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Groundwater Quality Assessment of Vadlipada Village of Kushalgarh Block in Banswara District (Rajasthan) India and it's Suitability for Potable Purposes

Purva Vohra¹, Ashok Kumar Kakodia², Shiv Lal³ and Kumud Tanwar⁴*

 Govind Guru Tribal University, Banswara, Rajasthan, INDIA
Department of Chemistry, Government College, Rajgarh, Alwar, Rajasthan, INDIA
Rajasthan Technical University, Kota, Rajasthan, INDIA
Kanoria P.G Mahilla Mahavidyalaya, Jaipur, Rajasthan, INDIA Email: sl@rtu.ac.in, tanwar.kumud@gmail.com

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ABSTRACT

The Vadlipada village faces acute water shortage in summer due to the drying of open wells, rivers and is depended mainly on the groundwater for their daily requirements. The groundwater pollution sources in this area are open defecation, domestic effluents, discharge of sewage, septic tanks, soak pits, dumping of solid waste and use of pesticides and fertilizers in agriculture. Hence, regular monitoring and assessment of the quality of the groundwater resources of this region is quite necessary. Following physicochemical parameters were analyzed in the present investigation to determine the quality of groundwater samples collected during assessment year from April 2022 to March 2023 from the selected hand pump of the village: temperature, pH, turbidity, total dissolved solid, total alkalinity, total hardness, chloride, fluoride and nitrate. The present study is carried out the groundwater quality assessment of village Vadlipada of Kushalgarh block in Banswara district, Rajasthan, India.

9 8.5 8 7.1 6.7 6.7 7 5.9 6 5.3 5.2 Fluoride, mg L-1 5 4.13.9 4 3 2.8 2.6 2 0 Apr-22 May-22 Jun-22 Jul-22 Aug-22 Sep-22 Oct-22 Nov-22 Dec-22 Jan-23 Feb-23 Mar-23 April 2022 to March 2023

Graphical Abstract:

Assessment of Fluoride in groundwater of Vadlipada village.

Keywords: Groundwater, Quality assessment, Fluoride, Physicochemical Parameters.