IDENTIFIKASI KANDUNGAN MINERAL TANAH VULKANIS DI LERENG GUNUNG SAGO SUMATERA BARAT PADA LAHAN SAWAH

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ABSTRAK

Kandungan mineral dalam tanah berkaitan erat dengan pendugaan potensi kesuburan tanah serta penyuplaian hara bagi tanaman. Tanah vulkanis mempunyai komposisi mineral yang berbeda-beda. Penelitian ini bertujuan untuk mengidentifikasi kandungan mineral pada tanah vulkanis di lereng gunung Sago dengan menggunakan alat-alat pendeteksi seperti XRD, dan Selective Dissolution. Sampel di ambil dengan metode survei berdasarkan peta geologi tanah. Dua puluh satu sampel diambil pada ketinggian 500 m d.p.l–1000 m d.p.l pada kedalaman 0–20 cm dan dianalisis tekstur tanah, berat volume tanah, P–retensi, dan kandungan mineral tanah. Hasil analisis dilaboratorium menunjukan kelas tekstur di gunung Sago adalah liat dan lempung, berat volume tanah di gunung Sago berkriteria sangat rendah–tinggi yaitu 0,58–1,06 Mg m^{-3}, kandungan P–retensi berkisar antara 87%–99%, kandungan mineral kristalin yang tergolong pada mineral primer yaitu kristobalit, feldspar, magnetit dan apatit, sedangkan mineral sekunder kaolinite, dan hematit, kandungan alofan mencapai 2,41% dan ferihidrit maksimal 0,71%.

Kata kunci*: mineralogi, gunung Sago, alofan, tanah sawah vulkanis.*

IDENTIFICATION OF MINERAL CONTENT OF VOLCANIC PADDY SOIL OF MOUNT SAGO, WEST SUMATRA

ABSTRACT

The mineral content in the soil is closely related to the estimation of potential soil fertility and nutrients supply for plants. Volcanic soils have different mineral compositions. This research was aimed to identify the mineral content of volcanic soil on the slopes of Mt. Sago by using detection devices such as XRD, and Selective Dissolution. Samples were coclected based on survey methods of the geological. Twenty one samples were taken from 0-20 cm depth at 500–1000 m a.s.l. Soil samples were analyzed for the texture, soil bulk density, P-retention, and soil mineral content at Soil Laboratory, Andalas University. The result showed that the texture class of Mt. Sago was clay, the bulk density ranged from very low to high (0.58–1.06 Mg m^{-3}), P-retention content ranged from 87%–99%, crystalline mineral content that is classified as primary minerals were cristoballite, feldspar, magnetite dan apatite, while secondary minerals were kaolinite and hematite, allophane and ferihydrite.

Keywords: mineralogy, mount Sago, allophane, volcanic paddy soils..