be determined by human tears. The normal pH of tears is the same as that of the blood, lymph and other fluids.

The pH range of healthy tears



If the pH of the tears is 7.4 – 7.6, the tears are healthy. Deviation from the optimal values indicates violation of internal biochemical processes.

Back in 1931 Otto Warburg received the Nobel Prize for having proved that the main cause of cancer is acidification of the human body. He proved that with a pH of 7.43, cancer cells do not develop. His students later proved that parasites, viruses and fungal pathogens do not develop at this pH.

How does the body control acidity?

- ◆ Disposes of acid through the gastro-intestinal tract, kidneys, lungs, skin.
- ◆ Neutralises acid with the help of minerals: calcium, magnesium, potassium, sodium
- ◆ Stores acid away in the tissue, primarily in the muscle tissue

If there is a long-term unbalance with too much acidity, the skeleton, as a depot of calcium and magnesium, may be subject to compensatory processes.

The body does not allow the pH of the blood to rise/fall outside the specified limits.

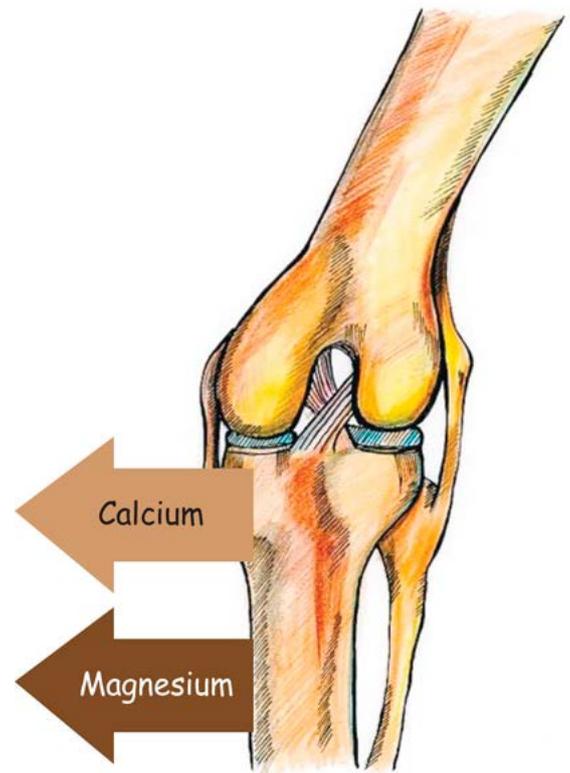
But the balance is achieved at great cost: the skeleton is depleted of calcium and magnesium.

According to the latest global research:

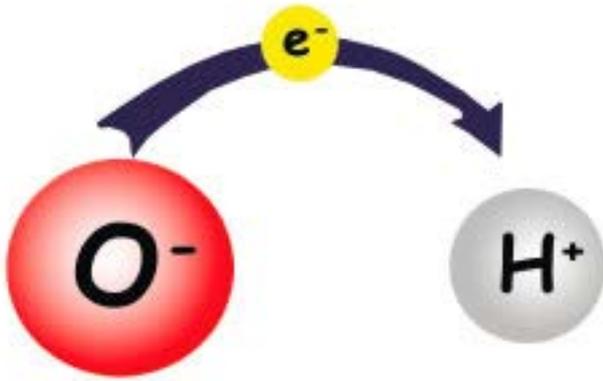
- ◆ At first, the bones lose magnesium. Magnesium is washed out first, then calcium. Hence the rapid development of osteoporosis.
- ◆ Muscles are destroyed. Chronic fatigue and muscle pain can be observed already in young age.
- ◆ Weakness of bones and muscles leads to the degradation of the joints.
- ◆ The acid pH of urine creates ideal conditions for the formation of kidney stones. It takes on the character of an epidemic. Chronic kidney failure causes the development of inflammatory diseases and renal failure.
- ◆ Acidic saliva destroys the teeth and contributes to the development of stomatitis.
- ◆ Chronic acidification can cause headaches, anxiety, insomnia and fluid retention in the body.

Excessive alkali content in the body (alkalosis) disrupts the absorption of minerals, food is digested much slower allowing toxins to penetrate from the gastrointestinal tract into the blood with all the subsequent negative effects.

Modern research has shown that consuming structured, bioactive water can maintain a proper, healthy pH balance. Such water, with the correct parameters, optimally promotes resolution of all possible imbalances in the body, thus helping to restore health.



## ORP (Eh) Level of the Water



Oxidation-reduction potential (ORP or redox potential) is the quantity of oxygen determining the level of activity of electrons in electrons acquiring and releasing reactions. Reduction potential is measured in volts or millivolts (mV).

In natural water the ORP value can have both positive and negative value, ranging from - 400 to + 700 mV.

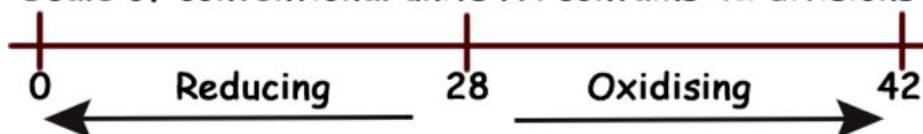
When the ORP value is positive and between + 100 and + 200 mV or more, then the property of the water is oxidising. Such conditions are most commonly found in surface waters. ORP of "dead" water obtained by water electrolysis, may reach +800 + 1000 mV. When the ORP value is negative and between -50 and -200 mV, the property of the water is reductive. It is typical for underground mountain springs or meltwater. This water is called "living" water. For example, ORP of fresh carrot juice is the same as that of a human cell and is equal to -70 mV.

The ORP of water depends on its temperature and correlates with the pH. If we consider that the ORP or redox potential of the aquatic environments of plants is reductive and between -50 and -70 mV, it is advisable to consume water with a redox potential close to that of the body.

In biochemistry, unlike in electrochemistry, redox potential values are not expressed in millivolts, but in units of rH (reduction Hydrogen). Translation of the ORP results using the device to standard units can be carried out using the Nernst formula or special tables.

$$rH = (Eh+200)/30 + 2pH$$

**Scale of conventional units rH contains 42 divisions**



0 = pure hydrogen.

42 = pure oxygen.

28 = neutral environment.

pH and rH are closely interrelated. Oxidation processes reduce the acid-base balance (the higher the rH, the lower the pH), reduction processes contribute to the rise of pH. In turn, the pH value affects the rH value.

Life processes are not possible without energy. All living organisms receive energy from oxidation-reduction reactions, electron transfer from a substance with weak bonds to one that has strong bonds. The greatest amount of energy is produced by reactions where electrons are transferred from an oxidising substance to oxygen directly or through a chain of intermediates.

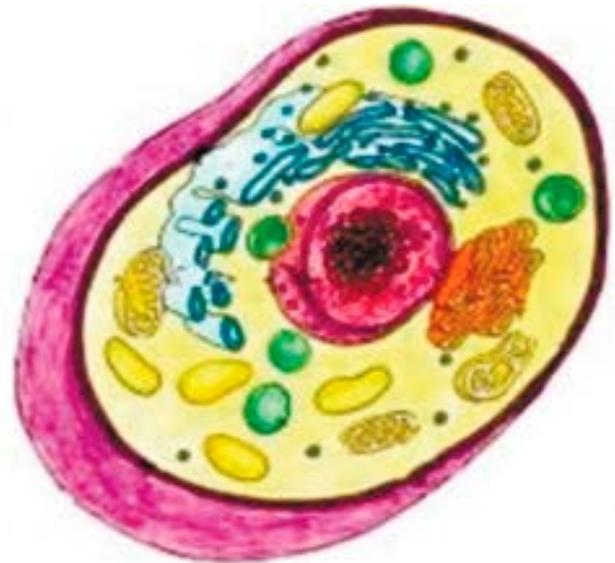
That is why almost all living organisms obtain oxygen from aerobic breathing.

The key role of water in the oxidation of oxygen flammable substances was discovered in the late 18<sup>th</sup> century, when it was found out that water serves as an intermediate (as a catalyst) in combustion processes.

Already then it was claimed that oxygen atoms oxidising flammable materials stem from water molecules and then the free H atoms form gas molecules of oxygen. Following that there is a regeneration of the used water molecules. This discovery was about two decades ahead of its time and was subsequently completely forgotten. Only in recent years it has been confirmed. Thus, antibodies (molecules responsible for the immunity) that are always present in the blood of humans and animals promote a direct oxidation of water molecules with oxygen, which virtually is a combustion.

The intermediate substance of this amazing process is hydrogen peroxide, which quickly break down to oxygen and water in the blood.

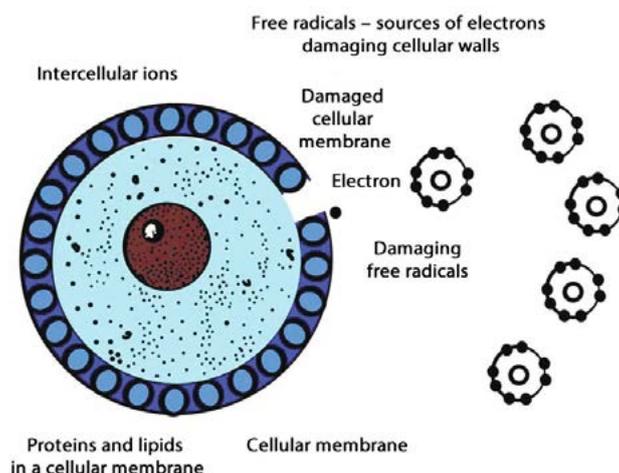
This process does not only contradict our common understanding that water cannot burn, but also it seems meaningless because the final substances are same as the ones that started the reaction.



**Healthy cells have an electric charge (ORP) of between -40 and -70 mV.**

**Weak, sick or cancerous cells typically only have a charge of between +15 and +20 mV.**

### Disruption of cellular membranes by free radicals



In fact the main product of the process is the released energy that for example can be used to bring about immunity responses. The “combustion” of water catalysed by antibodies is only one example of strictly controlled and continuously ongoing burning processes in living organisms with participation of structured EZ water (in the left side of the reaction):



Discoveries regarding the role and participation of water in combustion processes, made in the eighteenth and the twenty-first century, do of course not conflict with our general knowledge of “regular” water, which cannot burn, but instead extinguishes fire. Most likely, only water of special organisation and structure can actually “burn”, i.e. be oxidated by oxygen which differs from “regular” water just like fire wood differs from sawdust.

Indeed, the role of antibodies, big protein molecules, is organising the water molecules, so that water molecules accelerate the reaction within other water molecules and oxygen molecules.

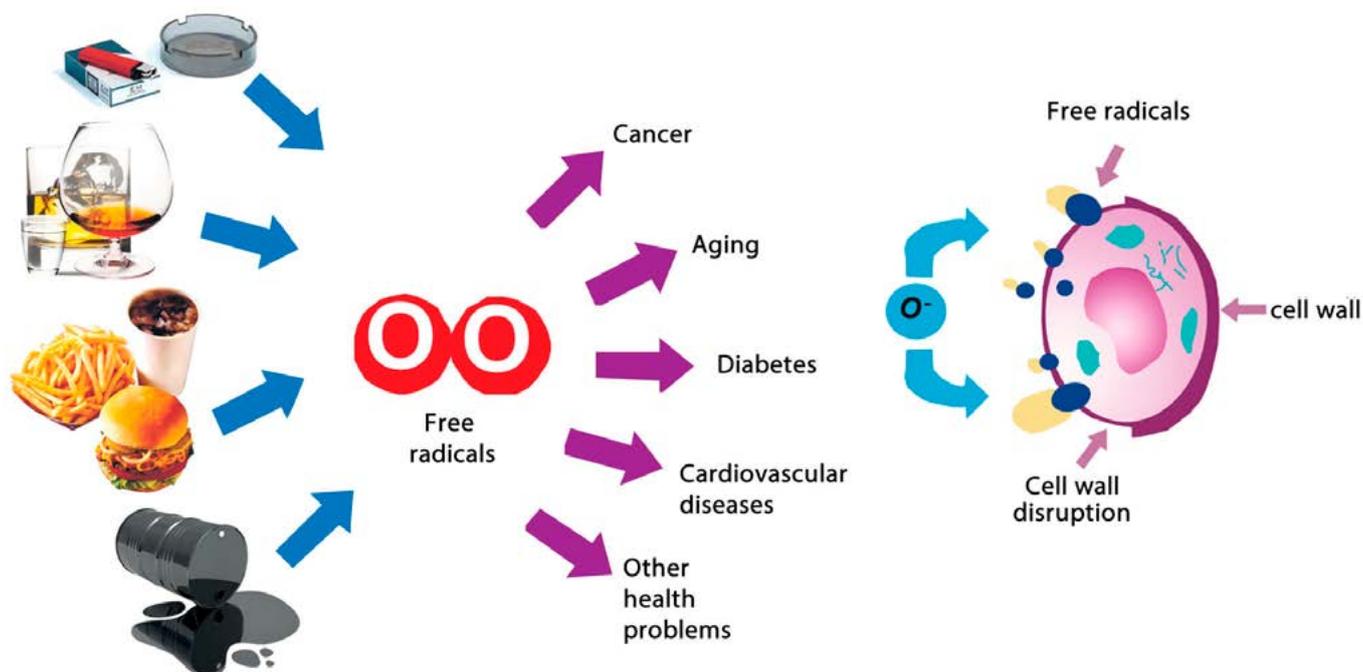
Burning is a process of progressive restoring oxygen to water with four electrons to water (one electron restoring). During the process an amount of energy is released, equivalent to the quantum of light in the visible and even UV range (>1 eV).

If the water combustion process does not end up with a full recovery of oxygen, free radicals are formed that attack the cell membranes.

### Source of free radicals

### Consequences

### Mechanism





They attack bioorganic molecules and trigger a chain reaction which damages the biomolecules. This is how free radicals participate in pathogenic processes.

When ordinary, non-structured drinking water penetrate tissues of an organism, it takes away the electrons from cells and tissues that consist of 80-90 % of water.

As a result biological structures of the organism (cell membranes, cell organelles, nucleic acids etc.) are subjected to oxidative degradation. This is how the organism gets old and vital organs lose their functions.

Free radicals is active oxygen, which is formed in the organism as a result of bad habits. The active oxygen acts very aggressively attacking and destroying the cell walls.

It should be noted that consuming water with +200 - +400 mV redox potential (for instance, from the tap) can cause bigger health problems than consuming of alcohol or smoking.

Healthy lifestyle does not protect you from any problems if you consume bad water!

When there is enough oxygen and enough electrons to restore the oxygen, then the renewing process is rapid and the amount of free radicals is kept low.

**Water with a negative redox potential (ORP) has received recognition as one of the best antioxidants of our time.**

If the drinking water has a more negative ORP than the ORP inside our organisms (bioactive structured water has exactly this kind of potential), it supplies the energy that is used by cells as an energy reserve of antioxidant protection against the adverse effects of the environment.

Structured bioactive water is charged with excess energy in the form of negative ions. This state is unstable and it gradually starts to discharge, literally emitting the charge overload in all directions. Electrons that were stuck start "disengaging". If you drink this type of water, take a shower under it or, even better, take a bath in it, it would discharge within your body, saturating your blood with electrons and thus neutralise the free radicals.

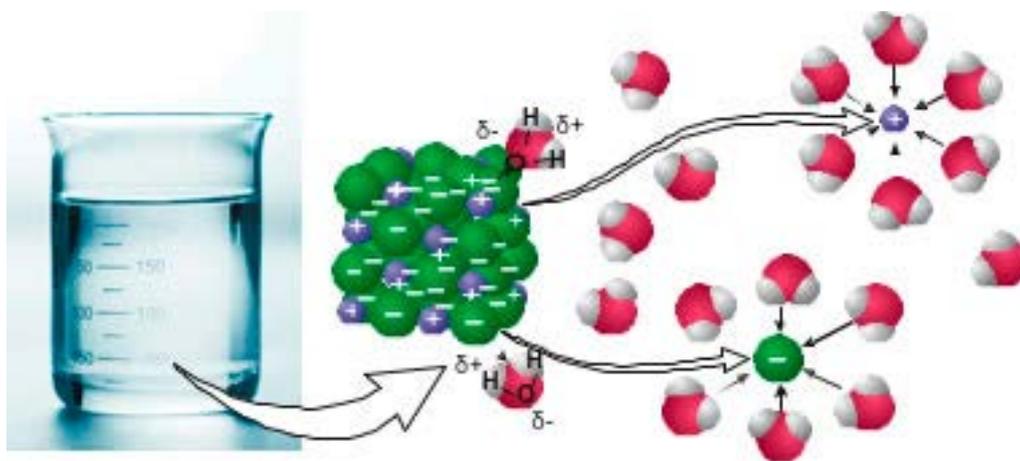
# Water Conductivity

The electrical conductivity of water is its ability, as a solution of electrolytes, to pass an electric current. It is expressed in mCm/cm.

