

## **ABSTRACT**

The experimental study conducted is a new approach on carbon sequestration using biochar in order to improve the sustainable development by absorbing the atmospheric CO<sub>2</sub> on concrete. Commercially available biochar was used. It is utilized as a carbon sequestration agent. In this investigation, the work describes the feasibility of using biochar in concrete production as partial replacement of cement. The cement has been replaced by biochar accordingly in the range of 1% and 3% by the weight of cement for M-20 mix. This concrete mixtures produced, tested and compared in terms of compressive strength test with the conventional concrete for 7days and 28 days. Concrete with biochar showed absorption of atmospheric CO<sub>2</sub> which was evidenced from the result through FTIR and Phenolphthalein Indicator test.