



The BIOWASHBALL ceramics

This ceramics contain TM micro organisms, and have the ability to restructure water beneficially. We have never been able to understand fully how micro organisms can survive the 1,000 up to 1,300°C firing temperatures generated while producing ceramics

It is highly improbable that other species could survive at such high temperatures, but the existence of these photosynthetic organisms is essential to partly understand the importance and the incredible role of the TM organisms

These organisms were first discovered in Japan and given the “EM - Effective Micro organisms” denomination. Thereafter, South Korea developed this technology further and gave the TM name “Total Effective Micro organisms”, combining the ground/soils fermentation effects to increase the micro organism’s capabilities.

Essentially, three bacteria’s make up the composition of these micro organisms:

A. Photosynthetic Bacteria

These bacteria synthesize substances coming from roots, organic matter and gases (especially hydrogen sulfite) by using light from the sun and heat from the ground.

The beneficial substances thus produced by these bacteria include, amongst others, amino acids, nucleic acids, bioactive substances & sugars. The metabolites produced by these micro organisms are absorbed directly by plants.

B. Lactic Acid Bacteria

These bacteria produce lactic acid from sugars and other carbohydrates coming from the photosynthetic bacteria and the yeasts.

Some foods (such as yoghurts) are produced from these bacteria for many decades. However, lactic acid has a very important sterilization effect, it destroys undesirable micro organisms and triggers fermentation. Furthermore, lactic acid insures the decomposition of matter such as lignite & cellulose and also triggers their fermentation, thus canceling the undesirable effects of possible non decomposed organic materials

B. The Yeasts

The yeasts synthesize antimicrobial substances as well as other substances necessary to plant growth from amino acids, sugar products from photosynthetic bacteria & plant roots. Bioactive substances such as hormones & enzymes produced by yeasts will improve cells activity and cell dividing.

Ceramics which contain TM and TM-x’s can and will transfer beneficial effects & energies to water and/or to other substances in which they are added (concrete, plaster, compost, animal waste), and thus make for a more beneficial local environment :





- 1) It improves the structure of water
- 2) It imparts other beneficial energies & effects to water







3) It discourages growth of unfriendly organisms

The presence of photosynthetic bacteria explains why the BIOWASHBALL needs to be exposed to the sun in order to “regenerate”.

As it is most of the time the case with associating minerals, the effects of each ceramic is enhanced by the presence of one or several others. All the basic components of these ceramics are entirely natural products extracted from the ground.

	<p>TM-C M Ceramic</p> <p>TM-C M ceramic improve the water emulsification, permeation, dispersion, and solubility abilities. They modify the pH of water to reduce alkalinity.</p>
	<p>TM-C R Ceramic</p> <p>Water molecules in contact with TM-C R ceramics have a high anti-oxidant activity and prevent water molecules from breaking down into 2 kinds of ions (H+ and OH-). Normal tap water treated with this ceramics turns into water with a low oxidation-reduction potential and becomes a strong non oxidizing agent. This phenomenon decreases and/or removes hazards induced by free radicals.</p>
	<p>TM-C EL Ceramic</p> <p>TM-C EL ceramic radiates far infrared rays within wave lengths closest to the one favorable to the human body.</p>
	<p>TM-C J Ceramic</p> <p>TM-C EL ceramic radiates far infrared rays within wave lengths closest to the one favorable to the human body and reduce the oxidation effects of water. They also help water to enhance the metabolism of the human body.</p>



	<p>TM-C pH Ceramic</p> <p>TM-C pH ceramics controls the pH of treated water by reducing alkalinity stabilize the pH. The abundance of ions released from the ceramics allows the water to keep a low alkaline level.</p>
	<p>TM-C K Ceramic</p> <p>This ceramics protect water from bacterial & microbial contamination. The far infrared rays radiating from this ceramics make water molecules clusters much smaller. Because water passing through or contacting this ceramic possesses strong surface tension, toxic ions are bound tightly by this treated water and become harmless.</p>
	<p>Activated Carbon</p> <p>CALGON-made (made in USA) activated carbon is effectively able to remove harmful organic substances as well as mold, odor and others.</p>
	<p>TM-C Z Ceramic</p> <p>This ceramic mainly protects water from microbial or bacterial contamination.</p>