It depends on the amount of free cations in the water, i.e. from the amount of mineral salts dissolved in the water and its temperature.

Undissolved mineral salts do not conduct electric current. As the cells “charge the batteries” in the form of ions, water that has a low electric conductivity also has a low value for humans, animals and plants. When there are low concentrations of potassium, calcium, magnesium and a high concentration of bicarbonates, the water has poor taste.

## Dissolving salt molecules



Water has a magnificent ability to dissolve salts, sugar, acids and alcohol. The reason for this is that its molecules have charged areas, water dipoles, that, so to speak “take away” the molecules from these substances and distribute them among each other: hydrogen cations to negative ions of substance and negatively charged oxygen to positive cations of substance.

It is important not to confuse the concentration of ions or salts with water hardness or softness.

Water hardness is a function of multivalent ions such as  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ , but not of monovalent ions such as  $\text{Na}^+$  or  $\text{Cl}^-$ .

Monovalent ions are also included in the total dissolved solids (TDS) of a solution, hence it is possible to have a total mineralization of 450 mg / l (1 = 1 promile mg / l) by adding table salt in distilled water, which, however, will remain soft.

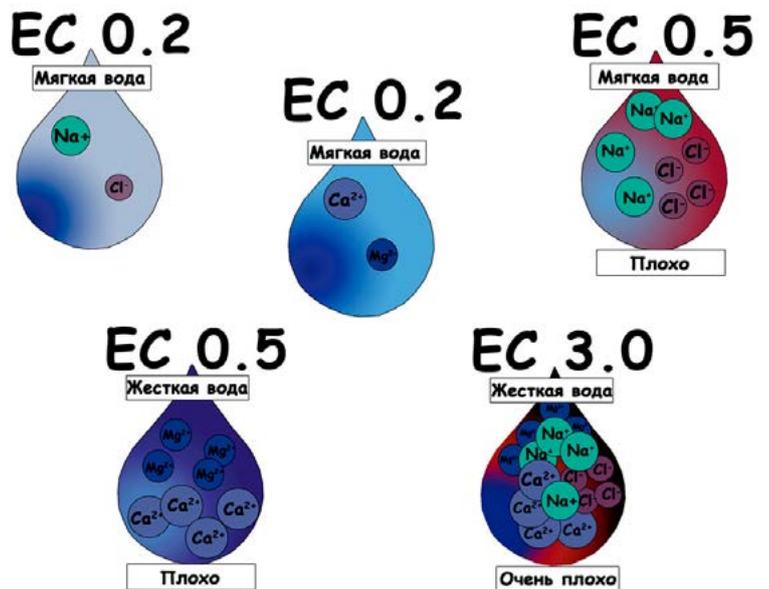
There is no direct relationship between the electrical conductivity (total mineralisation) and water hardness. You can only be sure that the water is hard, if you are sure that all the electrical conductivity stems only from Ca, Mg, or other multivalent ions. For example, a sugar solution conducts electricity, but it not (necessarily) hard. Water softeners operate on the principle of substituting the problematic ions (calcium and magnesium) with sodium ions. Electrical conductivity remains the same or increases and the water becomes soft, which is not good for the body.

Bad water is just bad because it contains high levels of salt and other unwanted chemical elements. It can be found everywhere, especially in industrial areas, regions with intensive agriculture or near salty water reservoirs. And it doesn't matter if this water is soft or hard.

Unstructured water has large size clusters that do not dissolve easily and that contain large amounts of impurities including calcium and magnesium bicarbonates forming temporary hardness.

Due to the low amounts of free calcium and magnesium cations in such water solutions they have low conductivity which also lowers the nutritional value of the water.

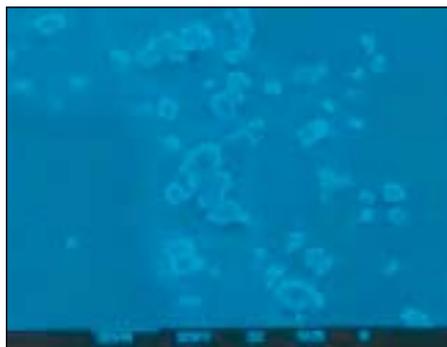
Structured water constructs a six-edge cluster structure that has the maximum material dissolving characteristics. This water does not contain big non-dissolved additions and has high electric conductivity. Calcium and magnesium bicarbonates dissolve to individual cations of  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  that are distributed evenly between the molecules. Insoluble precipitate is not formed in such a solution.



### Dissolving calcium carbonate

#### Unstructured water

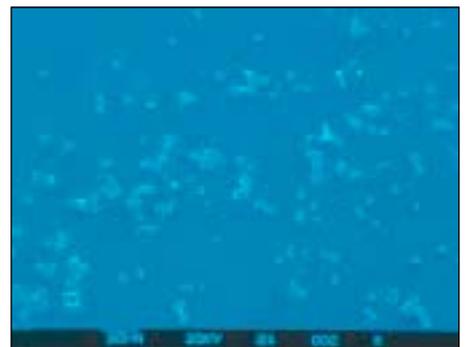
Large clusters with low energy



Low capability of the water to dissolve calcium-carbonate and fast formation of precipitate.

#### Structured water

Small hexahedral clusters with high energy



High capability of the water to dissolve and form easily removable calcium carbonate crystals.

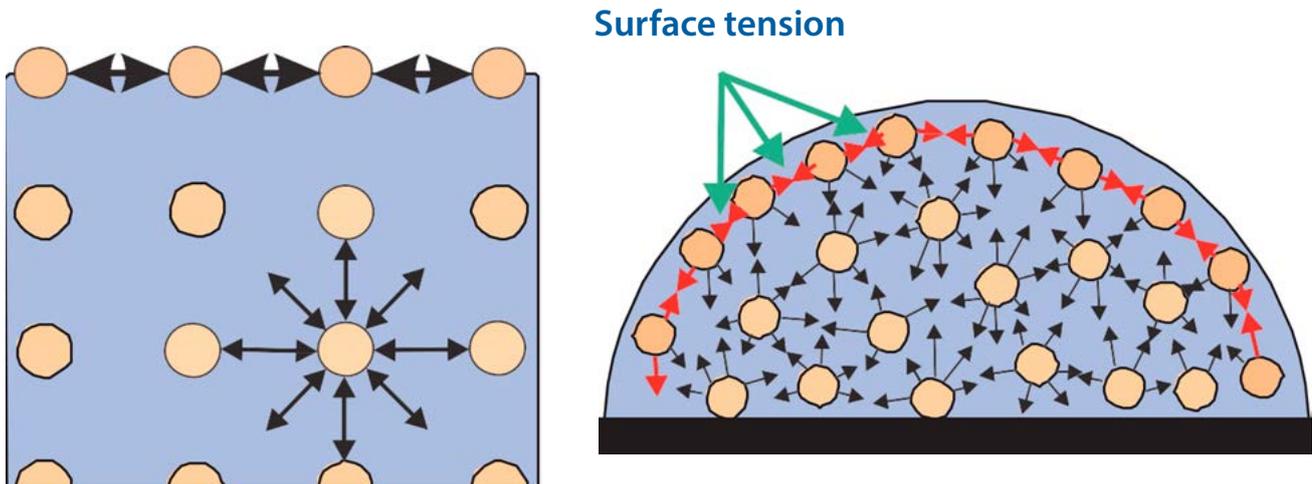
# Surface Tension

The most interesting feature of the liquids is the presence of free surface. Between fluid and gas (or vapour) a border is formed which has different properties in comparison with the rest of the fluid.

Molecules in a border layer of the fluid, compared to those in its depth, are surrounded by other molecules of the fluid but not from all sides. The forces of intermolecular interaction acting on a molecule inside the fluid from the side of adjacent molecules are on an average intercompensated.

A molecule in a border layer is attracted by molecules from inside the fluid (forces acting on this molecule of fluid from molecules of gas (or vapour) can be neglected). As a result a certain resultant force appears which is directed inward.

Surface molecules are drawn inside the liquid by the forces of intermolecular attraction. But all molecules, including border layer molecules, should be in a state of balance. This balance is achieved at the expense of a certain shortening of a distance between border layer molecules and adjacent molecules from the inside of the fluid.

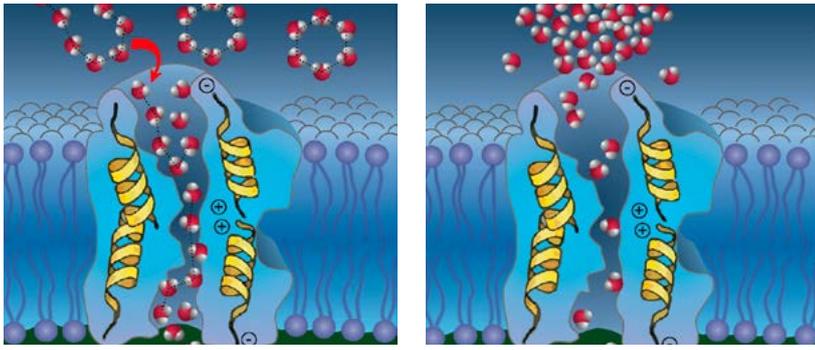


The surface layer molecules have more potential energy than the molecules inside the fluid. The surface layer is attempting to make the surface area smaller. This is why a drop of water or other liquid has a spherical shape.

The hexahedral cluster structure of structured water reduces the surface tension, compared to non-structured, making it more “wet” and thus biologically more accessible.

The surface tension of a water, that determines its ability to get through to the cell, is measured in  $\text{dyn}/\text{cm}^2$ .

## Penetration of water into the cell through aquaporins



Tap water has a surface tension about  $73 \text{ dyn/cm}^2$  and the water inside and in between cells about  $43 \text{ dyn/cm}^2$ . A cell needs a great amount of energy in order to overcome the surface tension. Nutrients pass through the cell membrane and the toxic compounds leave the cell, so the

organism has to reduce the surface tension of the water that we consume.

The lower the surface tension of the water is, the better it can dissolve substances, the better it flows, soaks and penetrates through the capillary pores. Water with low surface tension is biologically more valuable. It participates in intermolecular processes more easily and makes the transportation of nutrients directly to the cell easier and helps to clear out the toxins from the organism.

Some liquids, e.g. soapy water, have the ability to create thin films. Everyone knows that soap bubbles have a spherical shape. This is also an example of surface tension forces. If a wire ring is dipped into soapy water, all of it will be covered with the liquid film.

Most plant and animal tissues are filled with an huge amount of capillary vessels. And it is in the capillaries that the main processes related to breathing and supplying with organism with nutrients take place. The most complicated life chemistry is closely related to diffusion processes.

Tree trunks, plant branches are filled with a great amount of capillary tubes through which nutrients rise to the uppermost leaves.



Soap bubble liquid is very simple to prepare from dishwashing detergents, soap and water. Everyone knows that water has to be soft. Because of high surface tension hard water makes weak, fast bursting bubbles. The best soap bubbles are made from structured bioactive water with low surface tension.

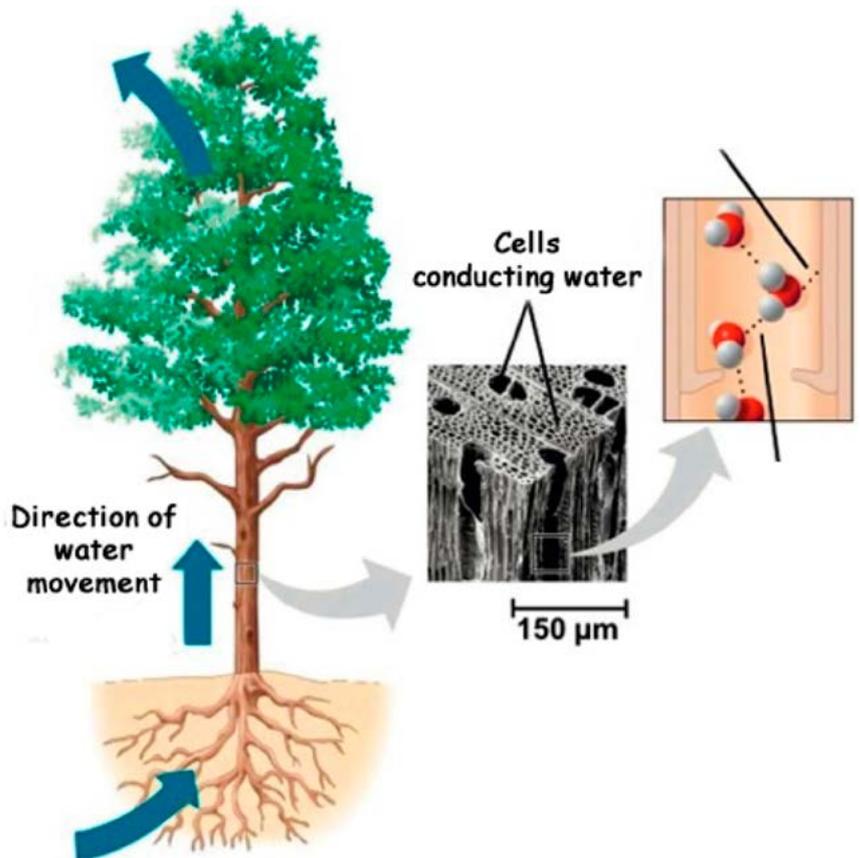


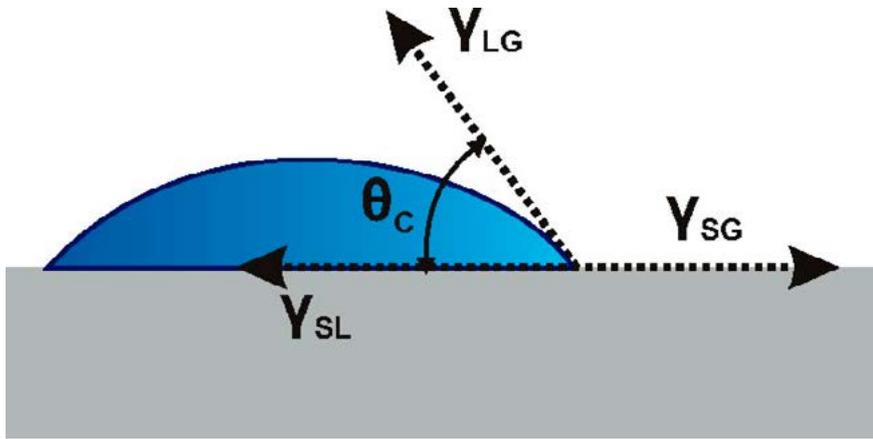
The plant root system, in turn, ends in the thinnest threads, in capillaries. The soil itself, which is the source of nutrition for the roots, can be thought as a set of capillary tubes that have water rising to the surface with already dissolved materials in it, slow or fast depending on the soil structure and cultivation. The higher the water rises the smaller is the diameter of the capillaries is.

Some facts about the human body. The diameter of an aorta is 8 cm<sup>2</sup> and the total area of all the capillaries is about 3,200 cm<sup>2</sup>, which means that area of the capillaries is 400 times larger than the area of the aorta. Accordingly, the speed of the bloodstream falls from 20 cm/s in the beginning of aorta to 0,5 cm/s in the capillaries.

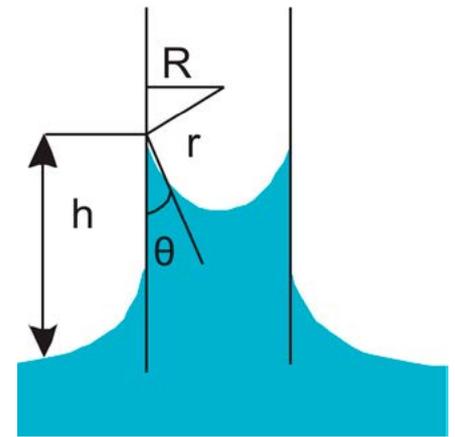
The diameter of each of the capillaries is 50 times less than a human hair and its length is less than 0,05 mm. There are 160 billion capillaries in an adult human body.

Capillarity is actually a rising of lowering of fluid in small diameter pipes – capillaries. Wetting fluids rise along the capillaries, non-wetting fluids – go down the capillaries.





