Data Article

Data on physicochemical quality of drinking water in the rural area in Divandarreh county, Kurdistan, Iran

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ABSTRACT

Good quality of drinking water is very important in the maintenance of human health. The gathered data from the present work was used to evaluate the quality of drinking water resources in the rural villages of Divandarreh, Iran. Physicochemical quality of water was determined by a collection of 35 random samples during dry and rainy seasons in 2015. The APHA approach was used to determine the physicochemical parameters of the samples. The results showed that the average concentration of Ca, Mg, Na, K, Cl, SO_4, TDS and TH during dry season was 85.64 mg/l, 13.41 mg/l, 34.11 mg/l, 2.8 mg/l, 9.9 mg/l, 45.7 mg/l, 326.06 mg/l and 269.61 mg/l, respectively. Also, the average concentration of the parameters during rainy season was 77.3 mg/l, 18.27 mg/l, 30.3 mg/l, 1.9 mg/l, 12.54 mg/l, 39 mg/l, 269.1 mg/l and 316.17 mg/l, respectively.

Specifications Table

Subject area	Chemistry
More specific subject area	Drinking water quality
Type of data	Tables and map
How data was acquired	Analyses of temporary hardness, calcium, magnesium were conducted using titration method. The electrical conductivity and pH of samples were determined with (Jenway 470 Conductivity meter) and pH meter (model Jenway 350), respectively. Measurement of sulfate anions and cations was done by spectrophotometry (DR 5000; Hach) in water.
Data format	Analyzed
Experimental factors	The water samples stored at room temperature and were analyzed according to the APHA approach.
Experimental features	The levels of physical and chemical parameters were determined.
Data source location	Divandarreh, Kurdistan province, Iran
Data accessibility	Data are included in this article

Value of the data

- Based on the obtained data proper measure can be taken in order to deliver appropriate water quality to consumers.
- The collected data can be used for the preparation of research map in the field of water treatment by another researcher.
- The collected data can be useful for the codification of local standards along with other researcher's data.

1. Data

The specified parameters in the experiments are included calcium ion, magnesium ion, sodium ion, chloride ion, sulfate ion, temperature, total alkalinity, electrical conductivity (EC), total dissolved solids (TDS) and pH analyzed according to standard methods for the examination of water and wastewater [1]. Water stability was evaluated based on RSI, LSI, PSI, AI and LS. The sampling points and study area was shown in Fig. 1. The chemical and physical characteristics of intended water samples are presented in Tables 2 and 3. Table 4 shows the equations and indicators for categorizing the water stability. Calculation of water quality indices is shown in Table 5. Table 6 illustrates the stability indices in water resource. The condition of water stability in the water resources is shown in Table 7 (Table 1).

2. Experimental design, materials and methods

2.1. Description of study area

Divandarreh, one of the cities of Kurdistan province, located at west of Iran (35°54′N, 47°01′E). The city area is about 4203 km^2 (approximately 15% of Kurdistan province area). The highest and lowest temperatures of air are 32 °C and −20 °C, respectively.