Available online at **www.joac.info**

ISSN: 2278-1862

Journal of Applicable Chemistry

2022, 11 (5): 849-857

(International Peer Reviewed Journal)

The Study of Ground water Quality in Dungarpur, with Special Reference to Pollution

Roshan Kumar Mehta* and Jayana Upadhyay

Department of Botany, Govind Guru Tribal University, Banswara, Rajasthan-327001, **INDIA**

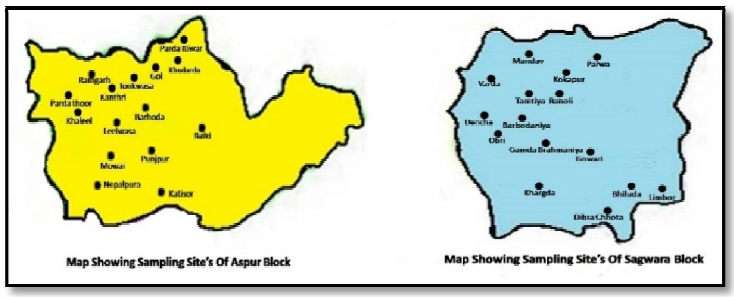
Email: roshan224225@gmail.com

Accepted on 4th August, 2022

ABSTRACT

The objective of the present investigation is to assess the quality of groundwater in Aspur and Sagwara blocks of Dungarpur district, Rajasthan, where groundwater is the primary source of drinking water and other uses for the people in the study area. Physico-chemical analysis of groundwater was conducted in the selected blocks of Dungarpur district. As per the purpose of the investigation, various Physico-chemical parameters were selected such as pH, electro conductivity, total dissolved solids, total alkalinity, total hardness, chloride, and nitrate. Therefore, 30 samples (15 from each block) were collected from different villages of Aspur and Sagwara blocks during the pre-monsoon, monsoon and post-monsoon seasons of 2020–2021 and all samples were analyzed using standard methods of APHA. To determine the quality of groundwater, the results were compared with the drinking water standards prescribed by BIS and WHO for each parameter. The results showed that the pH value was alkaline in nature of both the blocks, while the values of electro conductivity, total hardness, total dissolved solid, total alkalinity, chloride, and nitrate were found to be higher in the Aspur block as compared to the Sagwara block. A one-way ANOVA test was also conducted to estimate the highly significant or non-significant value of selected Physico-chemical parameters of both the blocks. The results showed a highly significant difference ($p<0.01$) in the values of electrical conductivity, total dissolved solids, chloride and nitrate, while no significant difference ($p > 0.05$) was found in the values of pH, total hardness, and total alkalinity in both the blocks of Dungarpur district.

Graphical Abstract:



Sampling Locations of Aspur and Sagwara blocks

Keywords: Physico-chemical parameters, Groundwater, ANOVA test, Water quality.