Wetting ability of water

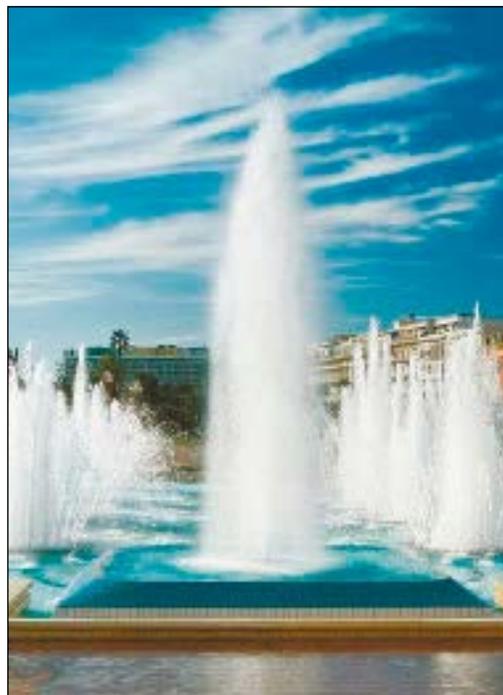


Capillary rise of water

Near the boundary between the liquid, solid and gas form, the free surface of the liquid depends on the strength of the interaction of the molecules in the liquid and those in the solid (interaction with the molecules of the gas (or vapour) can be neglected). If these forces are greater than the forces of interaction between the molecules of the liquid, the liquid wets the solid surface. In this case, the liquid comes to the surface of a solid body at an acute angle  $\theta$ , specific to this pair of liquid - solid. The angle  $\theta$  is called the contact angle.

If the interaction forces between the molecules of the liquid exceed the force of their interactions with the solid body, the angle  $\theta$  is obtuse. That's when liquid doesn't wet the surface of a solid body. When there is full wetting  $\theta=0$ , when there is full non-wetting  $\theta=180^\circ$ .

Structured water has a better ability to go up the capillaries because of the smaller surface tension. The organism uses less energy for the transportation of the liquid through the arteries and veins with the result that the pressure is brought back to normal. The strength of the rise of water in plant capillaries can be measured with the help of a pressure chamber.



## Viscosity



Viscosity (internal friction) is a property of fluid bodies (fluids and gases) to show resistance to the motion of one of its part in reference to the other.

Viscosity is the property of moving fluid and doesn't appear in the standstill. Viscosity makes conditions for the appearance of resistance forces during fluid movement. These forces are called internal friction forces or viscosity forces.

Later in 1888 the Russian scientist V.N. Petrov formulated a mathematical formula for friction forces. From the standpoint of molecular theory, viscosity is explained as the movement of the molecules as well as the existence of molecular forces. In liquids, where the distances within the particles are smaller than in gas, a major role is played by intermolecular interaction.

The viscosity of water is caused by hydrogen bonds preventing water molecules from moving at different speeds.

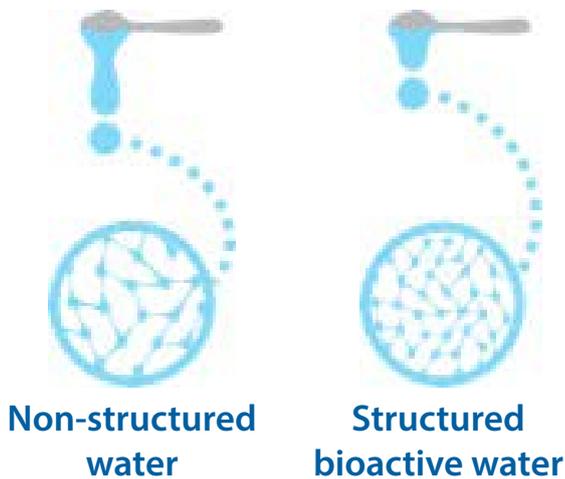
As far as fluid is always inhomogeneous, it has big molecules that form crystalline grids. That's why viscosity depends on the flow rate. The higher the speed, the higher the viscosity.

Normally viscosity depends greatly on the temperature. Coefficient of internal dynamic friction for the water at 0°C equals to 0.081, and at 70°C – to 0.0042; in other words, if the viscosity of water at 0°C is measured by the number 100, then at 70°C the viscosity of water is expressed by number 23.5.

A distinction is made between dynamic viscosity (measuring unit: poise, 0.1 pascal-s) and kinematic viscosity (measuring unit: stokes, m<sup>2</sup>/s, off-system unit – Engler degree).

Viscosity plays an important role in different natural, especially biological processes, determining fluids velocity and resistance offered by them to the particles motion. Changing of viscosity due to the temperature has an impact on the velocity of chemical reactions proceeding in biological systems, on a range of physical-chemical phenomena related to the vital activity of the cell.

Proteins and enzymes function more effectively in the solutions of structured water which has reduced viscosity level. This regards to all cell membrane receptors. Moreover, water forms specific structure used as a bonding material in cell architecture which acts like a glue binding solid structures of cell membrane.



Specifically in case of structured water shortage in the human body the process of dehydration starts, as in this situation the viscosity of body fluid mediums rises and energy efficiency of proteins and enzymes decline.

Initially the volume of the cell fluid is decreased (66%), then the volume of extracellular fluid (26%), and after that the water is extracted from the blood flow (8%). This is mainly done for the purpose of supplying brain with the water. The water makes up to 85% of brain volume, and

according to some reports even up to 92%, and losing of even 1% of it may lead to irreversible consequences. External symptoms of brain dehydration are increasing of body temperature, acceleration of pulse and breathing, thirst, sickness, performance impairment.

## Effect of Water Viscosity on Human Blood Structure

When the normal consistency of the blood is changed, it acts like a trigger and starts a process of disease formation (or aggravation of already existing), such as arteriosclerosis, varicose etc.

There is no such a disease as “**thick blood**”, therefore it would be not correct to enumerate the symptoms of it specifically. The same symptoms may be presented by some other body malfunctions.

Thick blood has a higher viscosity – this causes stagnation of blood circulation and increases the risk of thrombosis.

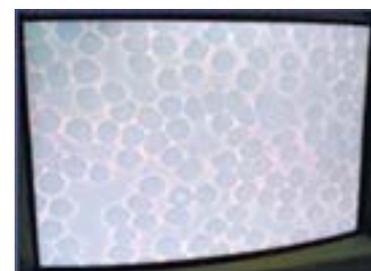
**Clinical implications of thick blood:** heightened blood pressure; drowsiness; fatigue; general weakness; depressed mood; dry mouth; headache; distractibility; permanently cold limbs; heavy legs; varicose veins.

If a person consumes structured bioactive water, then his blood would be thinner and he is more likely to live long. If a person consumes non-structured (normal) drinking water, then the erythrocytes (red blood cells) couple with each other forming freaky formations that remind of a pile of coins or roof tiles. The thickness of the blood and with that the health risks increase.

### Photos of human blood



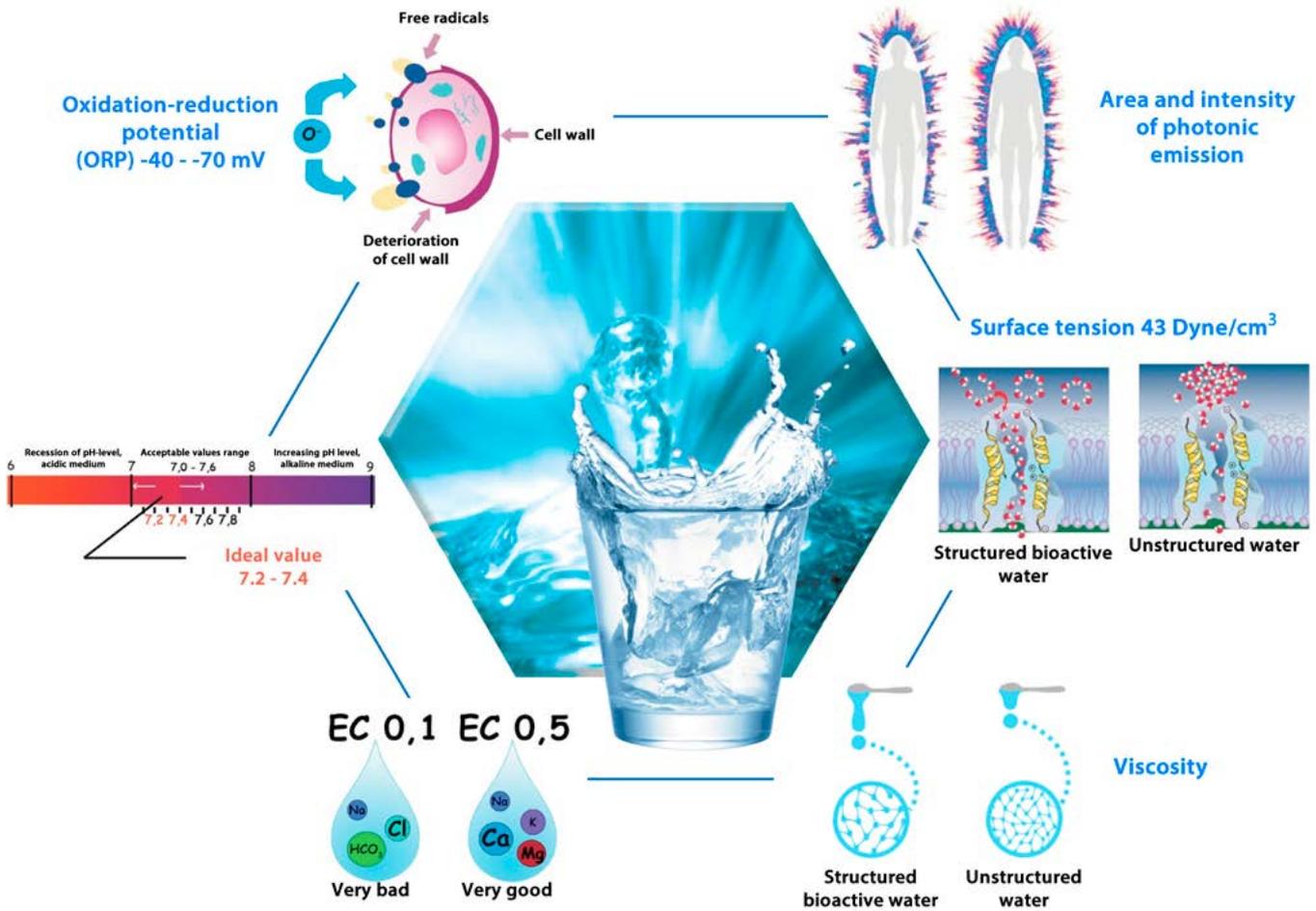
Person drinking normal water



Person drinking structured bioactive water

Photos presented by Australian Institute of Applied Sciences.

# Water Becomes an Elixir of Life if it Shows the Parameters of Crystal Clear Spring Water



Trading Company “Water Studio” will help you to find out whether your water is clean, bioactive and healing. Water diagnostics is performed by qualified specialists using up-to-date equipment. In accordance with the diagnostic results recommendations are provided.

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# History of Water Revitalization Technology Invention

## Dr. Wilhelm Reich's Invention

One of the most extraordinary scientists who devoted himself to studying of low-observable energetic processes in the human body was Dr. Wilhelm Reich (1897 – 1957). This close associate of Dr. Sigmund Freud, the founder of psychoanalysis, just had no other choice as to study the subject he was interested in empirically, using observations, experiments and microscopic examination. With the help of numerous experiments Reich succeeded in finding scientific evidence for the existence of an unknown form of energy, so called "Orgone". The most useful result of his invention was so called Orgone Accumulator. This accumulator is built of a box made of the layers of conductive and non-conductive materials. Orgone from the atmosphere is accumulated in it. Testee is situated inside of the accumulator and can feel the pleasant effects of "living energy".



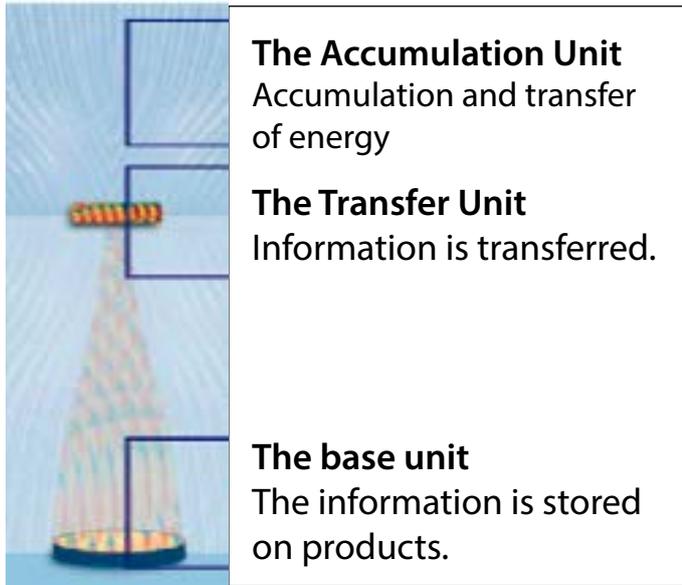
## An Inspiring Information Transmitter



Walter Gorenflos was an unusual scientist. He had a good understanding of the Orgone Accumulator invented by Wilhelm Reich and of its effectiveness.

Years later Gorenflos had "accumulated" information gained in an experimental way and decided to run his own investigations and experiments. He knew that molecules of certain substances get transformed under the influence of magnetic and electrical fields and can keep a certain information. The phenomenon that is represented now by every liquid-crystal display (LCD) (in its earlier physio-technical phase, that is) was discovered empirically by Dr. Gorenflos. Gorenflos was a friend of the Plocher family, whose children became the founders of PENERGETIC AG. The family is still on friendly terms with his widow. For use in his medical practice Dr. Gorenflos build an apparatus capable of transmitting information of remedial substances.

## Penergetic AG technology



In order to apply information being stored on the storage device to treat patients Gorenflos had to take it out from the device. He achieved it by injecting the brine and by using “informed” metal plates as a belt that patient had to wear.

Every information transfer needs an “impulse” energy. Dr. Gorenflos used a magnetic field for it, but was running experiments also with a big field. In the end he succeeded in creating a perfect bridge between two types of energies. He was saving the information on the carrier material using magnetic field and was

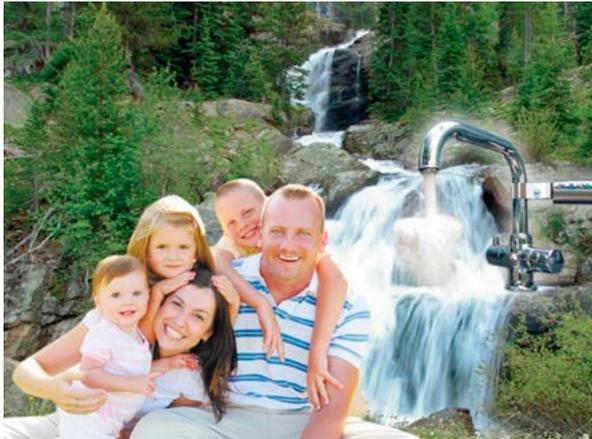
releasing it with the help of orgone radiation. Walter Gorenflos put the family in the way of things about his work in early 1980s. Thus, he became one of the main initiators of developing a technology for the Penergetic company, on which, apart from other things, the functioning of AquaKat is based.

### AquaKat Provides Vital Information for the Tap Water

Tap water is clean and could be provisionally consumed. This is guaranteed by drinking water acts and constant European quality standards conformance inspections. Nonetheless, tap water can't be “live” like spring water. For that the direct contact with the natural water surrounding is needed which is long lost for the tap water: light, air and soil. Tap water lacks “life-giving” exchange of information with the biosphere and freedom of movement – things that make up an advantage of water being a life elixir.

It is hard to imagine that the activity of water could be restored with the help of a purely technical device. We assume that the scarcely perceptible “inner life” of the water that can be studied with the help of presently available methods has a huge positive effect on this process. Achievements in understanding the unique nature of water were made during decades and their explanation with the help of up-to-date testing methods give reason to believe that the application of AquaKat device restores the vitality of tap water.

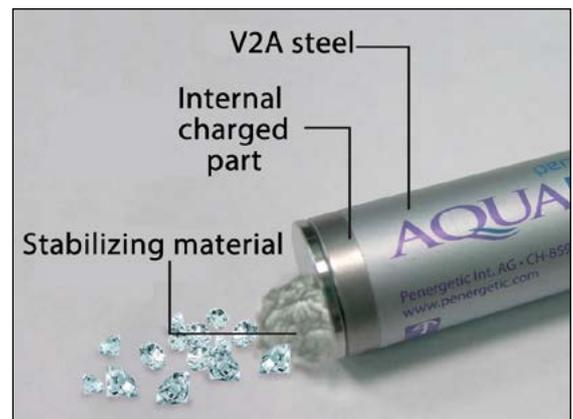
# Aquakat – a Spring for the Whole Family



The initial vitality of the water could be restored with the help of **AquaKat – energetically-physical device for water revitalization** which works as signal emitter (catalyzer). **Hermetically sealed steel cylinder** sends the frequencies with which it was charged, into the water. This brings the flowing water in resonance and its molecules got charged so that their **characteristics correspond to the characteristics of spring water.**

Information from several best “natural” live water springs is stored in crystals – semiconductors and sheets of foil made of precious metals alloy and rolled in a cylinder.

