

BAB 5

KESIMPULAN DAN SARAN

5.1 Kesimpulan

1. Diantara campuran *cocopeat* dengan kadar 3% dan 5%, campuran *cocopeat* dengan kadar 3% menghasilkan kenaikan nilai CBR *soaked* pada tumbukan 25x terbesar dan menghasilkan penurunan nilai kuat tekan bebas (q_u) terendah.
2. Diantara campuran *coconut coir fiber* dengan kadar 3% dan 5%, campuran *coconut coir fiber* dengan kadar 5% menghasilkan kenaikan nilai CBR desain *unsoaked* terbesar dan nilai kuat tekan bebas (q_u) terbesar, sedangkan campuran *coconut coir fiber* dengan kadar 3% menghasilkan kenaikan nilai CBR *soaked* pada tumbukan 25x terbesar.
3. Campuran *coconut coir fiber* dengan kadar 5% menghasilkan nilai CBR desain *unsoaked*, kuat tekan bebas (q_u), dan kuat geser *undrained* (C_u) terbesar sedangkan campuran *coconut coir fiber* dengan kadar 3% menghasilkan nilai CBR *soaked* dengan tumbukan 25x terbesar.

5.2 Saran

1. Perlu dilakukan uji dengan persentase campuran *cocopeat* dan *coconut coir fiber* yang lebih bervariasi.
2. Perlu dilakukan uji dengan panjang *coconut coir fiber* yang lebih bervariasi.
3. Perlu dilakukan uji *index properties* dan uji batas – batas *atterberg* untuk setiap campuran tanah.

DAFTAR PUSTAKA

Das, Braja M., Endah, Noor, Mochtar, Indrasurya B. (1995a). *Mekanika Tanah Jilid 1*, Erlangga, Jakarta.

Das, Braja M., Endah, Noor, Mochtar, Indrasurya B. (1995b). *Mekanika Tanah Jilid 2*, Erlangga, Jakarta.

Head, K. H. (2006). “*Manual of Soil Laboratory Testing Volume 1: Soil Classification and Compaction Test*. 3rd ed. Whittles Publishing. United Kingdom, UK.

Head, K. H. (2011). “*Manual of Soil Laboratory Testing Volume 2: Permeability, Shear Strength, and Compressibility Tests*. 3rd ed. Whittles Publishing. United Kingdom, UK.

Lakshmi, S. Muthu, Sasikala, S., Padmavathi, V., Priya, S., Saranya, V. (2018), “Utilization of coconut coir fiber for improving subgrade strength characteristics of clayey sand”, *International Jurnal of Inovative Research in Science Engineering and Technology*, e-ISSN: 2395-0056, p-ISSN: 2395-0072

Mahdi, Hejazi Sayyed, Sheikh, Zadeh Mohammed, Mahdi, Abtahi Sayyed, dan Ali, Zadhoush. (2012). “A simple review of soil reinforcement using natural and synthetic fibers”, *Construction and Building Materials* 30, 100-116

Mali, Shivanand, dan Singh, Baleshwar. (2014). “Strength Behaviour of Cohesive Soils Reinforced with Fibers”, *International Journal of Civil Engineering Research*, ISSN: 2278-3652

Nature Bounty PLC. (2001). “What is Cocopeat?”. (<https://www.ecopeat.com/cocopeat.html>, diakses 7 maret 2019)

Singh, H. P., dan Bagra, M. (2013), “Improvement in CBR value of soil reinforced with jute fibers”, *International Jurnal of Inovative Research in Science Engineering and Technology*, ISSN: 2319-8753

Singh, R. R., dan Mittal, Er. Shelly. (2014) “*Improvement of local subgrade soil for road construction by the use of coconut coir fiber*”, *International Jurnal of Innovative Research in Science Engineering and Technology*, eISSN: 2319-1163, pISSN: 2321-7308