Investigation of Ground Water Quality Parameters in Jawahar Nagar Area of Hyderabad

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Abstract—Drinking water needs to be protected from pollution and biological contamination. Suitability of water for drinking and irrigation purposes can be determined by various physico-chemical parameters. Ground water samples were collected from different area in Jawaharnagar of Hyderabad and analysed for 10 water quality parameters viz. pH, Electrical Conductivity, Total Alkalinity, Total dissolved solid, Total hardness, Calcium hardness, Magnesium hardness, nitrates, sulphates and Chlorides. On comparing results it was found that most of the parameters analyzed have shown that they are within the permissible limits for drinking water as prescribed by Bureau of Indian Standards (BIS). The pH values ranges from 6.56 to 7.62 which is within the limit prescribed by BIS. The low pH does not cause any harmful effect. EC values varied between 620 to 1820 μ mho/cm. The alkalinity values ranges from 240 to 620 mg/l. Calcium and magnesium content in the water present 185 to 420 mg/l and 65 to 280 mg/l respectively. The nitrate concentration in ground water ranged between 4.5 to 12.4 mg/l. The TDS values ranges from 215 to 1205 mg/l which is within the permissible limit of BIS.

Keywords: Ground water quality, Chloride, Total alkalinity, Total hardness, Jawaharnagar, TDS, Electrical, Conductivity