Scientific experiments with the AquaKat

Dr. Elmar Langenscheidt, Mönchengladbach

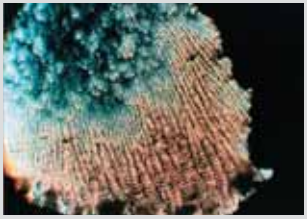
Dr. Elmar Langenscheidt from Mönchengladbach, Germany, has carried out a number of interesting experiments with the AquaKat. It was his intention to find out in which way the AquaKat might influence a liquid medium, mainly water, and how it can pass on the information modulated onto it in such a way that it shows its effects in the medium of water. For this, he uses a polarisation microscope and aqueous solutions of water and calcium carbonate as well as ascorbic acid and water.

In a first step the solutions are prepared and in a second one the solutions are left to evaporate at room temperature (22 °C). What was left was examined under the microscope. This showed that in the conglomerate of microcrystals plays a role. It is known that there is a charcteristic connection between the morphological, physical and chemical properties of the crystals and the crystal structure. When crystallisation from the two mentioned media takes place it becomes clear in which way the AquaKat changes the calcium carbonate in the water. Often at first an increasing quantity of material accumulations shows during drying processes with the formation of crystal patterns, i.e. the beginnings of corners and edges, for example, by smaller crystallites being deposited together and being joined at the grain boundaries. It was shown, for example, that the same substance could appear in various modifications depending on the outer conditions. In the case of the calcium carbonate, the picture shifts from hexagonal calcite to orthorhombic aragonite at temperatures < 30 °C.

Dr. Langenscheidt was able to prove that the use of AquaKat technology brings about a special phenomenon: large crystals of approximately 300 micrometers change in favour of very small crystal forms of 10 micrometers. Of course, the water/calcium carbonate system takes precedence in the tests. In the samples where the AquaKat was not used, crystal structures are hardly detectable. The interference colours that are typical for crystals are also not present. This is very different from the water that has been informed by the AquaKat. There, ideally formed crystals with a clear centre can be found. The crystal-typical interference colours represent a perfectly connected crystal structure.

It also becomes apparent that without the influence of the AquaKat large areas of crystals with connected structures, but also individual crystals, can be found. This means that no useful hardness stabilisation has yet taken place here. This is different for the water that has been treated with the AquaKat. Here, crystal structures that are barely connected anymore can be found.
The crystals are smaller, rounder; instead of the conglomerates.
Now single crystals appear, indicating a good hardness stabilisation.

Dr. Langenscheidt postulates that the change in the crystal shapes explains the beneficial properties of the AquaKat in particular with heating and warm water systems. There, it has been shown that aggressive limescale deposits, which at first could only be removed mechanically, had changed to a soft limescale film. Accordingly, after the treatment, heating coils etc. can be easily cleaned again.



Ascorbic acid test

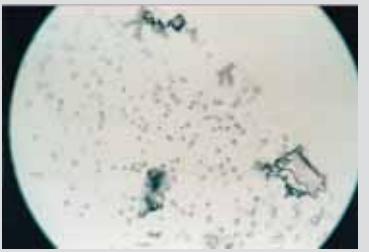
Without AquaKat
The sample without the AquaKat hardly shows any crystal structures whatsoever. The crystal-typical interference colours do not appear.

With AquaKat
In contrast to this, ideally shaped (uniaxial) crystals with a clear central point from which radial beams originate form in the water that is informed by the AquaKat. A polarisation cross is also visible. The crystal-typical interference colours indicate an ideally interconnected crystal structure.

Conclusion
The AquaKat is therefore able to control the properties of the water, and the crystallisation ratios of the substances (minerals) that are dissolved in it, in such a way that the crystals can form in a perfect manner. They behave, therefore, as if they were in a natural medium.

Lime crystallisation test

Without AquaKat
Areas with coagulated (large, connected) shapes were found in the samples as well areas with individual crystals. No useful hardness stabilisation takes place at this stage. Crystal-typical colour effects were not detectable.



With AquaKat
Hardly any coagulated shapes form in the samples of treated water. Instead, there are small, round isolated individual crystals, which indicate good hardness stabilisation.
These individual crystallites provide, analogous to the ascorbic acid test, the typical colour effects that can be seen "glowing" under the microscope. A phenomenon!

"With this we have estabished further proof of the for the vitalisation of water with the Penergetic AquaKat.
On the basis of the results of the physical experiments carried out, I can now confirm that the function of the device as described on the original packaging of the manufacturer, i.e. that good tap water and warm water can be transformed into even better water, like that of a natural spring, is fully met. *So even good things can be improved.*

Scientific conclusion
Based on the test results, we confirm that the AquaKat has a vitalising effect (i.e. restoring the structure of spring water) on the structure and crystallisation behaviour of the substances (minerals) dissolved in the water."

Microscope was used for the tests by Dr. Langenscheidt