

# Investigating Water Functionality

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The aim was to investigate the effect of a 'water vitalizing device' on water functionality. The 'water vitalizing device' concerned does not use explicit chemical additions or external electronic devices to induce changes to the water.

Over the years, various approaches were pursued, including tests in agriculture, on humans, and on water itself. In each case tap water before going through the water vitalizing device (Control) was compared to tap water after having gone through the water vitalizing device (Activated). A brief overview of these tests will be presented.

One study will be highlighted in this presentation that applied NIR spectroscopy with aquaphotomics approach. In the aquaphotomics approach perturbations are introduced to a bio aqueous system of interest. The differences in absorbance can provide information about the water molecular structure. In this case temperature perturbations were introduced.

In all experiments Activated water showed a different result around 1364 nm. According to the current water molecular system assignments used in aquaphotomics, 1364 nm is related to the 'solvation shell'. Activated water had a reproducible higher absorption at 1364 nm giving a good indication that Activated water has a different functional effect related to better solving of compounds, therefore more reactive and more 'energetic/ active'. This indication about functionality was supported by the results of the tests mentioned in the first paragraph.

Also, nine month old Activated and Control water had the same results. Different incoming tap water also showed the same results. However, leaving out an essential component of the water vitalizing device did not show the same results, which indicates the effect of that component.

Concluding, this self-developed aquaphotomics measurement protocol using temperature perturbations has potential to provide information about water functionality and aid in water vitalizing device design and quality monitoring.