UJI KEKUATAN DAN DAYA SERAP SERBUK SABUT KELAPA SEBAGAI MEDIA TANAM BERPEREKAT PATI

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ABSTRAK

Telah dilakukan penelitian tentang uji kekuatan dan daya serap air serbuk sabur kelapa sebagai media tanam berperekat pati. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh komposisi penambahan perekat dalam pembuatan media tanam serbuk sabut kelapa terhadap kekuatan dan daya serap air, pengaruh kondisi optimum media terhadap sifat fisis dan mekanisnya, serta memberikan informasi tentang sejauh mana kadar air dan daya serap air media tanam serbuk sabut kelapa. Penelitian ini meliputi penentuan kadar tannin, pengujian daya serap dan kadar air, uji sifat mekanis (penetrasi), foto porositas dan penentuan kapasitas penukar kation Ca2+ dan Mg2+. Hasil penelitian ini menunjukkan bahwa kadar tannin yang terdapat dalam serbuk sabut kelapa sebesar 9,49 %, daya serap air berkisar antara 119,04 – 276,16 %, kadar air rata – rata media tanam 12,6925%, penentuan kapasitas penukar kation melalui larutan sampel Ca2+ yang telah dikontakkan dengan media tanam serbuk sabut kelapa sebesar 186 dalam 200 m3 volume total media tanam, sedangkan kapasitas pertukaran kation Mg2+ adalah 27,024 dalam 18 m3 dan 300 dari 200 m3 volume media tanam. Sejauh ini daya serap dan kadar air media tanam serbuk sabut kelapa masih memenuhi standart SNI kayu.

Kata kunci : serbuk sabut kelapa, media tanam, kadar tannin, kadar air, kapasitas penukar kation Mg2+ dan Ca2

TEST THE STRENGTH AND ABSORBSTION OF COCONUT COIR FOR PLANT MEDIA STARCH ADHESIVE

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ABSTRACT

Has conducted research on testing the strength and water absorption from coconut coir as a medium for plant starch adhesive. The purpose of this research is to determine the effect addition of the adhesive composition of the media manufacturing plant in coconut coir to the strength and water absorption, the influence of the media under optimum conditions of physical and mechanical properties, as well as provide information about the extent of water content and water absorbent planting media from coconut coir. This research involves determining the levels of tannins, testing absorption and moisture content, test the mechanical properties (penetration), photos porosity and cation exchange capacity determination of Ca2+ and Mg2+. These results indicate that the levels of tannins contained in coco dust for 9.49%, water absorption ranged from 119.04 to 276.16%, average water levels - the average planting media 12.6925%, the determination of cation exchange capacity by sample solution of Ca2+ which has been in contact with the plant media from coco dust is 186 grams mEK/100 in a total volume of 200 m3 of planting media, while the determination of cation exchange capacity by sample solution of Mg2+ which has been in contact with the plant media from coco dust is 300 grams mEK/100 in a total volume of 200 m3 of planting media. So far absorption and water content of the planting medium coconut coir still meet the standard wood SNI.

Keywords: coconut coir, planting medium, tannin content, water content, cation exchange capacity of Mg2+ and Ca2+