

RAINSHOW'R MFG., CO. INC.

TECHNICAL ESSAY NO. 2:

TECHNICAL DISCUSSION ON THE USE AND APPLICATION OF ELECTROMAGNETIC CRYSTAL IN DECHLORINATING SHOWER FILTERS

Why would Rainshow'r, the premier manufacturer of dechlorination devices for the home and garden use the same mineral compound that made untold millionaires in California's Silicon Valley computer industry? Why indeed! Because they both discovered how to harness Mother Nature's amazing crystal technology.

It might stretch your advertising imagination if we said "Use computer power in your shower". But, what if we told you that the same silicon dioxide that allowed a computer to retain memory (silicon chips), allowed you to listen to wireless radio transmissions on a "crystal" radio set? What if we told you there was a connection between your Rainshow'r CQ-1000 shower filter and a crystal movement watch or clock? Or, a smoke alarm? Or, a sonar detector? Or, a television set? Or, an electronic component such as an oscillator, resonator or amplifier?

Just the same as you, we never thought about it until we began our research in crystal technology 1997.

What is Crystal's Geologic and Chemical Description?

Depending on the scientific source, between 70% and 80% of the earth's crust is quartz. What is quartz? Quartz is a chemical combination of Silicon, element 14 and Oxygen, element 8. Combined they form Silicon Dioxide (SiO_2).

You are most familiar with silica in the form of sand. Glass products are made from basic silica plus other materials. But crystal is also silicon dioxide therefore it is also quartz. What is the difference? While all crystal is quartz, not all quartz is crystal. [There are other minerals besides crystalline quartz that possess a crystal structure. When crystal is referred to in this report we mean crystalline quartz.]

At this point you should be saying, "I'm confused, please explain".

A recent book by English authors Morton & Thomas on Mayan archeology refers to the Mayan use of crystal. In their book they offer this scientific description of crystal formation.

Natural quartz, or rock crystal, on the other hand, is entirely a product of Mother Nature. It actually grows in the ground, taking sometimes billions of years to form. Crystals grow deep within the Earth's crust, usually around volcanic and earthquake activity. The process requires immense heat and pressure and always a 'seed' crystal is needed to start it off. This seed is created when a single silicon atom, under intense heat and pressure, fuses with two oxygen atoms from superheated water or steam trapped in the same space. The atoms fuse to form

a single crystalline cell of silicon dioxide, the substance from which all quartz crystal is made. (The by-product is hydrogen.)

Over the millennia, if conditions are right, this seed starts to grow. But the surrounding fluid must contain just the right proportions of silicon and water, or pressurized steam, maintained at a phenomenal intensity of heat and pressure for a sufficiently long period of time. As the primordial fluid oozes over the first cell of silicon dioxide, the cell starts to replicate itself, laying down its complex crystalline structure one atom at a time. Every cell in the crystal repeats the same pattern. Each cell is a tiny little crystal in and of itself, and each cell repeats the same pattern the one before. In this way the crystal builds up a complex three-dimensional network structure known as a 'crystal lattice', with absolute geometric regularity, where every cell is exactly symmetrical and precisely repeated throughout the whole. And so little by little, over the years a piece of pure, transparent natural quartz crystal comes into being. In its natural state it is highly angular in shape, always with six sides, tapering at either end to a fine point. (Morton & Thomas; reference 1)

In his 1986 book, "*Focus on Crystals*", Australian crystal expert Edmund Harold expands on Morton Thomas by identifying the electromagnetic origin of crystal energy.

It is known that there are vast iron ore deposits within the sub-strata of the planet and the iron particles line up north-south whenever they are free to move (when they are molten, for example, attracted as they are to magnetic North and South Poles. They become magnetized in a similar manner to the iron rod within the coil. These magnetized deposits subsequently influence the growth patterns of all minerals within their vicinity, particularly quartz crystals. Where such energies are present during the 'seeding time' of rock quartz—that initial period when the boiling geothermal waters, laden with liquefied silicon dioxide, pour through ancient volcanic gas chambers, or flood the fissures deep beneath the Earth's surface – they are absorbed within structure of the slowly forming crystals.

The closer such crystal formations lie to the magnetic core of the planet, the greater their magnetic field. All quartz mined in areas such as Arkansas in the United States – a region which is extremely close to that core – emit powerful electromagnetic energies, and this area currently provides the purest quartz crystals known to mankind. Much of the output mined in this region is used by the electrical industry to improve our current lifestyle. (E. Harold; reference 2)

Incidentally, crystal is also very hard. On the widely used MOHS scale of hardness, diamonds are at a 10 scale, and crystal is at a 7 scale. One of the main sources of Rainshow's crystal is Arkansas.

What is Crystal Electro-Magnetically?

In the 1860's Pierre and Jacques Curie (Pierre and Marie Curie identified radium) discovered that some types of pure quartz captured electrical energy in its formation over millions of years at the magnetic core of the earth. It possessed a strange kind of electrical property. They called this property "Piezo Electrose". Piezo is a Greek word meaning, "to squeeze" and Electrose means, "get a charge from".

(Morton & Thomas; reference 2)

Piezoelectric property

The piezoelectric effect was first observed in the laboratory. Several minerals, including tourmaline,

and sphalerite, also exhibit this effect.

