# WATER MEMORY – MYTHS AND EXPERIMENTS

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The 'memory of water' is a popular phrase that is mostly associated with homeopathy and Jacques Benveniste. These research teams reported that solutes subjected to sequential physical processing and dilution show biological effects different from those apparent using just the water employed for the dilutions. The subject has drawn a lot of controversy with many scientists simply rejecting it outright without studying the evidence. The subject area has recently been the subject of a number of papers in the journal Homeopathy (July, 2007). Although there is much support for water showing properties that depend on its prior processing (that is, water having a memory effect), the experimental evidence indicates that such changes are due primarily to solute and surface changes occurring during this processing.

An extraordinary paper authored by Nobel prize-winning Luc Montagnier has described memory effects in aqueous DNA solutions that the authors propose depend on interactions with the background electromagnetic field. These effects, if real, require the prior processing and dilution of the solutions and are explained by Montagnier as resonance phenomena with nanostructures derived from the DNA and water.

Several technologies have been successfully utilized for demonstrating specific properties of homeopathy solutions. These are first of all spectroscopy in different parts of the spectrum: UV, visible, IR and Raman; thermoluminescence at low temperatures and the method of Electrophotonic imaging (EPI), known as well as the GDV Bioelectrography.

The high degree of informativeness of the Dynamic EPI analysis applied for studying liquid-phase subjects was first demonstrated during the study of the glow of microbiological cultures, blood of healthy people and cancer patients, reaction of blood to allergens, and very small concentrations of various salts. Great interest has been roused by the studies directed at detecting the differences between the glow of natural and synthetic essential oils with identical chemical composition. In water studies information depends on the chemical composition of water, but the determining and the most curious feature is the dependency on the structural composition of the liquid. The electrophotonic parameters are determined by the emission activity of the surface layer of the liquid, which depends on the presence of surface-active valences. This property is obviously determined by the structure of the near-surface clusters, which means that the electrophotonic method is one of the informative methods for study of structural-informational properties of liquids.

Water samples changed their photon output under the influence of low intensity electromagnetic waves, sound, sun and moon activity, pyramidal structures, directed human intentions, and these changes have been recorded for several days. In many cases these changes were statistically significant. Results have been reproduced by independent researchers in the USA, Chile and Germany. Water samples were specially prepared for the experiment to avoid the influence of the conventional environmental factors. Results were stronger for slightly mineralized water compared with distilled water. As the chemical composition of samples was not disturbed we may attribute these changes to the formation of claster structures on the surface and in the volume of liquid. This correlates with the quantum electrodynamics concept of the formation of the coherent domains in water.