Documentation on Vivatap ingredients and how they work as water improving agent

Vivatap is a water improving agent which has the following ingredients:

Coral algae, shell, antioxidant preparation (calcium ascorbate, acerola powder, rose hip powder, rutin, lemon oil), chitosan (from shrimps and shellfish).

According to the manufacturer, the coral algae and shell sand are harvested in a regulated area in very pure waters between Ørland and Storfosna outside the Norwegian coast. The skipper on the boat says that the coral algae and shell sand are taken from 7-10 meters depth at low tide.
The manufacturer strain the coral algae and shell sand in several steps, and they dry them in temperatures between 150 - 200 ºC until the humidity in the product is below 1 %.
The coral algae and shell sand are not radiated, and no chemical compounds are added.

The antioxidant preparation, called vitamine C powder from the manufacturer Winther-Medico A/S in Denmark is a high quality product manufactured under GMP guidelines. Its ingredients come from Germany and Denmark. The product does not contain GMOs (genetically modified organisms) and does not consist of anything made from GMOs.

The chitosan we have mainly used is ChitoClear from Primex, Iceland. The raw material is harvested in the orth Atlantic Ocean.
Lately we have also used a more expensive chitosan from Bioeffect, Chimarin MH-006. The raw material of this product is harvested in the North Sea.In laboratory tests this chitosan has shown better ability to remove mercury from drinking water.

The Vivatap mixture is presented in a small sachet (also called teabag). In one packet of Vivatap there are 18 sachets, each capable of treating 1-2 liters of tap water. Just fill a bottle or a jug with 1-2 liters of tap water, drop one sachet vertically into the water (do not open the sachet). Shake or stir well for 3-4 seconds. Allow the sachet to work in the water for at least 5-10 minutes, maximum 24 hours. All the chlorine is instantly removed, and up to 100% of E.coli, Pseudomonas, Salmonella bacteria etc are eliminated, according to reports from accredited laboratories. Vivatap releases minerals and trace elements like calcium, magnesium, potassium, sodium, manganese, zink etc into the water and also increases the alkalinity, depending on the initial tap water pH and mineral content. With lower pH and mineral content, more of the above mentioned elements will be released. If the tap water is

not too acidic, the pH value of Vivatap treated water will be stabilized at a healthy level between 7.5-8.5.

The coral algae and shell are calcified and have a hard surface due to the high content of calcium carbonate ($CaCO_3$) and caustic lime (calcium oxide, CaO). They also contain various minerals and trace elements. Calcium carbonate will dissolve in water depending on the pH value, more $CaCO_3$ will dissolve at low pH values. Both calcium carbonate and caustic lime will contribute to increase the pH of the water. The release of various minerals and trace elements is in the same way pH-dependent.
A laboratory report from January 1997 showed that 1 gram coral algae and shell removed practically all chlorine from reverse osmosis water added 0.30 mg sodium hypochlorite per liter.

The antioxidant preparation (vitamine C powder) contains mainly calcium ascorbate, which rapidly will dissolve in water and increase the calcium content. Ascorbate will reduce oxidants like chlorine in water, thus removing chlorine. The antioxidant preparation also stabilizes the pH value.

Chitosan is a natural polymer made of shrimps and other shellfish. Chitosan is soluble in weak organic acids and in dilute hydrochloric acid. In acidic environment with pH value below 7, the amino groups in chitosan will be protonized and become positively charged and will be able to react with negatively charged reactive groups on other molecules. Chitosan has shown the ability to combine heavy metals like mercury into complexes. The orwegian Institute for Water Research has in the IVA report SNO 4465-2001 written that Vivatap reduced the level of mercury from water of Lake Rore. Chitosan has also the property of eliminating bacteria and mold, according to reports from accredited laboratories.

Kind regards

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