Physico-chemical properties of soils from South Johor

TAN BOON KONG

Jabatan Geologi
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor

Some 70 soil samples from South Johor were analysed for their physico-chemical properties. The types of soils studied comprise residual soils of basalt, granite, gabbro, shale and Old Alluvium. The results of the study show that the physical properties can be correlated with the lithology or soil types, for example particle size which is coarser for granitic soils (sandy in nature) compared with gabbro soils (more fine-grained, i.e. comprising silts and clays). The compaction properties of the soils are also influenced by grain size, for example the Old Alluvium which is coarse-grained and well-graded produce maximum dry densities which are high compared to the gabbro soils which are fine-grained. The gabbro soils also show the highest plasticities in view of the high clay contents.

The pore fluids chemistry shows low ionic contents for all the soil types studied. Na^+ is the predominant soluble cation. The pH values obtained are < 7, indicating the acidity of the pore fluids for all the soil types studies.

Warta Geologi (Newsletter of the Geological Society of Malaysia), Vol. 25, No. 3, May-June 1999