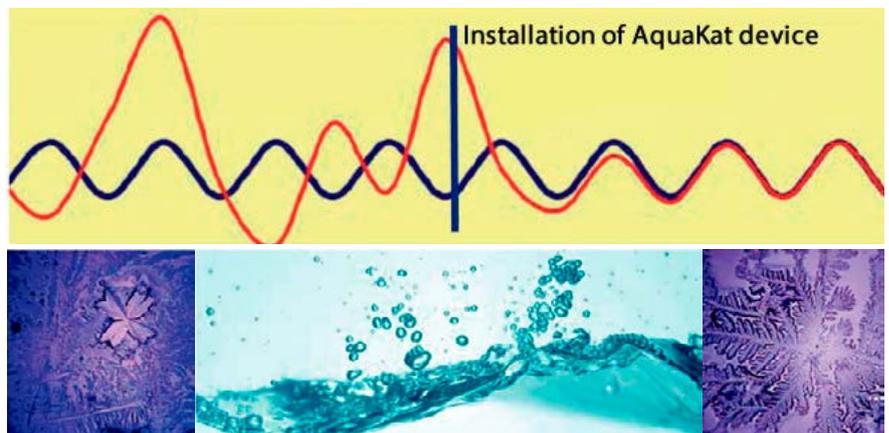
Even if the water from the tap is not running, still it resonates with oscillations of the water which information is “imprinted” on the foil (carrier). Water clusters are formed in corresponding structures and store up these oscillations.

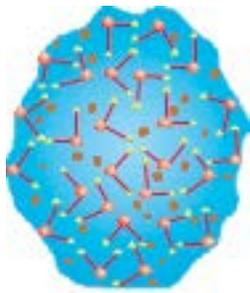


## Water Physical Processing Method is Based on Resonance Effect

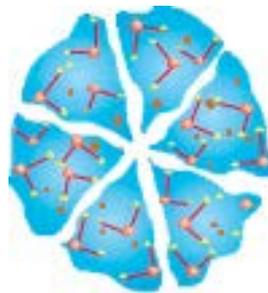
The AquaKat works with the constant frequency of 8 Hz corresponding to the frequency of clayed soil, spring water and oxygen. Tap water adopts the frequency and restores the characteristics of clear spring water and gets oxygenated.

Considering the fact that water can store and transfer information, the AquaKat performs not only physical purification of the water, but also energetic purification of information from contaminations, like water freezing and melting.

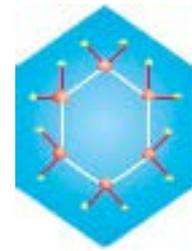




**Low biological water activity**



**Large water clusters (20-30 molecules) break up into small (4-6 molecules)**



**High biological water activity**

Microscopic examinations and instrument measurements have proved that under the action of the AquaKat device water becomes structured, biologically active and spring-alike.

### **Photos of Water Made under a Microscope**



**Spring water**



**Tap water**



**Water after treatment with the AquaKat**

As the AquaKat device never has direct contact with the water during operation, it doesn't have to be approved in accordance with drinking water regulations.

### **Advantages of using the AquaKat**

- ◆ No magnetism, electricity or chemicals.
- ◆ Adds and removes nothing from the water, increases biological activity of the water.
- ◆ Installation doesn't require plumbing works.
- ◆ No maintenance and repair costs.
- ◆ Makes water softer to the feel and taste.
- ◆ Improves the taste and maintains the freshness of fruits and vegetables.
- ◆ Enhances immunity, sustains physical health.
- ◆ Reduce the use of soap, detergents and detergent additives.
- ◆ Improves functionality of sewage water purification systems.
- ◆ Device is not sensitive to freezing.
- ◆ Thousands of end users all over the world – user experience over 20 years.

## Water and Children

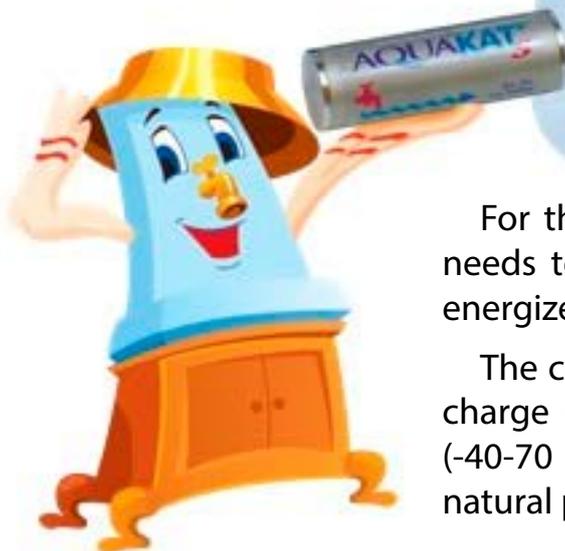
Child's body uses a huge part of energy for physical growth and development every day. Metabolic processes are therefore much faster in a child's body than in that of an adult.

Energy reserves are also depleted by the process of transforming water suitable for digestion. The symptoms of dehydration:

- ◆ Rapid fatigue
- ◆ Mood swings
- ◆ Low attention span
- ◆ Sleep disorder
- ◆ Appetite decline
- ◆ Decreased immunity

### Water, water, wash my face

So my eyes sparkle,  
So my cheeks blush,  
So my mouth laughs  
And my teeth bite!



### Energy

The body losing energy giving a feeling of fatigue.



### Sleep and appetite

Insufficient water consumption results in sleep disorder and loss of appetite.



### Healthy Heart

Well-balanced supply of Ca:Mg:K with the water keeps the heart healthy for a long time.



### Digestive Problems

Water stimulates and normalizes digestion.



### Healthy Skin

Water purifies the skin and makes it shine.



### Purification

The human body uses water for effective elimination of waste and toxins which helps to keep cells and organs healthy.



### Sport's Best Friend

A dehydrated body could keep from active outdoor games and sport activities.



### Weight Control

Water doesn't contain fat, calories, carbohydrates and sugar.



For the proper development of the child's organism it needs to consume a lot of water – clear, structured and energized.

The charge of structured bioactive water is equal to the charge of the internal environment of the healthy body (-40-70 mV) and charges every cell with bioenergy and natural power to the maximum.

## Water for Adults

Middle-aged people need energy to stay fit and active. Bad habits, poor ecological condition, food quality and, first of all, water quality have an influence on the state of health. Symptoms of dehydration:

- ◆ Skin dryness
- ◆ Cellulitis
- ◆ Bad smell
- ◆ Dizziness
- ◆ Headache
- ◆ Rapid fatigue

Any pain is our body's cry for help. If a cell is oversaturated with toxins a signal in a form of pain is sent to the brain.

It is not necessary to remedy it with pills. It is enough to restore the water balance in our body.

### Weight Control

Water doesn't contain fat, calories, carbohydrates and sugar.



### Healthy heart

Reduction of heart attack risk with 41%.



### Energy

A dehydrated body loses energy and feels tired.



### Headaches

Insufficient water consumption may cause headaches.



### Healthy skin

Water purifies the skin and makes it shine.



### Sport's Best Friend

A dehydrated body could keep from sport activities.



### Digestion Problems

Water stimulates and regulates digestion.



### Cancer risk

Reduction of colon cancer with 45% and urinary bladder cancer with 50%.



### Purification

The human body uses water for effective elimination of waste and toxins which helps to keep cells healthy.



**AquaKat water is great!**



Structured bioactive water with restored dynamics and harmony (quality of spring water) increases bioavailability of dissolved minerals due to their transformation in ionic form, perfectly supplies the cells and promotes waste removal.

# Water for elderly people

In the ripe age the importance of fluid rises sharply because the natural ability to transform water to the required condition declines.

Consuming conventional water, the human body continues to lose cell water, thus increasing stress on the water elimination system.

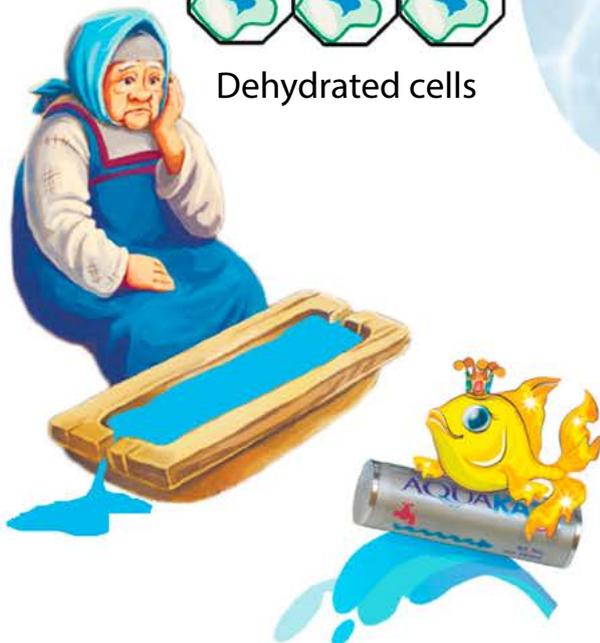
Symptoms of dehydration:

- ◆ Rapid fatigue
- ◆ Bad smell
- ◆ Digestive disorder
- ◆ Urinary tracts diseases
- ◆ Disturbed circulation, hypertension
- ◆ Diseases of the joints
- ◆ Decreased immunity
- ◆ Increase of body fat

**The loss of bioactive cell water = premature senility and diseases.**



Dehydrated cells



## Weight Control

Water doesn't contain fat, calories, carbohydrates and sugar.



## Healthy heart

Reduction of heart attack risk with 41%.



## Energy

A dehydrated body loses energy and feels tired.



## Headaches

Insufficient water consumption may cause headaches.

## Healthy skin

Water purifies the skin and makes it shine.



## Sport's Best Friend

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Reduction of colon cancer with 45% and urinary bladder cancer with 50%.



## Purification

The human body uses water for effective elimination of waste and toxins which helps to keep cells healthy.



Structured bioactive water having all the characteristics of natural spring water is much faster and easier in getting inside body cells and filling them. It accelerates and vitalizes all the processes and flushes by-products and toxins out.

## AquaKat Models



### AquaKat NoDrop

**Application:** test coaster for small volumes of water – glass, bottle.  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 200 ml.

### AquaKat S



**Application:** separate taps, portable usage (hotel, camping, etc.).  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 100 l/day.

### AquaKat M



**Application:** 1-2 people flats, open swimming pools.  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 750 l/day, for pipes up to 20 m long.

### AquaKat L



**Application:** 1-2 family houses, commercial use in small companies, swimming pools.  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 3000 l/day, for pipes up to 80 m long.

### AquaKat XL



**Application:** 6 flat houses, commercial usage, swimming pools.  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 9000 l/day, for pipes up to 120 m long.

### AquaKat XXL



**Application:** houses for 7 flats and more, commercial usage.  
**Purpose:** hot and cold water revitalizing.  
**Capacity:** water volume up to 30 000 l/day, pipe length up to 240 m.

### ThermoKat



**Application:** boiler stations, multifamily houses.  
**Purpose:** hot water revitalizing.  
**Capacity:** system volume up to 1500 l/day.

## Installation methods



# Facts on the Use of AquaKat Devices: Fraud or New Perspective?

In 2004 SBZ, a highly respected German magazine on sanitation, heating systems, air conditioning systems and plumbing, conducted an unusual test. As different media started to post a lot of comments about water revitalizing and the average consumer as well as experts had no idea what to think about these curious devices, the SBZ magazine decided to run a large-scale field study.

Whereas the majority of products on the market tend to be understandable only to a narrow circle of specialists, the basic idea behind the PENERGETIC products is clearly explainable to everybody.

The main statement was that problems with lime scale in houses, heating systems and electric appliances having contact with water could be solved. SBZ magazine decided to test everything independently. 35 plumbing companies gave their consent to take part in this test and to install AquaKat devices provided by the PENERGETIC company.

## The Results Surprised Everybody

First unexpected result: only 4 companies noted no effect after using the device. The remainder of 31 companies acknowledged the positive effects in varying degrees.

**Softening:** 28 professionals noted improvement in taste and feel of the water. It was also often noted that "the water seems to be softer, the taste has improved, it is fresher, without bubbles". It was often noted that the water no longer had the bad chlorine after-taste. Other testers mentioned softer hair and a nice feeling on the skin.

**Problems with lime scale:** 7 testers noted that the problem remained, 7 other testers had no problems with lime scale before the AquaKat installation and wanted to check only the capability of device to improve the taste of the water. However, 26 testers reported significant improvement of the scaling problem. They noticed that the lime scale had become much easier to remove. Before installation of the AquaKat they had to use special detergents to remove lime scale from ceramic tiles and fittings; after AquaKat installation it became possible to remove lime scale only with the hand or with a soft cloth. It was also mentioned that lime scale formation and extent had been reduced.



12 testers who had big problems with lime scale could extend the time period between descaling procedures considerably (by about 50%).

3 testers noticed that the water no longer left reddish stains from the presence of iron after installation the AquaKat.

According to the manufacturer it should be possible to reduce the amounts of detergent due to improved "dissolution properties." Almost half of the testers reported that they had been able to reduce the detergents by ca. 50%.

In April 2004 SBZ magazine published the following conclusion: all but a few companies that took part in the experiment have noted that the AquaKat device works.

Reports on efficiency varied from occasional effects to full solutions of the problems (taste, lime scale, rust). The test results did not shed light on how the device works. To understand that a large-scale investigation should be conducted.

Due to the good results of the test the SBZ magazine gave doubting clients and companies the advice of "not missing the opportunity". The original text of the magazine shows how interesting the results of the test were. If we take into consideration that the AquaKat does not require electricity or other power supply to work, the device will pay off rather quickly.

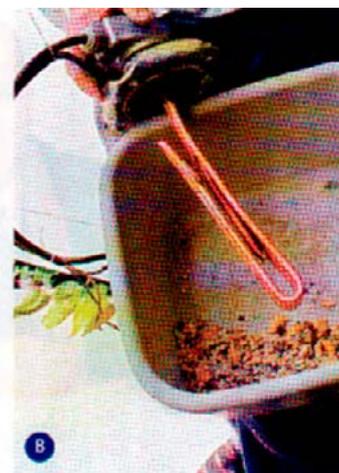
**A**

Before testing: condition of the heating element after 12 months of operation. Lime scale is hard as stone.



**B**

The heating element is cleaned with acid before the beginning of the test.



**C**

3 months after installation of the AquaKat the first lime deposits appear.



**D**

But according to Karl Meierthaler, SBZ magazine investigator, the lime scale was "very soft" and "could be removed easily by rinsing with water".



There is a large body of literature on the benefits and therapeutic effects of spring water. There is also a large number of studies that prove the vitalizing effect of spring water.

In this literature there is mention of the self-purification properties of water in which the spiral movement of the water plays an important role. This means that Nature gives the desired activity to the water, as well as light and space flows. The PENERGETIC company was able to simulate a certain resonance in their device, the so-called information for water. The principles are very similar to homeopathy.

However, it is not possible to measure this energy directly. The effect of the device can only be determined through practical application. It is understood that water is a carrier of information and certain frequencies can be stored in it. When the water structure is updated, the information is stored under favorable conditions. "Favorable" in this case means: low water temperature, lack of turbulence and electrical interference. Under these conditions AquaKat device can supply running water with necessary information. Exactly this effect was noticed and reported by the majority of testers who took part in the SBZ magazine experiment.

An excerpt from a report from one of the companies that participated in the experiment:

"During the SBZ magazine experiment we had the AquaKat L device installed from 24.06 till 28.09.2004.

These are the results that we got: the heating element of the 500 l tank had a thin layer of lime scale which was easy to remove under running water. We continued testing for a year and got the following results: lime scale reduced. We have discovered that the lime scale in the heating element was easy to remove. There was almost no residue in the tank".

During three months pipefitters (readers of specialized German magazine), as well as members of German National Association (of plumbers) and the house-owners association tested the Aquakat device. Positive evaluation in 80% of the cases was confirmed even by journalists who were skeptical at the beginning of the test. Even the properties of water, which can be assessed only subjectively, were evaluated: improved taste, softer water, no chlorine taste; there was a refreshing effect felt when taking a shower as if being under a waterfall in the mountains.

To summarize: scientifically proven changes of tap water that can be regarded as the result of revitalization, positive effects for companies that use a lot of water and the joy of "ordinary" people using revitalized tap water.

# The ThermoKat Device by PENERGETIC

## Two birds with one stone Initial skepticism ends with unexpected success

An apartment building with 22 apartments had a problem with hot water. Each flat is equipped with a floor heating system which works with the hot water from a central boiler with a heat exchanger. The system operates on the waste water from the tap in accordance with technical standards that define that waste water must undergo ion cleaning before heating. This reduces lime build-up and thus potential damage and loss because of the deposits. Pipes integrated in the floor are made of plastic which conducts oxygen. After a while oxygen penetrates the pipe which leads to formation of residues in the heating system. Such residues can block the system, especially the floor pipes and cause system shutdown or underperformance. Such a situation arose and the Strauss Plumbing company was called to eliminate the problem. As it turned out, water from the heating system contained impurities which lead to blocked pipes in some of the flats.

