



Testing and awareness drive for 'fluoride free' drinking water

A one-week testing and awareness drive has been conducted in view of the 'fluoride free' drinking water in district Sonbhadra, Uttar Pradesh. The focus of the drive was to make local communities aware about the significance of fluoride-free water. The objective of the visit was to check the fluoride contaminated hotspots present in the area and other parameters were tested to ensure the groundwater quality for drinking purpose.

Before starting the testing, it was ensured that all COVID-19 norms are followed including maintaining social distance, wearing masks and sanitising hands.

The drive began with a brief introduction and work of our organisation. Moreover, the team also briefed them about the harmful effect of presence of fluoride in the drinking water. The Bureau of Indian Standards (IS 10500, 2012) and World Health Organisation (WHO 2011) prescribe an upper limit of 1.0 and 1.5 mg/L, respectively. Impacts of consumption above the permissible limits include dental fluorosis to mottling, pitting, discoloration of teeth, bone embrittlement, osteoporosis, joint deformities, and neurological manifestations like desolateness, Alzheimer's disease etc.

The DA team tested around 80 handpumps and bore well in 15 villages of Chopan block, Sonbhadra for fluoride concentration and other parameters like TDS, pH, and temperature in groundwater. We found that villages, namely Padrach, Doomar, and Kurawa were highly affected by fluoride in groundwater. In these villages, approximately **30-40 % of people** are victims of dental and skeletal fluorosis. We interacted with these people, and the pragmatism of them were captured. We also collected samples

from 15 villages and brought them to our laboratory for further biological and chemical analysis. The photograph and GPS location of water sources were captured.

Moreover, we interacted with Gram panchayat Pradhan, Anganwadi workers, school teachers and students, and collected health data from the government officials.