Geochemical characterisation of the kulapis formation at the Segaliud Lokan Forest Reserve

ABSTRACT

Mineral licks are important for animals, especially wildlife, to nourish their diets, not only in terms of supporting their mineral intake deficiencies but also in regulating toxins in their bodies. This study characterised the geochemical properties of salt licks located in Segaliud Lokan Forest Reserve (SLFR). Soil samples were collected from five selected salt licks in the study area. The physico-chemical results show that the pH of the salt-lick soil varied from slightly acidic to slightly alkaline. The percentage of moisture content and organic matter ranges from 25.22% to 44.78% and 0.95% to 7.83, respectively. The electrical conductivity reading ranges from 48.59 µS/cm to 260.88 µS/cm. The soil samples were digested using aqua regia and analysed using inductively coupled plasma-optical emission spectrometry (ICP-OES). The concentrations of Ca (1101.92 mg/kg–11551.64 mg/kg), K (910.27 mg/kg–2355.41 mg/kg), Na (106.36 mg/kg–727.34 mg/kg), and Mg (1442.14 mg/kg–5305.13 mg/kg) in the five salt licks varied considerably and were higher than in the control soil samples. High chemical concentrations in salt licks are due to the pH of soils, which ranges from slightly acidic to slightly alkaline.