

**SYNERGIC EFFECT OF MAIZE STRAW ASH AND RICE HUSK ASH ON
STRENGTH PROPERTIES OF SANDCRETE**

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ABSTRACT

The synergic effect of maize straw ash and rice husk ash on the strength properties of ash substituted sandcrete is investigated in this paper. Ash materials were obtained after burning the wastes from maize straw and rice husk. Since binding materials obtained from various sources, mostly as ashes when used as partial replacement for ordinary Portland cement in cement based application, play an important role not only towards sustainable strength development but in reducing the construction cost as well. In this paper, two binary blends of sandcrete substituting 15% ordinary Portland cement (OPC) with 15% maize straw ash (MSA) and 15% rice husk ash (RHA), also, three ternary blends of sandcrete substituting 15% ordinary Portland cement (OPC) with 10% maize straw ash (MSA) and 5% rice husk ash (RHA), also with, 5% maize straw ash (MSA), and 10% rice husk ash (RHA). 100% ordinary Portland cement (OPC) as a control specimen, which were subjected to destructive compressive strength test, after curing till 28days. It was clearly shown that neither the 15% substituted maize straw ash nor the 15% rice husk ash had a better combination for the synergic effect. Rice husk ash and maize straw ash can be used as substitution for ordinary Portland cement.

Keywords: Sandcrete, Maize straw ash, Rice husk ash, Cement, Strength properties.