



Physico-Chemical and Heavy Metal Investigation of Underground Water at Commercial Areas of Agra District (U.P.), India

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ABSTRACT

Today, it is a known fact that the groundwater quality is degrading day by day which is a serious concern nowadays, as water with poor quality pose threats to human health and hygiene. Good quality of water is of utmost importance for survival of man and animals, and as we know because the groundwater aquifers are the largest source of fresh water, their contamination will prove to be havoc. Present work deals with the physico-chemical and heavy metal investigation of ground water samples from submersible pumps at different sites of commercial areas of Agra district during 2020-2021. Total twelve water samples were collected and investigated with respect to parameters such as pH, conductivity, TDS, total hardness, total alkalinity, chloride and fluoride as well as heavy metals such as Cu, Zn, Fe and As. TDS of most of the water samples exceeded the maximum permissible limit set by WHO and ICMR. Significantly, iron was found much above the maximum permissible limit of WHO in almost all the samples, whereas arsenic contamination was also noted at many sites. The results reveals that the water quality of most of the sites of commercial areas of Agra district is not suitable for drinking purpose which recommends the use of indigenous technologies, to make water fit for drinking purpose.

Keywords: Agra, Drinking water, Fluoride, Ground water, Hardness, TDS.
