

## A NEW METHOD FOR MANUFACTURE OF COST EFFECTIVE BRICKS

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### ABSTRACT

The paper is addressed to manufacture low-cost durable bricks. Due to rapid increase in population and urbanisation, the conventional type of bricks has become scarce. So, to meet the demand a cost-effective brick have been manufactured using the agricultural waste such as rice husk ash (RHA), sugarcane bagasse ash (SCBA), and bamboo leaves ash (BLA). The crushing strength is determined for different proportions at different burning and cooling temperatures by using Universal Testing machine (UTM) for optimization and are named as Bio-bricks.

Three types of bricks have been prepared in different proportions of mix and its compressive strength and Tensile strength were determined. On observation, these bricks are as per the recommended strength of Indian Standard for a building material and usage. The advantage of these Bio-brick is cost-effective, sustainable, acts as good heat and sound insulator and has overall negative carbon footprint. The watermelon seeds may also be used for adding strength, but it is not attempted here. Based on the strength these bio bricks may be used in building the low-cost houses with a combination of wood or metal structural framework.

Due to its porosity and low density these bio-bricks it maintains humidity of the buildings, so it is more suitable for hot climate like India.

**KEYWORDS:** Agro- Waste, Bio Bricks, Cost Effective, Durable

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