

Application of industrial cement in the durability of degradable bioplastic pot

Abstract

This paper presented the result of an experimental study investigating the durability of degradable bioplastic pot with additive cement industry. The ratios of degradable bioplastic were varied from B10%:N90%, B30%:N70%, B50%:N50%, B70%:N30 and B10%:N90% and mixed with 6%, 9% and 12% of industrial cement. Pots were prepared, tested for 90 days for Soil Burial Test in order to determine the biodegradability rate of pot and tested in the laboratory for Water Absorption Test in order to determine the presence of industrial cement as an additive decrease the moisture absorption capacity of the degradable bioplastic. The result of weight loss percentage shows that the lowest percentage of weight loss of soil burial test above ground was 31.80% for B10%:N90% mixed with 12% industrial cement. The highest weight loss percentage 100% was B90%:N10% mixed with 6% below ground after 90 days of soil burial test. The highest 75% of water absorption percentage of degradable bioplastic was B90%:N10% mixed with 6% industrial cement and the lowest 12% of water absorption percentage was B10%:N90% mixed with 12% industrial cement.