

ABSTRACTS FOR POSTER PRESENTATIONS

Potential Mixture of Coir Fibre and Palm Kernel Shell in Concrete: A Review

Noor Shafini Roslee, Salinah Dullah

Faculty of Engineering,
Universiti Malaysia Sabah, Kota Kinabalu,
Sabah, Malaysia

Corresponding authors' email:
shafini_2306@yahoo.com,
salinahd@ums.edu.my

Keywords: waste material, coir fibre, palm kernel shell, public health

Background: Globally, 998 million tonnes of agricultural waste is produced per year and in Malaysia, 1.2 million tonnes of agricultural waste is disposed of into landfills annually. Concurrently, increasing demands of concrete leads to vary of research conducted on improving cement production methods and formulating reduction or eliminate CO² emissions. **Objective:** This research aims to promote the idea of using natural waste such as coir fibre and palm kernel shell as partial replacement of concrete materials in concrete mixture to improve the properties of concrete and instantaneously helps in turning waste into useful product, hence decreasing environment pollution from the waste and CO² emissions. **Methods:** The replacement materials mix with cement, aggregates, and water to produce concrete which hardens within time. The properties and strength of modified concrete obtained from conducting laboratory test such as slump test on fresh concrete, compressive, flexural, and water absorption test on harden concrete. **Results:** Past research indicates that the replacement of cement and aggregates by waste materials either in part or in whole significantly contributed to improves the mechanical properties of concrete. **Conclusion:** In a nutshell, this research will give a new perspective on the potential use of natural waste materials and alternative ways to manage the waste materials to ensure the security of public health.