## Solution

On April 10<sup>th</sup>, 2008 Strauss Plumbing company specialists had flushed the pipes with water to remove the dirt. Then the system was completely filled with the waste tap water anew. Due to the fact that the whole system was full of lime scale the next breakdown was only a question of time. At this time the AquaKat XXL manufactured by PENERGETIC was installed for testing. It was mounted on the main pipe in a boiler room and left there for 4 weeks. The owner of the house and Strauss Plumbing company representative were rather skeptical about using this device.



**Boiler with  
heat exchanger**



**Installation of AquaKat XXL  
in the boiler room**



**Drainage hose and  
drainage valve of the  
heating system**

## Result



**Unexpected result:**  
clear water runs from the drain hose

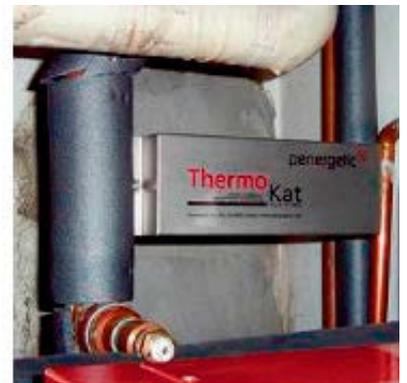
After several buckets of water have been drained, the water in the system was still clear. At the moment the owner of the house is deciding where to install the central system of tap water revitalizing. If he will not find a solution, then the piping system can be protected by installing several small AquaKat devices in every flat. However, the second variant will be more expensive as compared to the installation of two AquaKat XXL devices. **It must be noted that in case of using waste tap water (according to the VDI 2035 standard) the heating system is protected only against lime scaling, but not against impurities! Using AquaKat device we can eliminate both problems.**

## Elimination of Lime Scale Problem AquaKat device cleans water heating system

In January 2008 the Boslet family in Berlin installed a geothermal pumping heating system. Due to the presence of impurities in the water (caused by scaling of magnetite from steel radiators and iron pipes) the likelihood of a heating system breakdown was quite high. Even after the water had been fully replaced the symptoms of new scaling showed up again a few weeks later. The ThermoKat was integrated in the system on 9 March, 2008.



Water sample 09.05.2008

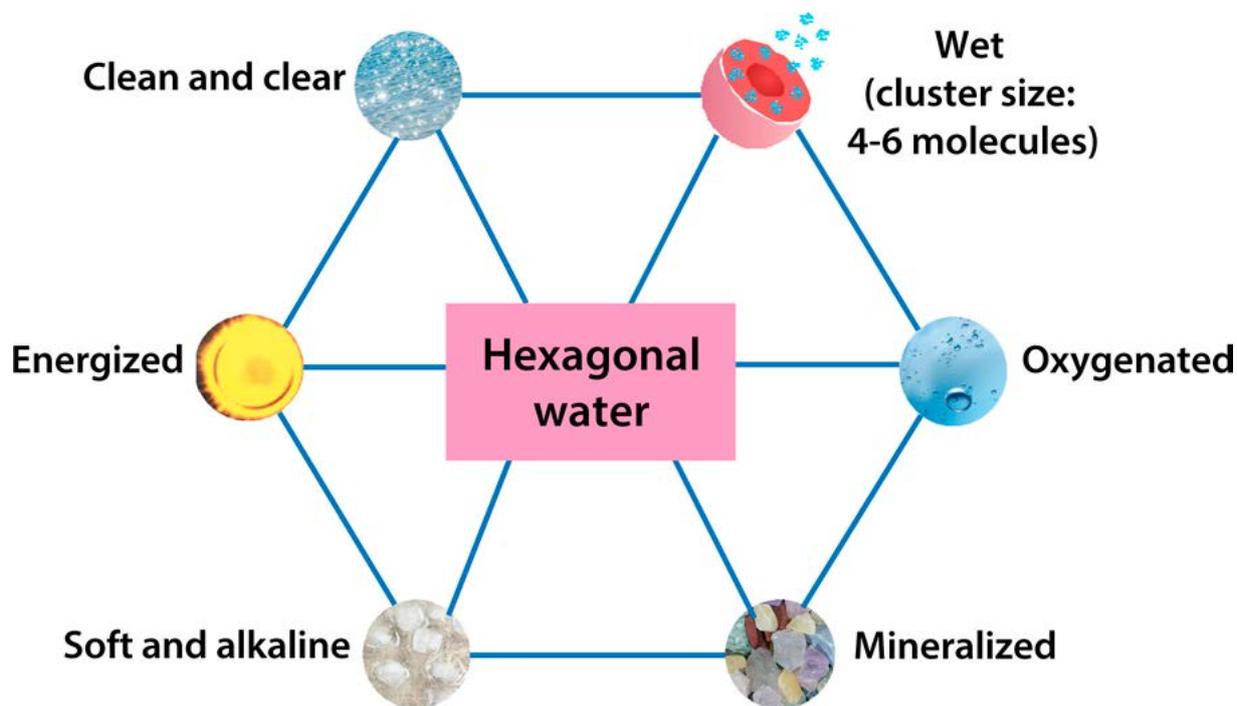


Installation of the  
ThermoKat on the pipes  
directly under the boiler

To everyone's surprise 6 weeks later after device installation the water in the whole system was clean and looked like drinking water.

The AquaKat L was then installed for full revitalization of the water (hot and cold water systems) and for removing lime scale and protecting the water heater, installations in the bathrooms and improving the taste of the water.

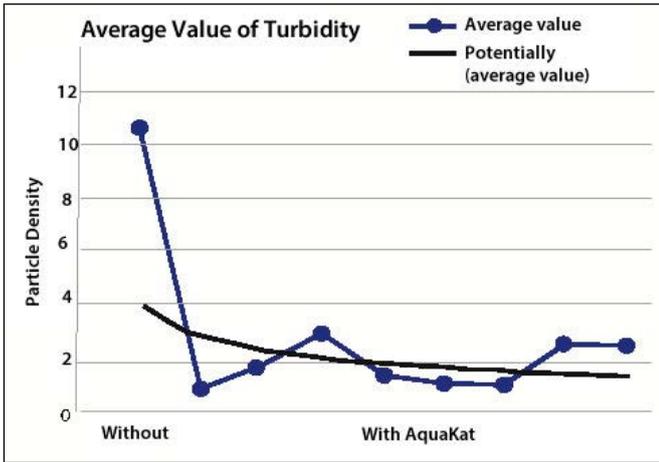
# Influence of the AquaKat on Water Structure and Bioactivity



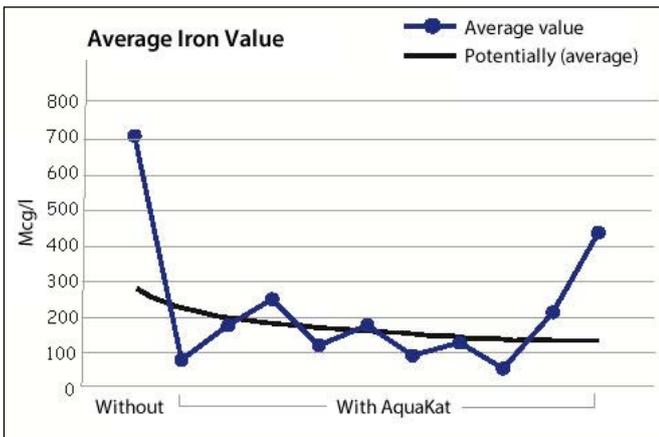
Up-to-date measuring equipment allows to determine AquaKat's influence not only on chemical, but also on physical and biological parameters of water.

Type of Study	Method of Analysis
Chemical	Volumetric Gravimetric
Chromatographic	Liquid column chromatography Thin-layer chromatography High-performance liquid chromatography
Electrochemical	Potentiometric (pH, EC, ORP) Polarographic
Optical	Photometric Spectrometric Luminescent
Photochemical	Photochemical
Physicochemical	Density Viscosity Surface tension
Bioelectrographical	Gas discharge visualization (GDV) of water and biological object condition

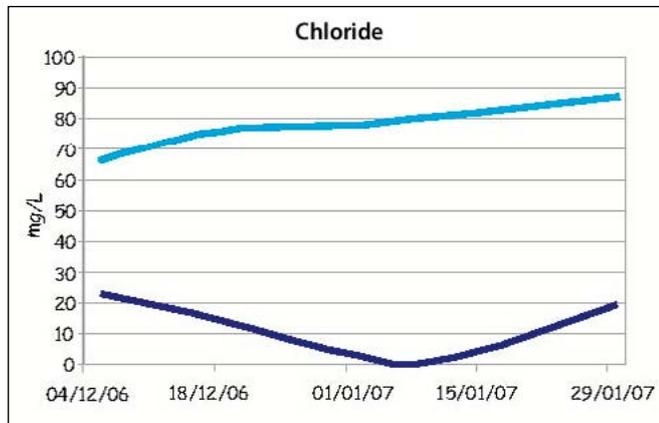
# Purity and Transparency



Application of the AquaKat reduces water turbidity by 60-70% as a result of reduction of iron and impurities in the water and increasing the amount of dissolved oxygen.

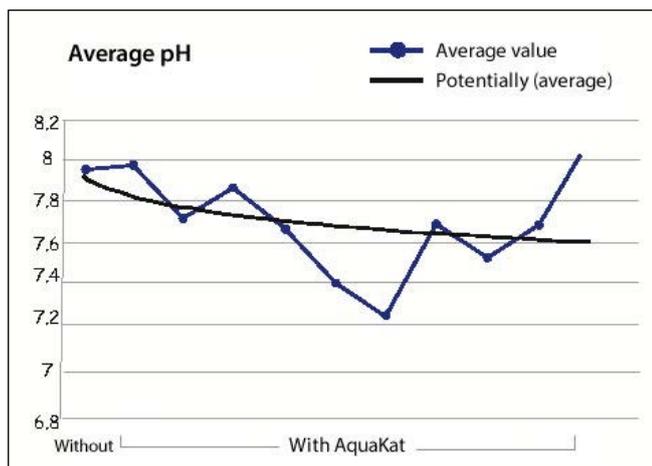


Application of the AquaKat reduces iron in water by 50-60% by increasing the cations of  $Ca^{2+}$  and  $Mg^{2+}$  which bind free oxygen and prevent corrosion of the piping.



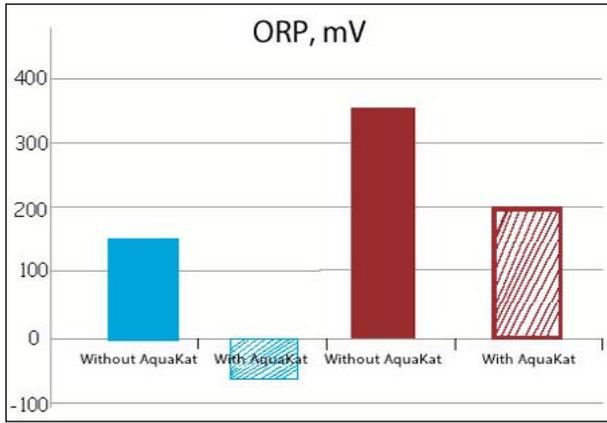
Chloride in the water is reduced by 70-80% due to small-cluster strictly ordered structure which "presses out" all impurities, including chloride.

## pH level



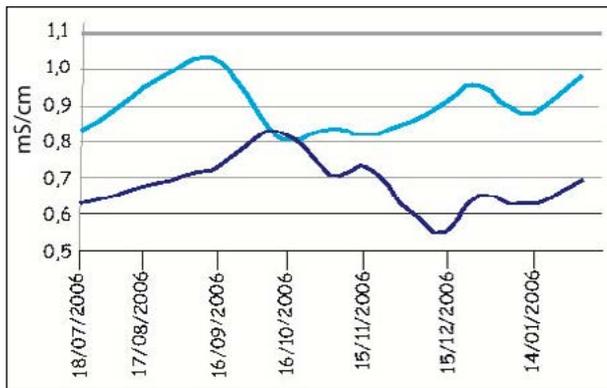
Application of the AquaKat changes the concentration of hydrogen ions: the pH is lowered to optimal values and then, after the dissolution of hydrocarbons and release of cations, pH increases.

## Oxidation-Reduction Potential (ORP) of the Water



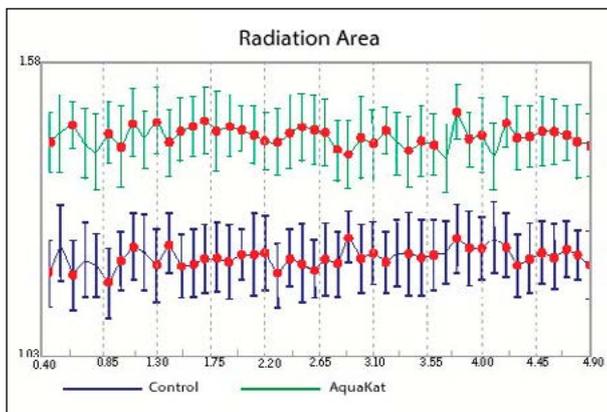
Application of the AquaKat device reduces oxidation-reduction potential of water by 40-60% due to increase of dissolved oxygen content in the water.

## Electrical Conductivity



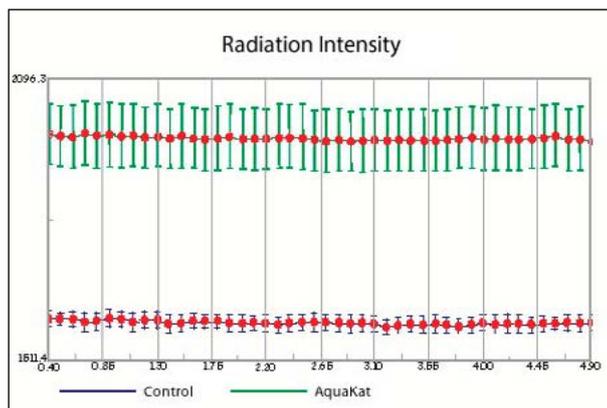
AquaKat application increases electrical conductivity of the water by 1.5–2.0 by dissolution of hydrocarbons and releasing  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ .

## Biophotonic Radiation of Water



AquaKat device application increases the area of biophotonic radiation by 30-50% due to increase of energy charge of the water molecules.

## Intensity of radiation



AquaKat device application increases water radiation intensity by 1.2–1.5.



# Tests and Observations that Prove the Advantage of Water Structured with the Help of AquaKat Devices

Bioactive structured AquaKat water changes life and the whole world for the better.

Below you will find some tests and examinations that you can try to do by yourself and check the results.

## Humans



### 1. Test for dissolving



With AquaKat Without AquaKat

Dissolve one drop of vinegar in AquaKat structured water and a drop in tap water, then compare the results.

Make tea with AquaKat structured water and tap water. You will see the difference by the better dissolution of tea molecules in the structured water.



### 2. Test with coffee

Everyone who drinks coffee knows if the coffee is good or not. Compare the coffee that you drink every day and coffee made with bioactive structured water.

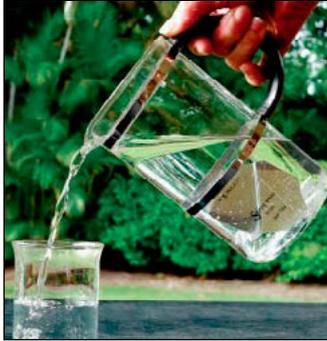
What do your tongue and other senses tell you? Have you noticed that structured coffee has a milder and clean-flavoured taste? A lot of coffee fans have bought water structuring devices after they have tried milder and richer taste of their own coffee!





### 3. Test with beverages

Pour water or juice in a glass through the Aquakat NoDrop (or place it on the the NoDrop) and compare it to the same beverages without the AquaKat NoDrop. Has the taste changed? And what about the temperature? Many people note that the drink becomes tastier and its temperature seems lower.



### 4. Test with stripes on the windows

Clean your window with normal tap water and with structured water (AquaKat). Which water leaves calcium stains after the drops have dried? The ability of structured water to dissolve calcium helps to avoid the appearance of stains on the window glass. The result of this test depends on the intensity of structuring and on the type of water that you use. The optimally structured water shows the most obvious effect.



### 5. Test of soapiness of hard water

This is a good test for those people who live in regions with hard water. Take two clean jars with lids. Pour normal tap water in one of them and bioactive structured water (AquaKat) in the other.

Add a tea spoonful of soap in every jar, put on the lids and shake well. In the jar with bioactive structured water there will be more foam after shaking, while before shaking it there was much less or no foam at all. And now shake the jar with normal tap water. What is the result?



## 6. Test of calcium dissolution

Can bioactive structured water dissolve calcium deposits on sprinklers and in fountains? Using devices on the sprinklers with calcium deposits and in the fountains has proved to be effective – from progressive calcium washing out till complete clearance. When using AquaKat device you don't have to replace sprinkler heads. How do your sprinklers look like after 1-2 months of using AquaKat device?



