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## Preservation Artifacts and Loss Pattern of Arsenic: A Case Study from Highly Contaminated Location in Central-East India

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### ABSTRACT

Arsenic is the focus of public attention because of its wider prevalence and toxicity. Proper sampling is important in characterizing toxic water contaminants in the groundwater. The present paper studies aspects of sampling, preservation artifacts, analytical issues etc. in a natural arsenic contaminated groundwater. The samples were collected from arsenic contaminated groundwater at three locations of village Kaudikasa in Rajnandgaon (Chhattisgarh). The standard method of sampling and preservation of arsenic was examined. The permitted sample holding time in this state is 180 days which has been found to be unrealistic on examination. The communication also compares the loss pattern of arsenic in unpreserved samples with samples preserved and kept at 4°C. It was found that about As losses during holding after preservation were about 0% in one day, 35% in seven day, 70% in fifteen day, and 65% in thirty days time. Hence, the present recommended method of preservation leads to huge under reporting of As in natural samples. If the pattern of losses observed at the present location exists at other locations then the actual As levels could be much higher than the reported ones.

### KEYWORDS

Arsenic, Groundwater Contamination, Preservation, Loss Pattern, Chhattisgarh

### Cite this paper

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