

**GROUNDWATER QUALITY WITH REFERENCE TO FLUORIDE  
CONTAMINATION, DUMARPANI WATERSHED, BLOCK NARHARPUR,  
DISTRICT KANKER, CHHATTISGARH**

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**Abstract**

Fluoride content ranges from 0.13 to 4.9 ppm in the groundwater of Dumarpani Watershed, District Kanker, Chhattisgarh. The study area is underlain by granitic-gneiss which contain the fluoride-bearing minerals. Twenty groundwater samples were collected during post-monsoon (November), mid-dry season (February) and pre-monsoon (May). Sixty percent in post-monsoon, 65% in mid-dry season and 80% in pre-monsoon of groundwater samples are unsafe for drinking due to fluoride content exceeding 1.5 ppm. A positive correlation between fluoride and temperature and electrical conductivity suggests that the later are responsible for the observed increase in fluoride content caused by geogenic origin in the groundwater. Field observations also support the observed ill-effects of fluoride content in school children and hence calcium rich food is recommended to mitigate the impact of high fluoride content in groundwater.

*Keywords:* Groundwater, Fluoride contamination, Dumarpani Watershed, Dental fluorosis