## 7. Car performance enhancement



Clients informed us about decrease in fuel consumption if pouring a couple of glasses of bioactive structured water into the engine radiator washer. Have you already tried it? Take note.

The result is not the same with new cars, if they have a computer-controlled fuel feed system.



## 8. Improving the health of a person suffering from asthma

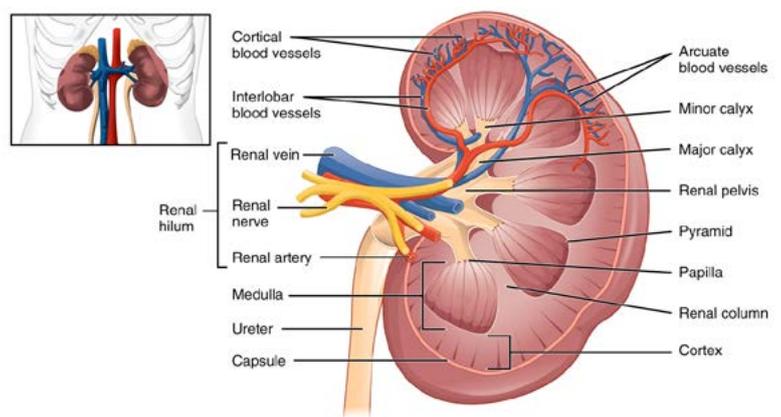
What happens if a person suffering from asthma drinks two glasses of bioactive structured water within 15 minutes? After one glass of structured water an elderly gentleman with rasping breathing noticed that his breathing became more even and less tensed. The rasping sounds of his breathing also became softer. His friends who were in the same room with him also noted this fact, even at a distance of 2.5–3.0 m.



## 9. Human kidneys

What happens to a persons kidneys and urinary system when he drinks bioactive structured water? Have you noticed anything?

Have you felt that your body responds to the new water quality? The performance of your kidneys is facilitated by drinking structured water.





## 10. Test of healthy sleep



After drinking structured bioactive water, be sure to pay attention to the length and quality of your sleep and that of your family. How many hours? Have dreams become more vivid and colorful? Is it easier now for your kids to wake up in the morning?



## 11. Test of water boiling speed

Theoretically structured bioactive water has smaller clusters and lower density. Therefore it needs less energy to break hydrogen bonds and to increase the temperature to 100°C. Have you noticed in practice that the kettle with structured bioactive water needs less time for boiling than a kettle with normal tap water?



## 12. Test of laundry cleanliness



It is known that laundry is easier to wash and maintains colours better in soft water than in hard water. Also washing powder can be reduced with soft water. What do you think about the washing quality since you use structured bioactive water?

# Animals



## 13. Test with animals



Pour bioactive structured water and tap water in two bowls.

Which water will your cat or dog chose?



## 14. Test with birds

Have you ever tried to pour bioactive structured water (AquaKat) in a birdbath or feed bowl?

Why have they started to sing so much? Can structured water arouse a feeling of happiness in birds?

Watch if your poultry gain more weight and look healthier after you have started to give them structured water.



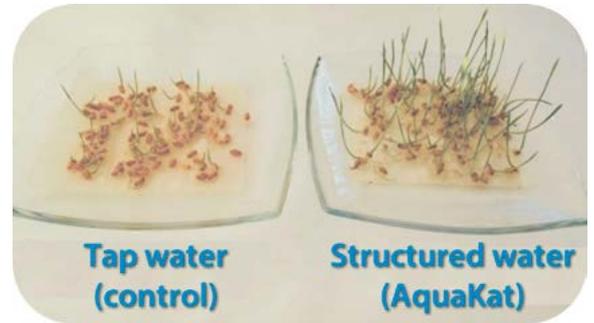
**AquaKat for Animals**

# Plants



## 15. Test to compare germination rates and seedlings growth

Which seedlings grow faster: watered with bioactive structured water, tap water or reverse osmosis water? Our customers and other researchers have reported that seedlings grow faster when watered with structured water in comparison with ordinary tap water. What are your observations?



## 16. Three day test with strawberries



Tap water



AquaKat water

Water strawberries for three days with bioactive structured water. Do you notice an improved growth and abundant flowering?



## 17. Test of budding



Without AquaKat

Put tree branches in pots with structured and tap water. In which pot did the buds break first? In which water did the branches blossom the longest?



With AquaKat



## 18. Test of durability of leaves or cut roses



Tap water



AquaKat water

Cut flowers will last longer and maintain their freshness and appearance, if they are put in bioactive structured water compared to unstructured (tap or bottled) water.



## 19. Using structured water for lawn watering

On which lawn is the grass higher and greener? Grass watered with bioactive structured or with normal water? On which lawn do you have less fertilizer or no fertilizer at all? We are often satisfied how good the lawns watered with structured water look. Compare your lawn watered with bioactive structured water with other parts of your garden watered with conventional water. Is there any difference? Do you have to use the lawn mower more often on a “structured” lawn? That is the only disadvantage of structured water!



## 20. Watering indoor plants with signs of disease and mold

Water plants that have some disease with bioactive structured water (AquaKat). Research has shown that structured water helps plants to get rid of mold.

How long did it take before you began to notice changes in the plants or they were completely free from mold?



## 21. Test with cultivation of roses



Hard water (control)

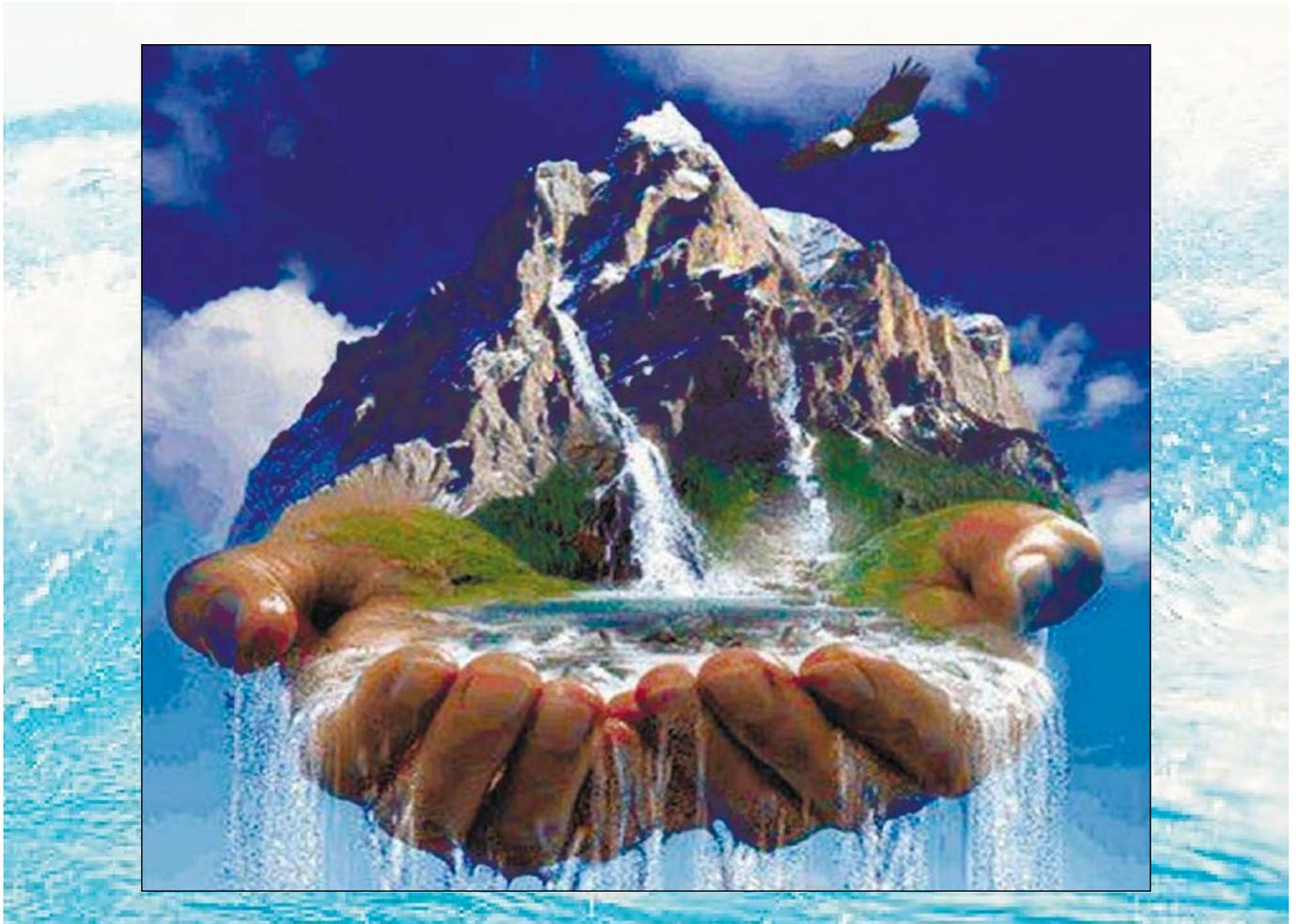


Hard structured water  
after AquaKat

Water your roses with bioactive structured water from a single tap with an AquaKat. Notice their growth. Are they now bigger, healthier and more colorful compared to what they were before? And now, for the energetic explosion,

connect 4 taps with AquaKat into a single line. After two months, you will see rose-leaders that have grown from 2.70 to 3.30 m in height. Flowers will increase in size. High-energy water enhances the growth of any plant or animal.

**These are only a few examples provided by people using structured bioactive water. We are confident that your experiences with AquaKat devices will be even more vivid and interesting.**



# AquaKat: Questions and answers

## Functions

### What is the AquaKat used for?

Water loses a great part of its vitality through technical and chemical processing, as well as through pressure and transportation. The AquaKat restores the original vitality of the water. The AquaKat was developed for re-vitalization of tap water in single and multi-family houses, apartments, fountains, businesses, industry and agriculture.

### How does AquaKat work?

The special construction of the AquaKat makes it possible to transfer vibrational patterns that energize the water. The memory of the water is stimulated, i.e. certain water clusters (molecular chains and clusters) are activated and brought into resonance. This resonance is transmitted to the whole system. The AquaKat does not use magnetism, chemicals or electricity.

## Installation

### Where and how can the AquaKat be installed?

The AquaKat should be installed with the mounting clamp after the water meter and the pressure reducer. For mounting a 10-16 cm free pipe section is required. There is no interference with the pipe system, as the AquaKat will be clamped to the pipe. The pipe should be clean and free of rust and dirt. Dealer representative will help you to install the device correctly for its proper operation.

### Are there any special installation requirements?

Strong electrical fields interfere with the function of the AquaKat. If there are large electrical devices in the room, the strength of the electromagnetic field at the installation point should be measured with a meter.

With very old pipes there is the risk that they start leaking as deposited lime scale is released. For example, through already existing hairline cracks. One should not use AquaKats on old lead pipes.

Plastic pipes are, in contrast to metal pipes, sluggish conductors (vibration transmitter). If the AquaKat is installed on a plastic pipe there will be a delay before there is an effect.

### Does effectiveness depend on the pipe type?

AquaKat device functions evenly effective with all types of pipes. The fastest effect is reached with steel pipes, then go zinc-plated pipes or pipes with other metal components and then plastic pipes.

### Can the AquaKat be mounted in such a way that it touches two pipes?

This is possible in principle, but it is more effective to join the two pipes with a metal plate and mount the AquaKat before or on this plate. The best solution, however, is to install an AquaKat on each pipe.

### Can the AquaKat be leaned against the wall?

No, the AquaKat should, if at all possible, be mounted hanging or standing freely without any contact to other objects.

### There is a pipe for hot water and one for cold water. Should an AquaKat be installed on both pipes or can you connect the pipes? Does that influence the effect?

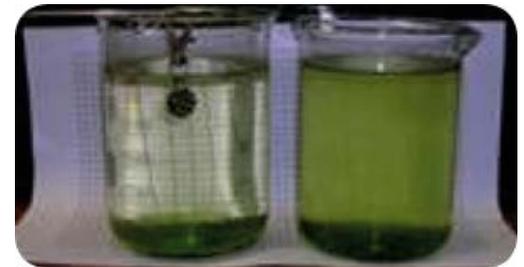
It is better to install AquaKat L device on the cold water pipe and AquaKat M device on the hot water pipe. AquaKat S device is also suitable for small rooms. Usually it is recommended to revitalize hot water once more as the heating process takes away energy from the water.

### Can an AquaKat be installed at the hot water circulation (heating)?

For that we use our ThermoKat. Simply install it at the heating circuit. Advantages: active water, better heat conductivity, less sludge and deposits on the expensive thermostats. Saves energy.

### Where and how should the AquaKat be installed to improve water quality in the pool?

For use in pools, SPAs etc. the AquaKat should be installed on the circulation pipe. As an addition it is recommended to install one more AquaKat on fresh water outlet.



Tap water after AquaKat      Ordinary Tap water

## Questions on Interaction with External Factors

### I have an electromagnetic device for lime elimination. Will it function with AquaKat?

No, the function of the AquaKat would be severely disrupted. The AquaKat tries to neutralize the magnetic alteration of the water. No positive effect will be detectable. One possible workaround is to dismantle the magnet, to hit the pipe with a hammer at several places to "resolve" the magnetization, then wait a few days before finally fitting the AquaKat.

### Does a chemical water softening system interfere with the AquaKat?

Chemical softening systems cost a lot to maintain and are also extremely harmful to the environment. The system should be switched off after the AquaKat has started working. In the dishwasher, the softener can also be reduced. How much it can be reduced varies and must be tested out.

## What do you mean by “stabilizing” hardness? What happens to the lime?

Hardness stabilization is a physical process by which the crystallization behavior of the water components changes in such a way that the crystals do not form chains or clumps. Also they do not form aggressive lime scale anymore.

### Performance Issues

#### After 2 weeks, still no noticeable difference

Then several factors need to be checked into: Where and how is the AquaKat fitted? What were the expectations? Are there sources of interference and / or other devices nearby? The water quality, water quantity and the pipe material have an impact on the effectiveness. It is recommended to unmount the AquaKat, to clarify the issues and to install it again a week later; it might also be necessary to fit a second AquaKat.

#### Why did my water suddenly become brown?

This is a very positive effect! Lime and other material such as iron (rust) are released from the pipes. During this time, the pipes should be frequently and thoroughly flushed.

### Warranty and Lifespan

#### What is the warranty period for the AquaKat?

30- day return period with money-back guarantee. 5 years on workmanship and materials.

#### What is the life span of the AquaKat?

According to our experience, the minimum life span life of the AquaKat is 20 years.



#### Important to note!

As water is an important part of our lives and is the greatest food source, anyone will benefit from revitalizing the water supply.

## Application Range and Global Practice



**Hairdressers began to use less shampoo, while the hair of the clients became softer and shinier.**

**Bakers can now prepare the dough easier. Pasta makers also noted easier kneading.**

**The bakery became famous by improving the taste of the bread, its freshness and long shelf life. The owner attributes these advantages to the installation of the AquaKat.**





The hotel can now save 30% of the costs for cleaning and sterilizing agents.

Pub and restaurant owners are very happy about the improved taste of the water and the easy of cleaning the glass-ware. The glass-ware is really sparkling clean now. Savings on detergents was also noticed.



Staff at car washes report lower surface tension of the water (less droplets and water stains remain on the surface).

After installation of the AquaKat it has also become possible to reduce detergents.



Softer and fresher feeling for the skin.

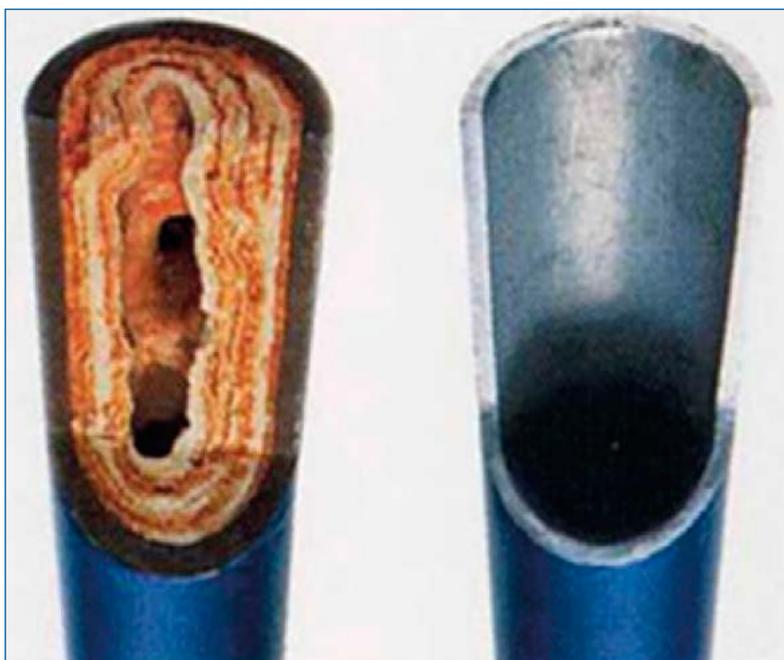
The water keeps longer fresh (reduction of chemicals like chlorine).

