

## ABSTRAK

Tanah laterit memiliki karakteristik daya dukung yang rendah, sehingga perlu dilakukan upaya stabilisasi untuk meningkatkan kualitasnya dalam mendukung konstruksi. Fokus penelitian ini adalah melakukan percobaan terhadap tanah laterit yang ditambahkan bahan garam dan serbuk kayu. Penelitian ini bertujuan untuk menganalisis pengaruh penambahan garam dan serbuk kayu terhadap karakteristik mekanis tanah laterit melalui pengujian *California Bearing Ratio* (CBR). Pengujian dilakukan di Laboratorium Teknik Sipil Universitas Widyatama. Campuran tanah yang diuji meliputi tanah asli, tanah dengan penambahan 10% garam, serta tanah dengan 10% garam dan variasi serbuk kayu 3%, 6%, 8%, 9%, 10%, dan 12%. Berdasarkan hasil pengujian sifat fisik, tanah diklasifikasikan sebagai A-7-6 menurut AASHTO dan ML (lanau anorganik) menurut sistem USCS, dengan persentase butiran lolos saringan No. 200 sebesar 58,3%, batas cair 47,18%, dan indeks plastisitas 14,72%. Hasil pengujian CBR menunjukkan bahwa penambahan 10% garam secara tunggal menurunkan nilai CBR dari 15,20% menjadi 12,45%. Namun, penambahan serbuk kayu ke dalam campuran tersebut berhasil meningkatkan kembali nilai CBR. Nilai tertinggi dicapai pada campuran 10% garam dan 9% serbuk kayu, dengan nilai CBR sebesar 19,29%. Berdasarkan hasil grafik, nilai CBR tanah campuran kembali setara dengan tanah asli pada kadar serbuk kayu sekitar 1,89% dan 9,78%. Dengan demikian, penggunaan serbuk kayu mampu memulihkan bahkan meningkatkan daya dukung tanah laterit yang menurun akibat kontaminasi garam. Hasil ini diharapkan dapat menjadi referensi dalam penerapan metode stabilisasi tanah yang lebih ramah lingkungan dan efisien untuk infrastruktur di wilayah dengan karakteristik tanah serupa.

Kata kunci: tanah laterit, stabilisasi, CBR, garam, serbuk kayu.

## **ABSTRACT**

*Laterite soil is known for its low bearing capacity, making stabilization efforts necessary to improve its quality for construction purposes. This study focuses on the experimental stabilization of laterite soil using salt and sawdust. The objective is to analyze the effect of adding salt and sawdust on the mechanical characteristics of laterite soil through the California Bearing Ratio (CBR) test. The laboratory tests were conducted at the Civil Engineering Laboratory of Widyatama University. Soil mixtures tested include natural laterite soil, soil with 10% salt, and soil with 10% salt combined with various sawdust contents of 3%, 6%, 8%, 9%, 10%, and 12%. Based on the physical properties test, the soil is classified as A-7-6 according to AASHTO and ML (inorganic silt) based on the USCS classification, with 58.3% passing the No. 200 sieve, a liquid limit of 47.18%, and a plasticity index of 14.72%. The CBR test results showed that the addition of 10% salt alone reduced the CBR value from 15.20% to 12.45%. However, adding sawdust to the salt mixture significantly increased the CBR values. The highest CBR value was obtained at a mixture of 10% salt and 9% sawdust, reaching 19.29%. Based on graphical interpolation, the CBR values became equivalent to the natural soil at approximately 1.89% and 9.78% sawdust content. These findings demonstrate that sawdust can restore and even improve the bearing capacity of salt-affected laterite soil. The results are expected to serve as a reference for more sustainable and effective soil stabilization techniques, especially in areas with similar soil characteristics.*

**Keywords:** *laterite soil, soil stabilization, CBR, salt, sawdust.*