OPTIMALISASI PROSES PENGERINGAN BIJI KOPI MENGGUNAKAN ALAT PENGERING *TRAY DRYER* BERBASIS PEMANAS PTC

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ABSTRACT

This study aims to design a coffee bean dryer using a Tray Dryer equipped with a PTC heater, with the goal of accelerating the drying process compared to traditional sun drying methods. The device uses a PTC heating element as the primary heat source. To monitor the temperature inside the dryer, a DS18B20 sensor is used, while a Soil Moisture sensor monitors the moisture content of the coffee beans. The entire system is controlled by an Arduino Nano microcontroller and features a 20x4 LCD to display real-time temperature and humidity conditions. Test results show that the device is capable of maintaining stable temperature and humidity levels, and can dry coffee beans significantly faster than traditional methods. Therefore, this tool can assist coffee farmers in improving drying efficiency and accelerating the distribution or sale of coffee beans.

Keywords: coffee bean dryer, Tray Dryer, PTC heater, Arduino Nano, temperature sensor, humidity.