Electricity is electrons in motion. A small electric pulse can be generated from some crystals whose atomic arrangement allows the electrons to move in certain directions, and quartz is one of the minerals that have this property. The flow of electrons is caused by a change in the shape of the crystal, which can be induced mechanically or thermally.

Triboluminescence

TRY-bo-lumen-essence. Luminescence is light or a glow. Triboluminescence is light that is produced by pressure, friction, or mechanical shock. It may be readily demonstrated with two half-size milky quartz crystals in a darkened room. Simply take the edge of one crystal and rub it back and forth on the face of the other crystal. You may simply rub two faces of the crystal together, but you get more light using the former method. You can also knock together two milky quartz pebble landscape rocks. An orange-yellow light can be seen inside the crystal. You will also notice a metallic smell. This makes a good demonstration! (Mike & Darcy Howard: reference 3)

This electrical energy that is inherent in crystals is highly visible when two large Rainshow'r crystals rubbed together for demonstration purposes.

Because crystal can maintain and control the electrical energy Mother Nature built into the crystal, industry finds it useful in a number of electronic applications. From an industrial standpoint, it could be said that we are in a crystal age.

Why Electromagnetic Crystal in Shower Filters?

Rainshow'r has maintained over the years an ongoing research program through which we have experimented with a variety of media and treatment techniques for water devices. As a result we became increasingly aware of the potential application of the magnetic resonance characteristics of electromagnetic crystal.

Rainshow'r introduced crystal to the general market through the CQ-1000 (crystalline quartz) shower filter series in March 1998. Insofar as we have been able to determine we are the first company in the water industry, domestic or international, to use crystal in a widely distributed and marketed consumer product.

Why specifically, do we use crystal in the CQ series? Because of the electron movement caused in shocking the crystal by "squeezing" it, we generate an electrical charge (see previous section on "Piezoelectric property" and "Triboluminescence"). This electrical charge has an effect on the water molecule.

It is our opinion, based on Rainshow'r in-house research, that we may be reducing the size of water molecule clusters. In other words we are making smaller water clusters from larger water clusters.

How can we tell? The evidence at this point is empirical but measurable in terms of physical evidence. The most immediate observation is that soap lather is greater with the use of crystal. This increased sudsing and lathering is due to a reduction of or breaking of the surface tension of the water. We be

there is a similarity between the action of a surfactant (detergent) in water and the crystal in water. I believe the water becomes “wetter”. In a real sense we believe the crystal is acting like a “mechanic surfactant, not a chemical surfactant as with common household cleaners.

Another observation, although more subjective, is that water feels “lighter”. While the crystal does not soften water, the smaller water cluster groups make the water feel lighter. This water sensation creates a very pleasant shower water ‘feel’. For some reason, which we can not fully explain, it seems that women are more sensitive to these improvements in shower water than are men.

Early in our Crystal research we were told by experts to be aware of another possible benefit to crystals. Either because of the Piezo electric effects or the magnetic resonance of the crystal, a shower with crystals seems to create a sense of well-being to the user. Why?

It is our opinion that we are generating a certain amount of beneficial negative ions in the shower area. Most people are aware of negative ion generators used in homes and autos. They are designed to increase the energy levels in the air of a closed environment by offsetting unwanted positive ions. The feeling created by the crystals and by negative ion generators is the same as the feeling of well-being that you might sense on a mountaintop after an electrical storm. There is a somewhat similar occurrence at the seashore when heavy waves break on rock formations. Negative ions are again generated creating that feeling of invigoration.

Rainshow'r and Crystal

As with all the materials used in Rainshow'r products, crystal (silicon dioxide) is completely safe and non-toxic. Not only is its chemical combination non-toxic but because of its hardness it cannot absorb materials which could be harmful.

Rainshow'r crystal which comes from two specifically selected mine sites in North America is virgin crystal straight from the mines. The crystal is ground and processed to Rainshow'r specifications and shipped to us in two thousand pound lots.

Before we use it, the crystal is washed in chlorine free water again and dried in the sun for at least 7 days. We have found that our special washing and sun exposure adds a higher intensity to the crystals.

We add at least a full ounce of crystal to each CQ-1000 cartridge and layer it at the outlet. It is fully integrated into the KDF filtering media.

Consumer response has been positive. As a company we are extremely pleased and proud to be the manufacturer who first introduced crystal to the public in this way. The positive feeling generated by an energized shower may be a small improvement in the pressure filled life of the average person, but it is a meaningful improvement.

A free 2-ounce sample of the same crystals used in the CQ-1000 will be sent to you upon request. Please mail a check in the amount of \$3.75 for shipping and handling with your request to the address below.

Visit us at www.rainshowermfg.com, our web site, for updates on crystal technology and additional product information. Our purpose is to inform and educate consumers on the unique CQ-1000

dechlorinating shower filter.

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References:

- 1, The Mystery of the Crystal—Bear & Co. 1997, Morton & Thomas
- 2, Focus on Crystals-Ballantine Books NY. 1986, Edmund Harold
- 3, www.rockhoundingar.com/quartz 1999, Mike & Darcy Howard

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