

Five points of consideration for a new research methodology in ultra high dilution (UHD) science

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Introduction

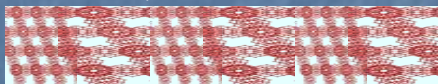
An experiment is a scientific activity whereby we interfere with a system under observation and want to keep its conditions constant, save for the parameter that we are interested in. It is distinctly different from the mere observation, where the observer does not interfere.

Mostly, this is achieved by well controlled laboratory chambers, with T and light control. Sometimes even the oscillating EM fields are not allowed to enter the experimental system (Faraday cage). If the walls of the experimental chamber are built on mumetal, the system is cut even from the geomagnetic field and environmental ELF magnetic fields.

The necessary condition for a new experimental finding to become a part of the established science is that it must be recognized and approved by the majority of scientists of the particular branch. In practice this means that the finding must be successfully repeated not only by the first investigating scientist (team, laboratory), but also by a representative number (at least a handful) of other scientists (teams, labs).

UHD model based on quantum field theory

It is a mesoscopic phenomenon demonstrating a long range, long lasting dynamic order that applies to water molecular structures. The latter are stabilized by coherent oscillations.



This oscillatory phase is mostly unrecognized by the established physical chemistry. Only short term clusters and short range stable structures are admitted.

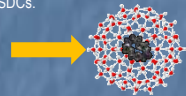
Dynamically ordered ensembles of water molecules (stable dynamic clusters: SDCs) entangled with coherent EMF (size: nano or even micro). They are called nanosociates by some authors and are estimated to span between 1 nm up-to and beyond 1 µm and have been already photographed.

UHD imprinting model in more detail: entanglement

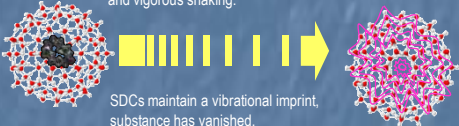
Through vigorous shaking, water with dynamically ordered ensembles is first tuned to mother tincture molecular vibrations.

First, there emerges a resonant entanglement between the mother tincture molecular vibrations (fields) and SDCs.

Mother tincture molecule - SDC coupling as a result of vigorous shaking.



Dilution up-to and beyond Avogadro and vigorous shaking:



SDCs maintain a vibrational imprint, substance has vanished.

General problems of UHD research methodology

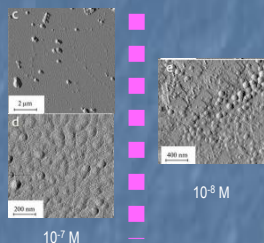
UHD phenomenon is strongly bound to water in its unconventional aspects and is as yet out of range of the established science – this is exactly the reason why the research into homeopathy (involving UHD research) is usually stigmatized as a pseudo science. If we put aside the problem of “water memory” (an inner, water state problem), there are others that concern water’s and in certain cases especially SDCs’ sensitivity to the external environment that is not expected in ordinary biochemical phenomena. Let’s see some instances that should be taken into consideration.

1. Susceptibility of SDCs to geomagnetic and magnetic fields,
2. susceptibility of SDCs to external EM fields,
3. susceptibility to daily Sun’s position,
4. susceptibility to cosmic phenomena involving Moon phases or eclipses,
5. susceptibility to bioelectromagnetic field of humans.

1 Susceptibility of SDCs to geomagnetic field

SDCs are not formed only on the basis of the starting mother tincture molecule(s). According to researches by Konvalov and Rhyzkina (1) some form of a penetrating magnetic field is needed for SDCs formation beyond 10^{-8} M dilution. We may assume that UHD therefore depends on the magnetic environment and that different magnetic environments (this may include also different times at the same place) may result in variable activity of UHD solutions.

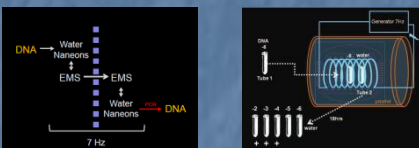
Up to 10^{-7} M structures (SDCs, also called nanosociates) are formed under permalloy shielding, too.



From $\sim 10^{-8}$ M on SDCs are no more formed under permalloy shielding from the geomagnetic field and / or lower oscillating EM frequencies.

