Groundwater Quality Assessment Using the Fuzzy Variable Set Model

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According to the complexity and fuzziness of the water quality system, a Fuzzy Variable Set Model method was introduced for groundwater quality assessment in Xiaoxie city in China. Different relative membership degree matrices were obtained by using different groups of model parameters. Then the groundwater quality class was assessed correspondingly. The Fuzzy Variable Set Model method was found to be more effective and reasonable than the traditional water assessment methods. It is found that the groundwater quality class of Xiaoxie city is III. The results of water quality assessment are more reliable because that the fuzziness of the water environment quality is comprehensively considered in this method.

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