

Evaluation of the Metrological Characteristics of Natural and Treated Waters With Stable Salt Composition Identification Method

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The research paper contains the analysis of surface and groundwaters quality evaluation approaches. It has been stated that the initial stage of waters identification can be carried out with the help of one or a range of criteria. Known identification approaches are expensive, time consuming or require an immense amount of data. Natural and treated waters with stable salt composition identification method based on the initial water electrical conductivity as well as the identification coefficient measurement are suggested to use. The method is express, inexpensive, simple in implementation and environment friendly. As illustrated by the selection from 35 natural and treated water samples, the metrological characteristics of the method have been measured, precisely the uncertainty according to type A and B as well as the expanded uncertainty have been defined. It has been also demonstrated that the value of the standard total uncertainty is influenced by both type A and type B uncertainty. In addition, it has been presumed that the relative expanded uncertainty of natural and treated waters with stable salt composition identification method is not more than 4% for waters with the mineralization of 0.005 - 30 gm.

KEYWORDS

Water quality, Identification, Conductivity, Identification coefficient, Uncertainty.

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