

## **DISTRIBUTION OF TRACE ELEMENTS IN WATER SOURCES OF AYIROOR RIVER BASIN, S. KERALA, INDIA**

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### **Abstract**

Ayiroor River Basin (ARB) a small river basin draining parts of Thiruvananthapuram and Kollam districts of Kerala State rises from midland part of the state and flows through both crystalline and sedimentary terrains. This paper reports the relative abundance of seven trace elements viz., Mn, Co, Ni, Cu, Fe, Zn and Cr in water samples collected from different sources of the basin after a analysis using a Jordan Valley Ex-3600 Energy Disperse X-ray Fluorescence (EDXRF) Spectrometer. It is a well-known fact that the chemistry of water sources in a river basin depends not only on natural sources but also on anthropogenic activities. It is noticed that the content of trace elements in all the water bearing environment is very low except in bore wells where Mn and Fe content is slightly higher. Further, the lake water is found to contain higher Zn content than the waters from other environments. Their study shows that in general the trace element and content in drinking water sources in the basin is within the safe limits for heavy metals as laid down by BIS (2003); WHO (1993); ICMR (1975); ISI (1991) and APHA (1998).

*Keywords:* Ayiroor River Basin, Trace elements, EDXRF Spectrometer.