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NATIONAL STANDARD OF THE
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GB/T 14848-93

Quality standard for ground water

地下水质量标准

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National Standard of People's Republic of China

GB/T 14848-93

Quality standard of ground water

1 Introduction

This standard is formulated to protect and rationally develop groundwater resources, prevent and control groundwater pollution, safeguard people's health AND promote economic construction.

This standard is used as the basis for the groundwater exploration and evaluation, development, utilization and supervision and management.

2 Subject matter and application scope

2.1 This standard specifies the groundwater quality classification, groundwater quality monitoring, evaluation methods and groundwater quality protection.

2.2 This standard is applicable to general groundwater, BUT not applicable to underground hot water, mineral water, salt brine.

3 References

GB 5750 Standard examination methods for drinking water

4 Groundwater quality classification and quality classification indicators

4.1 Groundwater quality classification

In accordance with the current situation of groundwater quality, the baseline value of human health, the target of groundwater protection, AND making

6.2 The groundwater quality single component evaluation is, in accordance with this Standard, divided into five categories, AND their codes are same with the category codes; when different categories have same standard values, USE the higher category.

For example, the standard values of the category I and II volatile phenolic compounds are 0.001 mg/L. If the water quality analysis result is 0.001 mg/L, it shall be classified as category I, not category II.

6.3 The comprehensive evaluation of groundwater quality adopts the scoring method with notes. AND the specific requirements and steps are as follows:

6.3.1 The quantity of items to be scored shall not be less than the quantity of the monitoring items as specified in this standard, BUT not include the bacteriological indicators.

6.3.2 Firstly CONDUCT each single component evaluation, and CLASSIFY the quality categories the component belongs to.

6.3.3 With respect to each category, in accordance with the provisions below (Table 2), respectively DETERMINE the evaluated score F_i of single component.

Table 2

Category	I	II	III	IV	V
F_i	0	1	3	6	10

6.3.4 USE the equation (1) and (2) to calculate the comprehensive evaluation score F .

$$F = \sqrt{\frac{\bar{F}^2 + F_{\max}^2}{2}} \quad \text{.....(1)}$$

$$\bar{F} = \frac{1}{n} \sum_{i=1}^n F_i \quad \text{.....(2)}$$

Where:

$\bar{F}$ - The average value of the individual component evaluation score F_i ;

$F_{\max}$ - The maximum value of the individual component evaluation score F_i ;

n - The number of items.

6.3.5 Based on the F value, in accordance with the following provisions (Table 3), CLASSIFY the groundwater quality levels; then NOTE the

bacteriological indicator evaluation category behind of the level, such as "Excellent (category I)", "Good (category II)"

Table 3

Level	Excellent	Very good	Good	Poor	Very poor
F	< 0.80	0.80 ~ < 2.50	2.50 ~ < 4.25	4.25 ~ < 7.20	> 7.20

6.4 When using the water quality analysis data more than two times for evaluation, it can respectively conduct groundwater quality evaluation; OR otherwise based on actual conditions, USE the annual average value AND multi-year average OR respectively USE the multi-year dry season and wet season average value for evaluation.

6.5 In the groundwater quality evaluation, in addition to the use of this method, it is also allowed to use other evaluation method for comparison.

7 Protection of groundwater quality

7.1 In order to prevent the deterioration of groundwater pollution, over-exploitation, groundwater quality deterioration due to artificial recharge, AND meanwhile protect the groundwater source, it must follow the relevant provisions of the Water Pollution Prevention Law of the People's Republic of China and the Water Law of the People's Republic of China.

7.2 The use of sewage irrigation, sewage discharge, hazardous waste (urban waste, industrial waste, nuclear waste, etc) dumping and underground disposal, must be subject to the environmental geological feasibility demonstration and the environmental impact evaluation, AND approved by the environmental protection department.

Additional information:

This standard was proposed by the Ministry of Geology and Mineral Resources of the People's Republic of China.

This standard shall be under the jurisdiction of the Geological Environmental Management Department of the Ministry of Geology and Mineral Resources, Hydrogeology and Engineering Geology Study Institute of the Ministry of Geology and Mineral Resources.

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