

## SCIENTIFIC ASSESSMENT OF GROUNDWATER QUALITY FOR RURAL DEVELOPMENT IN FALDI VILLAGE, INDIA

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*The quality of groundwater is crucial for public health in rural areas, yet contamination behaviour is often not well understood, particularly in underdeveloped regions of India. This study evaluates groundwater from Faldi Village in North 24 Parganas and finds that iron concentrations varied significantly, with some samples exceeding the permissible limit of 5.78 mg/L as per BIS 10500:2012. Report signifies the presence of Iron in ground water and fecal coliform in the collected water for few cite locations. Studies on spatial interpolation and water quality assessments, indicated the various pollution hotspots. The water quality index of 25 samples were determined to justify the drinking water suitability and the mutual relationships among microbial and physicochemical groundwater parameters*

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