

KANDUNGAN BAHAN ORGANIK, KALSIUM KARBONAT, DAN TEKSTUR TANAH VERTISOL DAN ALFISOL DI KHTDK WANAGAMA I, GUNUNGGIDUL, DAERAH ISTIMEWA YOGYAKARTA

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INTISARI

KHDTK Wanagama I awalnya merupakan bukit gundul yang gersang dan tandus, tanah dengan kedalaman yang dangkal dan berbatu. Batuan yang membentuk tanah di Wanagama I adalah batuan gamping (*limestone*). Tanah KHDTK Wanagama I terdiri dari: vertisol, alfisol, dan entisol. Tujuan penelitian ini untuk mengetahui kandungan bahan organik, kalsium karbonat, dan tekstur tanah pada tanah vertisol dan alfisol.

Pengambilan sampel tanah dilakukan dengan mengebor tanah, tanah yang diambil adalah tanah terusik. Kemudian tanah yang sudah diambil dari setiap kedalaman (0-20), (20-40), dan (40-60) dibawa ke laboratorium untuk mengetahui nilai kandungan bahan organik (metode destruktif kimia), kalsium karbonat (metode destruktif kimia), dan tekstur tanah (metode pipet).

Berdasarkan penelitian yang telah dilakukan, didapatkan hasil bahwa kandungan seresah pada tanah vertisol didapatkan 0,0001-0,0034%, pada tanah alfisol didapatkan 0,0005-0,0030%. Bahan organik tanah vertisol didapatkan 0,76-0,90%, pada tanah alfisol didapatkan 0,76-0,80%. Kalsium karbonat tanah vertisol 0,17-0,21%, pada tanah alfisol 0,17-0,22%. Dari segi tekstur tanah vertisol lempung berkisar antara 73,35%-84,15%, sementara fraksi pasir sangat rendah 2,52%- 7,23% dan debu antara 8,62% -21,51%. Tanah alfisol memperlihatkan komposisi yang bervariasi, dengan kandungan lempung berkisar antara 45,14%-69,36%, pasir antara 5,93% - 33,16%, dan debu antara 10,20% hingga 41,45%.

Kata Kunci: vertisol, alfisol, bahan organik, kalsium karbonat, tekstur tanah, kedalaman lapisan tanah

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Organic Matter, Calcium Carbonate, and Soil Texture Content of Vertisol and Alfisol in KHTDK Wanagama I, Gunungkidul, Special Region of Yogyakarta

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ABSTRACT

The KHTDK Wanagama I area was originally a barren and arid hill with shallow and rocky soil. The rocks forming the soil in Wanagama I are limestone. The soils in KHTDK Wanagama I consist of Vertisol, Alfisol, and Entisol. The purpose of this study was to determine the organic matter content, calcium carbonate content, and soil texture in Vertisol and Alfisol soils.

Soil sampling was carried out by drilling, and the samples collected were disturbed soil samples. The soil samples taken from each depth (0–20 cm, 20–40 cm, and 40–60 cm) were brought to the laboratory to determine the values of organic matter content (*chemical destructive method*), calcium carbonate (*chemical destructive method*), and soil texture (*pipette method*).

Based on the research conducted, the results show that the litter content in Vertisol soil ranged from 0.0001–0.0034%, while in Alfisol soil it ranged from 0.0005–0.0030%. The organic matter content in Vertisol soil was 0.76–0.90%, whereas in Alfisol soil it was 0.76–0.80%. The calcium carbonate (CaCO₃) content in Vertisol soil ranged from 0.17–0.21%, and in Alfisol soil from 0.17–0.22%.n terms of texture, Vertisol soil showed a high clay fraction, ranging from 73.35% to 84.15%, with very low sand content (2.52%–7.23%) and silt content between 8.62% and 21.51%. Alfisol soil exhibited a more variable composition, with clay content ranging from 45.14% to 69.36%, sand content between 5.93% and 33.16%, and silt content between 10.20% and 41.45%.

Keywords: *vertisol, alfisol, organic matter, calcium carbonate, soil texture, soil layer dept.*

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