Abstract
Accumulation of unmanaged agroindustrial solid wastes especially in developing countries has resulted in an increased environmental concern. Recycling of such wastes as a sustainable construction material appears to be a viable solution not only to the pollution problem but also an economical option to design green buildings. This paper studies the application of several agroindustrial wastes in brick manufacturing, which include cocoa shell, sawdust, rice husk and sugarcane. First, the mineralogical and chemical composition of the wastes and clayey soil were determined. Next, bricks were fabricated with different quantities of waste (5%, 10% and 20%). The effect of adding these wastes on the technological behavior of the brick was assessed by compressive strength, flexural strength and durability tests. Based on the results obtained, the optimum amounts of agroindustrial waste to obtain bricks were mixing 10% of cocoa shell and 90% of clayey soil. These percentages produced bricks whose mechanical properties were suitable for use as secondary raw materials in the brick production.

Keywords
Agroindustrial wastes, bricks, recycling, construction material, engineering properties.