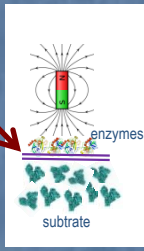
2 Susceptibility of SDCs to external EM fields

Similar findings resulted also from Montagnier’s work concerning electronic homeopathy. Here SDCs are called neaneons. They, too, need two conditions: a) source substance (here parts of DNA or RNA) and b) ELF electromagnetic field (minimal frequency is told to be ~ 7 Hz; see 2, 3)



3 Long range enzymatic and immunological activity sensitive to Sun’s position

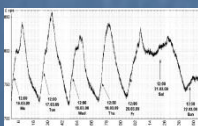
It was found by very thorough and pedant research done by a biochemist and immunologist Rothen that antibody-antigen as well as substrate-enzyme (trypsin) reactions (4) can transpire also through ~ 4 nm thick metal (Ni) membranes, where water was found to be of prime importance due to its long range order (5). Parallel magnetic field cancelled this activity, while the perpendicular one restored it again. If the concentration of the antigen exceeded 10^{-7} g/ml no difference was seen, but the latter became striking if concentrations dropped up-to 10^{-12} or 10^{-13} g/ml.



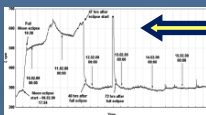
What is important for us here is that Rothen observed interesting daily variations of this activity (mediated by dynamically ordered water structures), dependent on Sun’s position and this even under a thick cover. This again indicates that ordered water structures that are behind UHD phenomena may be sensitive to cosmic influences and that the latter should be taken into account with any UHD experiments.

4 Sensitivity of water to cosmic phenomena

Voelkov in his thorough experiments using H_2O_2 , Nabicarbonate and luminol, all in very small concentrations, in a thermostatic chamber and in isolation from the ambient light, water demonstrated



circadian oscillations (6) (similar to Rothen’s observations)



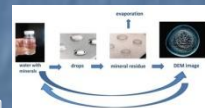
The system also demonstrated a striking sensitivity to cosmic phenomenon of lunar eclipse (the display here concerns 26 January 2009 (6).

5 Sensitivity of water to the biofield: a possible experimenter effect



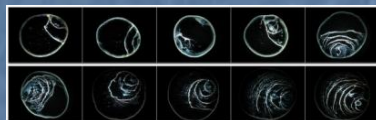
Even the bioelectromagnetic emanations from humans (bioenergy therapists) proved a possibility of influencing water structuring monitored by the Droplet evaporation method (DEM). From 16 such tests 11 succeeded to change DEM residues structures and 5 did not (more than 2/3 of successful trials).

The method consists of creating drops of different solutions on clean microscope slides and drying them under defined conditions. Dry residues are then



observed under the microscope. Properly dried drops with no additional artifacts are photographed and analyzed by visual assessment or a specially developed software.

Below: An example of influencing water by (ultra)weak EM emission from hands of a therapist. The upper row: DEM images of the control, the lower row: images of the exposed water (7).



DEM residues images even disclose therapists’ capability of mentally directing some general form of droplets remnant formation, as presented on the lower figure. From 14 such tests 7 succeeded to narrow the ring of droplet remnants, 4 did not succeed, while with 3 cases water did not yield possibility to form rings (a little less than 2/3 of successful trials), (7).



Recommendations for experiments

From the five points disclosing high water susceptibility to an even ultra-weak environmental impact there should follow some new methodological directions. We learned that water itself and its dynamic ordered structures (SDCs, nanosociates, neaneons ...) may be very sensitive to ambient electromagnetic fields, to the (geo)magnetic field, to cosmic phenomena with as yet no clear causal explanation and even to the ultra-weak human bioelectromagnetic field. In the scientific literature many more examples in the same general line as here presented could be found.

UHD experiments are therefore not conditioned only by the originating substance and the potency (dilution), but also by the natural and artificial electromagnetic environment, the state of the experimenter (experimenter effect) and the state of more cosmic influences stemming either from the Moon (eclipse, phases) or from the Sun (eclipses, solar wind activity).

This may at least partially explain the results of a meticulous systematic meta research of repeatability of results in UHD research (8). Namely, it was found that in total, 24 models were replicated with comparable results, 12 models with zero effect, and 6 models with opposite results. Five models were externally reproduced with comparable results.

References

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