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Classification of surface water quality in the rural areas of Meshginshahr using cluster analysis

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ABSTRACT:

This study was conducted to classify the water quality of the rivers in north-western Iran, in Meshginshahr. Amount of heavy metals were measured at five stations in two high and low water season during 2012. Sampling and measurement of samples were done based on the standard method and by atomic absorption spectrometry (model Perkin Elmer 2380). For categorizing the quality of stations in terms of heavy metals in the environment, cluster analysis was used in Minitab software. The results showed that among the stations, Kangarlou and Tazekand were the most infected stations. Then, the average emission was for Khyavchai stations and the stations *viz* Gharesou and Ghasabeh were in low emission class. The results showed that the cluster analysis could classify the surface water quality based on the classification of heavy metals.

Keywords:

Surface water, Heavy metals, Multivariate statistical analysis, Meshginshahr, Iran.

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