

Evaluation of physicochemical features of *Zincum metallicum* homeopathic solutions

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Background: Zinc is an essential trace element required for various cellular functions. Its importance is even more explicit in the central nervous system and immunity. The study of physicochemical parameters of high diluted solutions (HDS) is a necessary quality control to validate studies in homeopathy. Besides, considering the characteristics of *in vitro* cellular models it is needed to sterilize the HDS to avoid microbiological contaminations. However, little is known about possible modifications that sterilizing processes may cause in the solvents, and consecutively in HDS.

Aims: Analyze electrical conductivity and pH of the homeopathic *Zincum metallicum* solutions prepared with different purified waters.

Methodology: Zinc was sanded generating a thin powder and used as start point to prepare the homeopathic potencies. Following the Brazilian Homeopathic Pharmacopea this Zinc powder was grinded with lactose until 3cH. After obtaining the 3cH, this sample was solubilized in water purified by two different methodologies: sterilizing filtration or autoclaving. Each specific solution was used to prepare the respective potencies tested in this study: 5cH, 6cH and 30cH.

Results: Preliminary results comparing both water used (filtration and autoclaving) showed no statistical significant difference when physicochemical parameters were evaluated.

Conclusions: These experiments showed that sterilizing processes do not interfere with the physicochemicals parameters of the purified water even after the dynamization process. New experiments are being developed using high-purity grade distilled sterile-filtered water (Sigma-Aldrich, W3500) and *Zincum metallicum* potencies. Besides the electrical conductivity and pH analysis, the nuclear magnetic resonance will be used to improve the knowledge about the physicochemical properties of HDS.



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