

# PEATKOL Dots: A Sustainable Substitute for Charcoal Made from Carbonized Coir Pith

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## Abstract

Biomass briquettes, particularly bio charcoal briquettes derived from coir pith, are emerging as sustainable and renewable alternatives to traditional coal and charcoal. This research paper investigates the development and potential of PEATKOL dots, a novel sustainable alternative to charcoal. The study explores the production process of these dots from carbonized coirpith, a readily available agricultural coconut product. The production process involves charcoal-making from coir pith, followed by briquette formation using a C 45 steel die. The composition of the briquette mixture, including charcoal particles, binder, and accelerant, was optimized to achieve the highest calorific value. The study also evaluated the flammable properties of the briquettes, including burning rates and ignition time. Proximate analysis was conducted to determine key parameters such as moisture content, volatile matter, ash content, calorific value, fixed carbon, and sulphur content. Results indicate that the selected species of charcoal briquettes exhibit favourable fuel characteristics, complying with international standards. The paper also assesses the physical and chemical properties of PEATKOL dots, comparing them to traditional charcoal.

**Keywords** - Biomass, Briquettes, Peatkol, Carbonisation, Analysis.