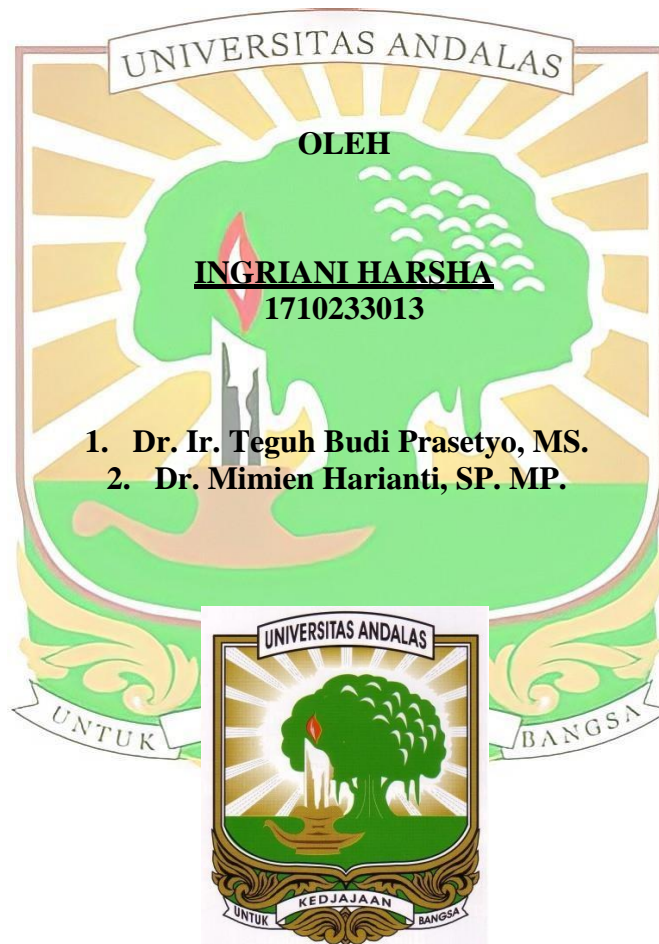


**KAJIAN SIFAT KIMIA TANAH GAMBUT PASCA  
KEBAKARAN DI PERKEBUNAN KELAPA SAWIT NAGARI  
TIKU V JORONG KECAMATAN TANJUNG MUTIARA  
KABUPATEN AGAM**

**SKRIPSI**



**PROGRAM STUDI ILMU TANAH  
FAKULTAS PERTANIAN  
UNIVERSITAS ANDALAS  
PADANG  
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# KAJIAN SIFAT KIMIA TANAH GAMBUT PASCA KEBAKARAN DI PERKEBUNAN KELAPA SAWIT NAGARI TIKU V JORONG KECAMATAN TANJUNG MUTIARA KABUPATEN AGAM

## Abstrak

Konversi lahan gambut dari lahan nonproduktif menjadi lahan produktif yang diawali dengan kegiatan pengeringan akan memicu terjadinya kebakaran lahan gambut. Kebakaran lahan gambut menyebabkan perubahan pada sifat kimia tanah gambut. Penelitian ini bertujuan untuk mengkaji sifat kimia tanah gambut pasca kebakaran di perkebunan kelapa sawit Nagari Tikuv Jorong Kecamatan Tanjung Mutiara Kabupaten Agam. Sampel tanah diambil menggunakan metode survei dengan pengambilan sampel secara *purposive sampling* pada lahan perkebunan kelapasawit tidak terbakar, lahan terbakar tahun 2018 dan lahan terbakar tahun 2021 pada kedalaman 0-20 cm dan 20-40 cm. Analisis sifat kimia tanah gambut dilakukan di Laboratorium Jurusan Tanah Fakultas Pertanian Universitas Andalas. Data dianalisis dengan menggunakan analisis sidik ragam dan dilanjutkan dengan uji DNMR taraf 5% jika  $F_{hitung} > F_{tabel}$ . Hasil penelitian menunjukkan terjadinya peningkatan secara nyata terhadap nilai kadar abu (6.13-9.7%; 4.24-5.54%), pH (0.28-0.62 unit; 0.19-0.45 unit), P-tersedia (9.63-21.32 ppm; 6.87-10.81 ppm), K-dd (0.4-0.94 cmol/kg; 0.44-0.8 cmol/kg), Na-dd (1.03-3.25 cmol/kg; 1.58-1.07 cmol/kg), Ca-dd (5.42-7.59 cmol/kg; 4.85-6.62 cmol/kg), dan Mg-dd (1.77-3.29 cmol/kg; 1.85-3.24 cmol/kg), serta penurunan secara nyata terhadap nilai C-organik (3.64%-5.62%; 2.45%-5.62%), KTK (20.77-56.45 cmol/kg; 8.52-43.31 cmol/kg), dan secara tidak nyata terhadap nilai N-total tanah (0.6-0.34%; 0.11-0.37%) pada kedalaman 0-20 cm dan 20-40 cm. Terjadi peningkatan beberapa sifat kimia tanah gambut, namun tidak bertahan lama dan terjadi penurunan pada unsur yang mudah menguap (karbon dan nitrogen) selama proses kebakaran berlangsung.

*Kata kunci: kebakaran lahan, gambut, sifat kimia tanah*

# STUDY OF CHEMICAL PROPERTIES OF POST FIRE PEAT SOIL IN OIL PALM PLANTATION NAGARI TIKU V JORONG, TANJUNG MUTIARA DISTRICT, AGAM REGENCY

## Abstract

The conversion of peatland from non to productive land, which begins with draining activities, can trigger peatland fire. Peatland fire causes changes in the chemical properties of peat soils. This study was aimed to examine the chemical properties of peat soil after being fire in the oil palm plantation located in Nagari Tiku V Jorong, Tanjung Mutiara District, Agam Regency. Soil samples were taken using survey method with purposive sampling based on burning age, those were unburned, burned in 2018, and burned in 2021 at 0-20 cm and 20-40 cm soil depth. Analysis of the soil chemical properties was carried out at the Soil Laboratory, Faculty of Agriculture, Andalas University. Data resulted were analyzed the variance using F test, and continued with the DNMRT test level 5% if F-test > F-table. The results showed that there was a significant increase in the value of ash content (6.13-9.7%; 4.24-5.54%), pH (0.28-0.62 units; 0.19-0.45 units), available P (9.63-21.32 ppm; 6.87-10.81 ppm), exchangeable K (0.4-0.94 cmol/kg; 0.44-0.8 cmol/kg), exchangeable Na (1.03-3.25 cmol/kg; 1.07-1.58 cmol/kg), exchangeable Ca (5.42-7.59 cmol/kg; 4.85-6.62 cmol/kg), and exchangeable Mg (1.77-3.29 cmol/kg; 1.85-3.24 cmol/kg), as well as a significant decrease in the value of organic-C (3.64%-5.62%; 2.45%-5.62%), CEC (20.77-56.45 cmol/kg; 8.52-43.31 cmol/kg), and not significantly to the total N-value of soil (0.6-0.34%; 0.11-0.37%) at a depth of 0-20 cm and 20-40 cm, respectively. There was an increase in some chemical properties of peat soil but it did not last long and there was a decrease in volatile elements (carbon and nitrogen) during the fire process.

*Keyword: land fire, peat, soil chemical properties*