

Physicochemical analysis of bore-well water of Kheda district, Gujarat, India**Disha Soni**

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Study was conducted for the purpose of physicochemical analysis such as temperature, pH, dissolved oxygen (DO), total dissolved solids (TDS), electrical conductivity (EC), total alkalinity (TA), calcium hardness (CaH), magnesium hardness (MgH), chloride (Cl), sulphate (SO₄-2), phosphate (po₄-3) and nitrate (NO₃-1) of water samples collected from bore-wells of 20 villages of Kheda district, Gujarat state, India. Quality of water is very important for different usages of water. Some villages were found to have maximum limit and minimum tolerance range for drinking water. The experimental values of water samples were compared with standard values given by World Health Organization (WHO) and Indian standards. The result concluded that, in some locations water quality was acceptable for drinking, domestic and irrigation purposes. In some of the locations, Phosphate parameters found higher than the prescribed values. The higher values of phosphates are mainly due to the use of fertilizers and pesticides used for the agriculture purpose. If phosphate is consumed in excess, phosphine gas is produced in gastrointestinal tract on reaction with gastric juice. Similarly, nitrate parameter is higher than the tolerance range in the bore-well water. In this study physicochemical analysis of bore-well water was carried out during 2015-2016 in order to assess water quality index.

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