

Moderate levels of sulphate improve the taste of water. Nitrate is not relevant.

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Abstract

The influence of some species, anions and cations, on the taste of waters is not clear enough. Some discrepancies are found in the literature about the role of specific ions. In fact, the situation is very complex because it depends on several factors: concentration, co-ion, regional effect/habitation, type of experiment, etc. In a previous work about mineral composition and liking of water, sulphate and nitrate concentrations correlated with liking scores by a trained panel.

Taste threshold concentration (TTC) for nitrate -be as sodium or potassium salts- were about 100 mg/L, unusually high values for drinking water. Therefore, nitrate is an important health issue but without organoleptic relevance.

On the contrary, TTCs for sulphate were about 80 mg/L and 160 mg/L for calcium and sodium salts respectively, usual values for natural and tap waters. Duo-trio preference tests showed that sulphate presents positive effect on taste up to 200 mg/L.