



## Correlation studies of Physico-chemical Parameters of Ground Water of Kasganj City, India

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### ABSTRACT

*This paper presents an evaluation of various physico-chemical parameters to assess the suitability of groundwater, mainly for drinking purpose in Kasganj. The city is situated on the bank of Kali River. Groundwater samples collected from various parts of city were analyzed for pH, Electric Conductivity (EC), Total Dissolved Solids (TDS), Dissolved Oxygen (DO), Total Hardness (TH), turbidity, fluoride (F) and chloride (Cl). The geochemical study shows that ground water is generally hard ( $TH > 260 \text{ mg L}^{-1}$ ) and alkaline in nature ( $pH > 7$ ). A large percentage of samples exceeded permissible limits of various parameters as given by various National/International bodies. Water from sampling locations S5 and S6 far exceeds the fluoride limit. Apart from already affected people, a larger part of city population is at risk.*

### Graphical Abstract



Kasganj District

**Keywords:** Fluoride, Drinking water, Fluorosis, Physico-chemical parameters, Yamuna.