Reduction of number of microorganisms in the water (and again reduction of chemicals).

Water rich in energy.

Swimmers feel energy surge.

Using the AquaKat system in the beverage industry has led to reduction of water softening costs and has helped improve taste.



An office building with a water-cooling and water recycling system reported reduction of lime scale build-up and lowered costs for repairs and cleaning of the pipes.

## AquaKat in Building and Construction



The quality of water in mortar preparation is the most important factor.

Feedback from clients using activated water for mixing cement, clay, lime, gypsum and other solutions:

- ◆ Acceleration in setting time
- ◆ Achievement of 70-80% (of specified) strength already in the first week of hardening
- ◆ Increase in cement strength
- ◆ Reduction of the porosity of the concrete
- ◆ Increase in mobility, plasticity and workability of the mixture
- ◆ 15-35% increase in concrete strength by the end of the standard hardening time
- ◆ Decrease in binder usage by 10-15% while maintaining a given strength
- ◆ 18-40% increase of frost resistance of the concrete
- ◆ Chemical additives such as superplasticizers, hardeners and other are no longer used (saving up to 300 rubles per cubic meter of mixture)

### AquaKat in under-floor heating systems

By using the AquaKat sludge was reduced in the system, the water was clearer, unpleasant odors were diminished and the heating effect was improved.





## AquaKat for crops

- ◆ Softer water and changes in structure ensure better accessibility of calcium and magnesium
- ◆ Reduction of amount of working fluids
- ◆ Optimization of fertilizers and plant protection products, increased efficiency of agrochemicals.
- ◆ Reduction of pesticides
- ◆ Increase of plant resistance to drought, salinity, chemical stress
- ◆ Larger crop and better quality



With AquaKat

Without AquaKat



## Aquakat in Animal Husbandry

- ◆ Better animals health.
- ◆ Increase of productivity.
- ◆ Increased of production.
- ◆ Improved milk quality (milk fat) and eggs (nutritional value, shell thickness).
- ◆ Improved fertility
- ◆ Stamina increase of animals intended for sport purposes
- ◆ Improvement of cell blood supply.
- ◆ Decreased fatigue (rapid elimination of toxins).



## Water is Considered the Basic Remedy for Many Minor Diseases

1. Lack of water first oppresses and then kills certain functions of the body.
2. Water is the most important source of energy. Water generates electrical and magnetic energy inside every cell of our body and gives strength to live.
3. Water is a bonding material of cellular structure architectural design.
4. Water protects DNA from damage and increases effectiveness of its recovery mechanism – it reduces the volume of DNA anomalies.
5. Water significantly increases the efficiency of the immune mechanism of the spinal cord, where the immune system is formed (all its mechanisms), including the effectively combating cancer.
6. Water is the main solvent of all types of food, vitamins and minerals. It decomposes food into small particles and sustains metabolic and digestive processes.
7. Water charges food with energy whereby food particles gain the capacity to transfer this energy to the body during the process of digestion. That is why food without water gives absolutely no calorific value to the body.
8. Water increases the body's ability to assimilate the vital substances contained in the food.
9. Water ensures transportation of all substances within the human body.
10. Water enhances the ability of the red blood cells to accumulate oxygen in the lungs.
11. Penetrating into the cell, water supplies it with oxygen and takes the waste gases to the lungs for excretion from the body.
12. Water eliminates toxic waste from different parts of the body and transports them to the liver and kidneys for final disposal.
13. Water being the main lubricant in the joints helps prevent arthritis and back pain.
14. Water creates absorbing water cushions in the vertebral discs.
15. Water is the mildest laxative and best remedy for a constipation.
16. Water helps reduce the risk of heart attacks and strokes.
17. Water protects the arteries of the heart and the brain against the blockage.
18. Water is the most important element of cooling (sweat) and heating (electrification) systems of the body.
19. Water gives us power and electrical energy for all brain functions, primarily for thinking.
20. Water is necessary for effective production of all neurotransmitters including serotonin.
21. Water is necessary for production of all hormones generated by the brain including melatonin.
22. Water can prevent disorders like attention deficit disorder in adults and children.
23. Water increases performance efficiency and improves attention span.

24. Water is the best tonic without side effects.
25. Water helps to relieve stress, anxiety and depression.
26. Water helps to improve sleep.
27. Water helps reduce fatigue - it gives us the energy of youth. Water makes the skin smoother, allowing you to reduce the effects of aging.
28. Water makes the eyes sparkle.
29. Water helps to prevent glaucoma.
30. Water normalizes hematogenesis in the bone marrow system, it helps to prevent leukaemia and leukoma.
31. Water is absolutely necessary to increase effectiveness of immune system in the situation of changing climatic conditions and in a fight against infections and cancer cell formation.
32. Water thins the blood and prevents clotting.
33. Water reduces premenstrual pains and hot flashes.
34. Water and heart contraction thin the blood and create waves not letting solid substances precipitate on the walls of blood vessels.
35. The human body does not possess water reserves to maintain vital activity under conditions of dehydration. Therefore we should **DRINK WATER REGULARLY and ALL THROUGH THE DAY.**
36. Dehydrations stops generation of sex hormones and is one of the main reasons for impotency and reduced libido.
37. Drinking water helps to distinguish the sensation of thirst from hunger.
38. **WATER IS THE BEST MEANS OF WEIGHT REDUCTION.** Drink water timely and lose weight without any special diets. Moreover, you will stop eating when you think you are hungry because in fact you are only **THIRSTY.**
39. Dehydration is the reason of toxic deposits in our body. Water clears away all these deposits.
40. Water reduces the number of morning sickness spells of pregnant women.
41. Water unites brain and body functions increasing the capacity to achieve a goal.
42. Water helps to prevent memory loss with age and reduces the risk of contracting **ALZHEIMER DISEASE, SCLEROSIS, PARKINSON DISEASE.**
43. Water helps to get rid of bad habits including craving for caffeine, alcohol and drugs. What should you do to prevent a lot of diseases? For that you have to **DRINK NOT LESS THAN 8 GLASSES OF STRUCTURED WATER EVERY DAY.** This is about the amount of water that the body loses daily. Water should be drunk in portions of **2 GLASSES** and not one litre in one gulp. The later will create stress for the body. It is recommended to drink water 30 minutes before meals. Of course, you should drink water every time when you feel thirst, but not sooner than 2 hours after eating.

## Knowledge about Water will Change your Life for the Better

We have stopped drinking tap water as it has become dangerous. It is a far cry from the days when our grandfathers and grandmothers were using rain and well-water and running barefoot in the grass, wet with dew.

Progress has brought us not only comfortable things of modern life. At the same time we have almost lost the biggest gift of Nature – clean and tasty water!

Our health depends on what kind of water we drink! Our genetic memory does not rest and makes us look for a solution.

We buy treated purified water, filter it, boil it, freeze and unfreeze it. We undertake fierce attempts to come back to what our ancestors called the Elixir of Life.

We all take care of our close ones. First of all we are concerned about the health of our children and senior relatives. We spare no expense if someone in our family gets sick.

Even if the water quality has improved in general lately, we still do not get all the benefits that pure natural water can bring.

Materials presented in this booklet will help to understand what water should be like. Knowledge about water will change your life for the better.

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# FAQ AquaKat (English)

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## Questions Regarding Function

### 1. What is the AquaKat used for?

Water loses a great part of its vitality through technical and chemical processing, as well as through pressure and transportation. The AquaKat restores the original vitality of the water. The AquaKat was developed for re-vitalisation of tap water in single and multi-family houses, apartments, fountains, businesses, industry and agriculture.

### 2. How does the AquaKat work?

The special construction of the AquaKat makes it possible to transfer vibrational patterns that energize the water. The memory of the water is stimulated, i.e. certain water clusters (molecular chains and clusters) are activated and brought into resonance. This resonance is transmitted to the whole system. The AquaKat does not use magnetism, chemicals or electricity.

### 3. What effects does the AquaKat create?

There is reduction of the size of calcium crystals; how crystals in general are formed, is modified; the taste improves and substances like calcium, iron (but also detergents) dissolve better.

### 4. What quantities of water can be treated with the device?

With a steady water consumption the

AquaKat L is sufficient for a 1-2 family house, i.e. averagely 3 m<sup>3</sup> per day.

AquaKat S can treat 100 lt. per day.

AquaKat M is sufficient for 750 lt. per day, with very good water up to 1 m<sup>3</sup>.

AquaKat XL is designed for a multi-family house with a water consumption of about 6m<sup>3</sup> per day.

If more water is consumed, more AquaKats should be installed.

### 5. Where is the AquaKat used?

The AquaKat is used in single and multi-family houses and apartments. Further applications are in agriculture and industry, fountains, etc. The AquaKat can be used in a wide variety of "water situations" for revitalisation.

## Questions Regarding the Installation

### 6. How and where is it installed?

The AquaKat should be installed with the mounting clamp after the water meter and the pressure reducer. For mounting a 10-16cm free pipe section is required. There is no interference with the pipe system, as the AquaKat will be clamped to the pipe. The pipe should be clean and free of rust and dirt.

### 7. What can delay or impair the effectiveness of AquaKat?

Strong electrical fields interfere with the function of AquaKat. If there are large electrical devices in the room, the strength of the electromagnetic field at the installation point should be measured with a meter.

Plastic pipes are, in contrast to metal pipes, sluggish conductors (vibration transmitter). If the AquaKat is installed on a plastic pipe there will be a delay before there is an effect.



**8. Are there any known problems related to the usage?**

With very old pipes there is the risk that they start leaking as deposited limestone is released. For example, through already existing hairline cracks. One should not use AquaKats on old lead pipes.

**9. There is no space for mounting as the minor pipes to the living areas are placed right after the main inlet. How should the AquaKat be installed?**

- ⊙ Install immediately adjacent to the water meter
- ⊙ Mount it on the first minor pipe as close to the main inlet pipe as possible
- ⊙ Place a bracket on the main pipe and mount the AquaKat on it
- ⊙ When testing the AquaKat, it can be placed lengthwise on the pipe or tied onto it
- ⊙ Ask for a narrower mounting clamp
- ⊙ Add a pipe section in the main pipe and mount the AquaKat on that

**10. What pipe sizes does the AquaKat accommodate?**

The mounting clamps of AquaKat L and XL cover the range from ½ to 2 inches, those of AquaKat M ¼ to 1 inch. If you have bigger pipes, e.g. recirculation pipes in a swimming pool, a larger clamp can be ordered from the manufacturer.

**11. Can the AquaKat be mounted in such a way that it touches two pipes?**

This is possible in principle, but it is more effective to join the two pipes with a metal plate and mount the AquaKat before or on this plate. The best solution, however, is to install an AquaKat on each pipe.

**12. Can the AquaKat be leaned against the wall?**

No, the AquaKat should, if at all possible, be mounted hanging or standing freely.

**13. Must it be installed in a particular direction?**

No. The direction is not important.

**14. There is a pipe for hot water and one for cold water. Should an AquaKat be installed on both pipes or can you connect the pipes? Does that influence the effect?**

Ideally put the AquaKat L on the cold water pipe and an AquaKat M on the hot water pipe as the energy decreased when the water is heated. The AquaKat S can be used for single taps /outlets. Other possibilities: See question 11.

**15. Can an AquaKat be installed at the hot water circulation (heating)?**

For that we use our ThermoKat. Simply install it at the heating circuit. Advantages: active water, better heat conductivity, less sludge and deposits on the expensive thermostats. Saves energy.

**16. Mounting an AquaKat on the main pipe is not permitted. How can you install the AquaKat in an apartment?**

The AquaKat can be installed on the branch leading into your apartment or inside the apartment if possible at the beginning of the pipe. If there is too little space, the AquaKat M or S should be used. As needed it can be used in the bathroom, in the



kitchen, for the washing machine, underneath the sink, etc. Ideally it should be fitted on both the cold and the hot water pipes.

## Questions about Interactions and Effects

### **17. Other Penergetic products are already in use. Does one need an AquaKat and can the dosages of the other products be reduced?**

With the AquaKat installed, one sees a stronger effect of other Penergetic products where these get in contact with the vitalised water. You can check if the dosages of the other Penergetic products can be gradually reduced. On an average a reduction of around 20-30% is possible.

### **18. Can a ground wire interfere with the AquaKat?**

Yes, if there is leakage current on the wire and the protective safety device of the control cabinet is out of order. If this is the case wrap electric tape around the piece of pipe where the clamp of the AquaKat is fitted. We also recommend sticking a Phone Chip on the AquaKat.

### **19. What difference does the pipe material make?**

The AquaKat works on all pipe materials. It works the fastest or best with stainless steel, followed by galvanized steel and other metallic compounds. Plastic pipes delay the effect (see question 7).

### **20. A magnet is used to prevent lime build-up. Does it work together with the AquaKat?**

No, the function of the AquaKat would be severely disrupted. The AquaKat tries to neutralize the magnetic alteration of the water. No positive effect will be detectable. One possible workaround is to dismantle the magnet, to hit the pipe with a hammer at several places to "resolve" the magnetisation, then wait a few days before finally fitting the AquaKat.

### **21. An electromagnetic device for lime control is already installed. Does it work with the AquaKat??**

See questions 20 above. Unplug the device and wait a few days before fitting the AquaKat.

### **22. Does a chemical water softening system interfere with the AquaKat?**

Chemical softening systems cost a lot to maintain and are also extremely harmful to the environment. The system should be switched off after the AquaKat has started working. In the dishwasher, the softener can also be reduced. How much it can be reduced varies and must be tested out.

### **23. Does the AquaKat work with other devices like Grander, etc?**

If you install the AquaKat, we recommend disabling or removing other systems.

### **24. For pipe protection chemicals has to be added to very aggressive water. Is it possible to leave them out now with the AquaKat installed?**

A difficult question. If the pH is very low, one has to wait for the AquaKat to take effect and then slowly reduce the chemical doses. In extreme cases it may not be possible to omit the chemical treatment.



**25. Do reverse osmosis filters work together with the AquaKat?**

Yes. However, the filter cartridges must be well maintained. Also, the AquaKat should be placed after the R.O. filter to revitalize the water again. A common complaint about R.O. water is that since it has essentially been stripped of its mineral content it no longer has a satiating effect (no longer seems to quench one's thirst). Installation of an AquaKat after the R.O. filter will help to overcome this problem – giving the water more taste.

**26. The water is treated with UV radiation because of the germs. Does that reduce the effect of the AquaKat?**

The effect of AquaKat may be reduced to such a degree that the installation of one more AquaKat is necessary. Must be fitted after the UV filter.

**27. There are lead pipes in the apartment. Is that a problem?**

Neither the AquaKat nor the ThermoKat should be used with lead piping.

**28. According to the description, deposits in the pipes may dissolve. Do large quantities of these then end up in the body? Is it necessary to install a filter?**

When old deposits are released from the pipes, they usually come out as larger platelets that are caught in the aerators. The fine dissolved lime particles increase the hardness temporarily. They dissolve in small quantities over a longer period of time, so an additional filter is not necessary.

Tip: Let the water run longer to flush the dissolved particles out.

**Questions Regarding the Effect**

**29. By how many degrees is the water hardness reduced after mounting?**

The hardness remains the same; it may even rise a bit temporarily when lime deposits are released from the pipes. In almost all cases the AquaKat brings about a stabilisation of the hardness, but no softening. However, the water feels a lot softer after installation of the AquaKat.

**30. What is hardness stabilisation? What happens with the lime?**

Hardness stabilisation is a physical process by which the crystallisation behaviour of the water components changes in such a way that the crystals do not form chains or clumps. Also they do not form aggressive lime scale anymore.

**31. How can you check the effect?**

You can compare the initial condition with the condition after installing the AquaKat. Here an example:

Problems with lime scale deposits? (Please tick)

**BEFORE:**    very big     big     not much     none

**AFTER:**     very big     big     not much     none



### 32. How often is it necessary to thoroughly decalcify household appliances?

BEFORE: 1. Tap aerators 2. Pots 3. Coffee machine 4. Fittings 5. \_\_\_\_\_

Interval:

AFTER: 1. Tap aerators 2. Pots 3. Coffee machine 4. Fittings 5. \_\_\_\_\_

Interval:

Which subjective changes did you experience with ...?

Removal of lime, water colour (clearer), water taste, food (taste), detergent (savings), laundry (softer), easier to clean, skin and hair (feel, look, maintenance), plants (appearance, health), animals (appearance, well-being), etc.

