

## **Water Quality at Mokodou River as A Control River**

### **ABSTRACT**

The purpose of this study is to determine the water quality for Mokodou river to be suggested as control river for future research that related to ex-mining pollution at Ranau Sabah. The in-situ parameters were measured by using ProDSS YSI multimeter. And, for heavy metals the water samples were collected by using polyethylene bottles in depth between 15 to 20 cm under the surface water and preserve it with  $\text{HNO}_3$  until  $\text{pH} < 2$  before analysed with ICPOES. The water quality parameters are measured were temperature, electrical conductivity (EC), DO, pH, turbidity, sulphate, chloride and heavy metals (Cu, Cr, Cd, Fe, Pb and Zn) with the concentrations  $24.7 \pm 2.03$  oC,  $91.24 \pm 13.11$   $\mu\text{S}/\text{cm}$ ,  $8.21 \pm 0.31$  mg/L,  $7.89 \pm 0.35$ ,  $100.63 \pm 216.96$  NTU,  $1.33 \pm 1.21$  mg/L,  $8.61 \pm 2.29$  mg/L,  $0.05 \pm 0.05$  mg/L,  $0.01 \pm 0.01$  mg/L,  $0.02 \pm 0.01$  mg/L,  $0.45 \pm 0.34$  mg/L,  $0.04 \pm 0.01$  mg/L and  $0.03 \pm 0.01$  mg/L, respectively. The ANOVA one way shows that there is significant different between frequent sampling time ( $p < 0.05$ ) except for sulphate and Pb. And, the water quality parameter at Mokodou river is still under the National Water Quality Standard for Malaysia (NWQSM) except for DO and turbidity. For conclusion, Mokodou river is identified as an unpolluted river that suggested to be control river for future research in Ranau area.