### 33. It works well, but there are still hard deposits in the pressure cooker and in the water kettle, why?

In a pressure cooker there are temperatures above 100 ° C and enormous pressure. Under these conditions, the lime scale starts forming again.

Residual water is often left in the water kettle and boiled again. The revitalisation diminishes over time. So this "old" water with its lime forms a small deposit that builds up over time.

Therefore empty the kettle fully after boiling and rinse if necessary.

### 34. Can it be that the effect of the AquaKat fluctuates?

If the effect varies, it is mostly due to these factors: Change in water quality, connection and disconnection of electrical equipment in the area where the AquaKat is mounted (sources of interference), habituation to the effect, formation of deposits between the mounting clamp and the pipe (must be removed).

If the fluctuations happen continuously, contact the seller.

### 35. After 2 weeks, still no noticeable difference?

Then several factors need to be checked into: Where and how is the AquaKat fitted? What were the expectations? Are there sources of interference and / or other devices nearby? The water quality, water quantity and the pipe material have an impact on the effectiveness. It is recommended to uninstall the AquaKat, to clarify the issues and to install it again a week later; it might also be necessary to fit a second AquaKat.

### 36. After two months the AquaKat does not work anymore!

Again, several factors need to be clarified: Have new (electrical) devices have been put into operation? Is the water supply different (ask waterworks, new appliances, different mix, etc.)? Is the AquaKat properly mounted or perhaps fallen down? Have deposits formed between clamp and pipe? Have large amounts of water been used? Have you already gotten used to the good quality? Is the lime structure the same again? When in doubt, it is also advisable here to dismount the AquaKat and fit it again after two weeks. Also a vinegar test is recommended! A replacement of the AquaKat can only then be taken up for consideration (see also questions 34 and 35).



### **37. The water is all of a sudden brown. Why?**

This is a very positive effect! Lime and other material such as iron (rust) are released from the pipes. During this time, the pipes should be frequently and thoroughly flushed.

### **38. The aerators and filters are clogged.**

Unscrew and remove the deposits.

### **39. Is it safe for babies to drink the tap water again when the AquaKat has been installed?**

That depends solely on the quality of the water supplied. Many substances are not recognized in a simple analysis (15 parameters).

## **Warranty and Lifespan**

### **40. How long is the warranty?**

30-day return period with money-back guarantee. 5 years on workmanship and materials.

### **41. How long does the AquaKat keep working?**

According to experience so far at least 17 years.

### **42. Product Liability Act?**

The AquaKat was developed for water revitalisation. The side effect of hardness stabilisation is not a promise, but a possible side benefit.

## **Questions about Specific Areas of Application**

### **43. Can the AquaKat be used to vitalise the water in swimming pools?**

In swimming pools, etc. the AquaKat is mounted on the circulation pipe. An additional AquaKat can be installed on the central fresh water supply.

### **44. How many AquaKats does one need for a swimming pool?**

The number of AquaKat depends on how much fresh water is exchanged daily. Up to 3 cubic meters of fresh water per day = 1 AquaKat L. For larger amounts 2 or more AquaKat are required. (See equipment list for swimming pools).

### **45. Problems with germs in the swimming pool?**

Because of the vitalisation also a change of milieu for germs takes place. As a result, an environment may be created in which the germs do not feel comfortable. The effect has to be monitored.

### **46. Can you leave out the chlorine?**

For public swimming pools there are regulations regarding this. A reduction of the chlorine is still conceivable. Under constant control a more optimal, new dosage can be found. Generally "normal" swimming pools cannot be operated without the addition of chlorine. They lack natural filters (algae, vorticella, etc.).



#### 47. Can the AquaKat be used in air conditioning systems?

Yes. If the system is operated under high pressure and high temperatures an additional AquaKat should be installed.

#### 48. Can the AquaKat be used in industrial plants?

The AquaKat was developed specifically for the domestic water supply. The commercial and industrial use must first be discussed with the manufacturer. Various fixtures are available.

#### 49. Does the AquaKat also help with Legionella problems?

For problems with Legionella, sanitation (thermal or chemical) is the first and most important measure. The AquaKat should only be installed after sanitation and verification thereof has been done. In general one has to make sure that the pipes/tubes, in particular also the hot-water line, are flushed regularly and that filter systems are cleaned and properly maintained.

#### 50. Sales arguments

- ⊙ Vitalised tap water with spring water properties
- ⊙ Better taste
- ⊙ Always available, fresh from the tap
- ⊙ No transport
- ⊙ Reduced expenses
- ⊙ Better skin tolerance
- ⊙ Protection of pipes and appliances
- ⊙ Solves problems with lime and corrosion naturally
- ⊙ Minerals are preserved, only the structure is altered
- ⊙ Safety by stabilising and increasing the water hygiene
- ⊙ Vitalised water has greater powers of bringing order
- ⊙ The water, also industrial water, is more stable and does not go bad as quickly
- ⊙ No additional costs
- ⊙ Maintenance free
- ⊙ Low acquisition price
- ⊙ Distinguishing criteria compared to other methods
- ⊙ Composition of the water is not altered
- ⊙ Self-healing power of the water is promoted
- ⊙ Treatment is done on the water molecule chain even if it is inert
- ⊙ No chemistry, no salt, no magnet, no external energy

#### Agriculture:

- ⊙ Increased water intake of the animals, especially of calves
- ⊙ Less soiling of drinking bowls
- ⊙ Softer, structured water
- ⊙ Improved taste

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Mönchengladbach, 10/09/01

**Test report** for the “AquaKat“ device by PENERGETIC Int. AG, Kesswil, Switzerland.

## **Scientific test of the PENERGETIC AquaKat**

### **1.) Introduction:**

Everybody knows that only **nature** can supply us with perfect substances such as water, air, etc., thus providing us with a healthy environment. Fresh, pure spring water for example, rich in minerals and full of oxygen, comes to mind. The water of the sea that gives food and a habitat to a great variety of creatures is our habitat too. And man is in the process of destroying this, his own living space, more and more, and of changing the water into a cesspool.

Much has been written about this topic and countless possible solutions to avoid the destruction of the environment have been introduced - but have they been successful?

Admittedly there are, for example, complex treatment plants with filters and other components that work on a physical-chemical basis to reduce emissions that pollute our air and our water and therefore all of us.

This is because man believes he can heal with chemistry what he previously destroyed with his ruthless actions.

But let us start in our own home, let us open our tap for example: “Great taste – isn’t it?” And we thought that water was a strictly monitored food stuff, at least in Germany?

I have received a device by **PENERGETIC Int. AG**, a so-called “**AquaKat**“, that can produce *spring water from the tap* without using chemical substances, electric leads, light sources, magnetic fields or radioactivity. I am as sceptical as I am curious! After all, nature itself including all its flora and fauna does not need electrical cables, lights, microchips or whatever else. I have now had a closer look at this **AquaKat** from a scientific aspect and carried out some experiments accordingly. The intensity of the device was tested in several experiments with pure ascorbic acid (vitamin C) in which we could make use of its crystallisation behaviour in water. In further series of tests, limescale trials were carried out using pure water that was rich in minerals.

We will show for both instances the effects this **AquaKat** can have on systems with water.

## **2.) Experiments:**

*Ascorbic acid*

30/08/01

For the following we worked exclusively with the **AquaKat** by Penergetic, product no. wa570699.

It is a scientifically known fact that ascorbic acid in particular shows a characteristic crystallisation behaviour, which reacts very sensitively to external fields. The crystal structures that had formed were then examined in a special microscope with regard to their shape (tracht), micro-structure and their interference colours in polarised light. These tests are particularly important because the polarisability of optically active substances in an aqueous environment can provide knowledge about the information content of the water itself (see also the latest scientific research reports on this).

First a „stock solution“ with **4g/100ml ascorbic acid** in distilled water had to be prepared.

It was then filled into two dark dropping bottles, like those available in pharmacies. One of them was attached to the **AquaKat**, **the other one** was brought to a room that was shielded from the effects of the AquaKat or other fields. Both bottles were then “left to their own devices“ for 24 hours.

Then the time had come to apply two large drops each onto a microscope coverglass and to dry them in at room temperature. No dust was to get onto the coverglasses.

So we have two identical samples in front of us, but only one of them had “seen“ the AquaKat.

The optical tests were then carried out on 31/08/01 at 7.40 am.

### **2.1.) Results of the ascorbic acid experiments:**

The samples were examined under a microscope for transmitted light. All of the photographs were taken with crossed, linear polarising polarisation filters, some with the additional use of a Leitz compensator. Please note that the only solvent that was used was distilled water.

Fig. 1 – 5 show the vitamin C crystal **without AquaKat**

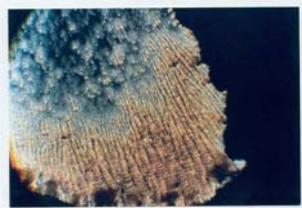


Fig. 1

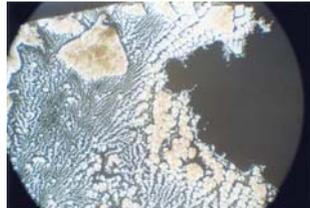


Fig. 2



Fig. 3

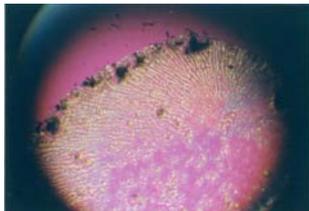


Fig. 4

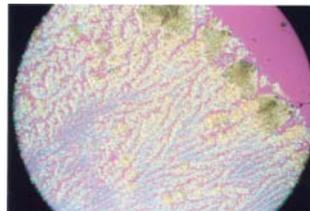


Fig. 5

Fig. 6 – 10 **after treatment with AquaKat**, as outlined above.



Fig. 6



Fig. 7



Fig. 8

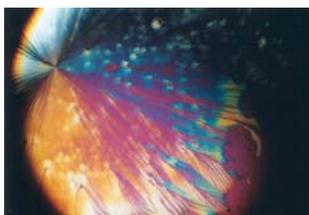


Fig. 9



Fig. 10

It becomes immediately apparent that the micro-structure and the interference colour structure in polarised light are very different. However, the macroscopic crystal structure (tracht) turns out to be very similar in all cases.

## **2.2.) Analysis of the experimental results:**

First we have to take note of the fact that vitamin C is a **natural** substance. If we now look at fig. 1 (without Kat) and fig. 7 (with Kat) we can see that, from a macroscopic point of view, crystal forms that are approximately 4 mm in diameter show up. In both cases we can also see spoke-shaped patterns, these black strips are approximately 0.08 mm apart (incidentally, the structures depend on the concentration).

Otherwise the results differ significantly. One gets the impression that the components that are dissolved in the water would hardly be able to come together in the form of beautiful crystals without the “help“ of the AquaKat. In spite of the interesting “micro-structures“ (fig. 1!) the singular ascorbic acid crystallites cannot bind together during condensation that took place, in particular no interference colours occur that would allow any conclusions about the collective properties of a crystal to be drawn.

After the water was informed by the device in question, we now see a **perfectly shaped (uniaxial\*) crystal** in fig. 7. It shows a clearly recognisable centre from which radial “beams“ originate. A polarisation cross is also visible. These beautiful interference colours indicate an ideally interconnected structure. We could, by the way, deduce further optical properties of vitamin C from the test results and draw conclusions about the interacting crystal forces.

If this test had been carried out with a significantly increased ascorbic acid concentration, a “better“ crystal shape with corresponding colour patterns would have been achieved even without the AquaKat. In other words: the AquaKat **amplifies** the positive effects of minerals that are dissolved in the water!

**The AquaKat is therefore able to control the properties of the water, and the crystallisation ratios of the substances (minerals) that are dissolved in it, in such a way that the crystals can form in a perfect manner. They behave, therefore, as if they were in a “natural“ medium. Hence the tested AquaKat transforms tap water and other waters back to spring water.**

*\* Here we are talking about the optical axis that is defined as having no double-refraction taking place in its direction. Trigonal, hexagonal and tetragonal crystals only have one optical axis. All rhombic, monoclinic and triclinic crystals behave optically biaxial.*

## **3.) Experiments:**

*Lime crystals in mineral water*

31/08/01

Good criteria for drinking water are, apart from the absence of foreign substances, type, composition and crystallisation behaviour of minerals in the drinking water. It is now also known that water is a "living" system which has to be "re-vitalised" if need be, whereby the absorption capacity of oxygen also plays an important part.

For a further test, mineral water with the following composition was selected (Fresenius Institute, 17/06/98):

Magnesium:	0.08 g/l	Chloride:	0.19 g/l
Potassium:	0.02 g/l	Sulphate:	0.09 g/l
Sodium:	0.36 g/l	Hydrogencarbonate:	1.14 g/l
Ca:	0.08 g/l		

It is also known that the spectrum of ions that have been crystallised out consists, among others, of magnesium sulphate, sodium, potassium chloride as well as lime crystals.

This mineral water was once again filled into two dropping bottles whereby one of them remained attached to the AquaKat for 50 hours.

Then drops of similar size were once again put onto two microscope coverglasses and examined in "transmitted light".

### **3.1.) Results:**

Fig. 11 and 12 show the resulting crystal forms **without** the device.

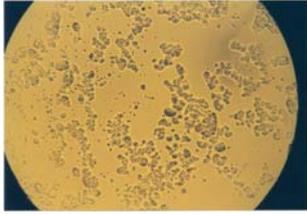


Fig. 11

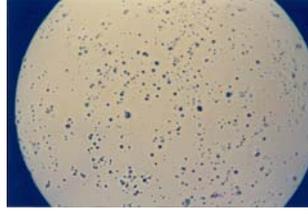


Fig. 12

Figures 13 –17 those **after treatment** with the AquaKat. The photographs of 14 – 17 were taken under **polarised light**.

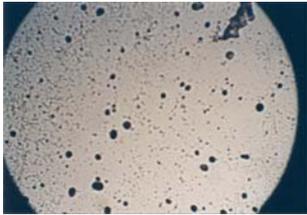


Fig. 13



Fig. 14

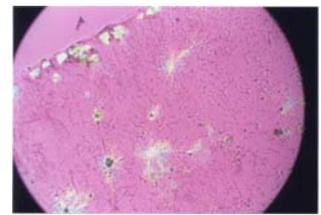


Fig. 15

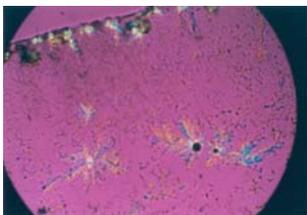


Fig. 16

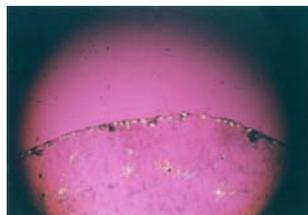


Fig. 17

### **3.2.) Analysis of the results:**

#### **Mineral water without AquaKat:**

Photographs 11 and 12 are proof that we are dealing with a good mineral water, free of suspended matter and with “normal” crystallisation behaviour of the dissolved substances as we expected.

However the two figures also show that so far **no suitable hardness stabilisation** (for example for the protection of water pipes) exists in the water, because there are areas in the drops with coagulated shapes (fig. 11) as well as with inert singular crystallites with a diameter of approximately 0.01 – 0.03 mm. Only these crystals can stay suspended in running water and do not deposit easily (fig. 12). In a physical – chemical sense, the complex state of the lime – water system that we see here is not well defined and therefore difficult to describe scientifically. Main components in the

mineral water are, by the way, calcium carbonate in the form of **trigonal calcite and rhombic aragonite**.

#### Positively changed water with the AquaKat:

Fig. 13 shows as a result that many singular, round crystallites with a diameter of 0.01 – 0.04 mm are visible. This diameter range has not become smaller with the Kat. However, the **coagulated** structures have, apart from a few exceptions, vanished, so that we can speak of a good hardness stabilisation, and the water “treated” in this way can be used for boilers or heating systems without further treatment.

We also discover another phenomenon under the microscope: **The small isolated miniature crystals start to “glow” (fig. 14 –17).**

This could not be observed in the case of “without the AquaKat“. So colour effects analogous to those of water with treated ascorbic acid appear once again.

With this we have established definite proof for the vitalisation of the water with the PENERGETIC AquaKat.

**On the basis of the results of the physical experiments carried out, I can now confirm that the function of the device as described on the original packaging of the manufacturer, i.e. that good tap water and warm water can be transformed into even better water, like that of a natural spring, is fully met.**

**So even good things can be improved.**

#### 4.) Scientific conclusion:

Based on the test results we confirm that the AquaKat has a vitalising (i.e. restoring the structure of spring water) effect on the structure and crystallisation behaviour of the substances (minerals) dissolved in the water.

#### 5.) Final remark:

I hope that people may be able to change their views in favour of nature and I wish PENERGETIC a continued growth in the use of their products and much success.



Dr. Elmar Langenscheidt