

Subject : Construction and Efficiency Test of Solar Drying
Cabinet for Nipa Palm Drying for Community Enterprise.

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Abstract

The objectives of research were to 1) prototyping renewable energy from solar dryers can be used by a niba plam 2) compare the performance and efficiency of solar energy for use a niba plam drying 3) analyze the breakeven use of electrical power for the ball from using the replacement power type of solar energy.

The research was made possible by the solar dryers for drying of the product for the enterprise community. Dryer nipa plam solar, the solar collators has been heated by the radiation of the sun, considering efficient drying. The quality of the product from the drying and the specific energy consumption of drying. The Dryer are built is good. Which is determined by several parameters that represents a effectiveness.

The research results nipa plam drying, by setting the temperature control inside the dryer is level 3 50 60 70 C. The drying time of 6 hours. The results showed that the intensity of solar average 750.58 W / m² initial moisture content of 39.65% dry basis and moisture content 17.04% dry basis. The moisture will decrease with time and temperature rise. Drying the nipa plam the solar drying well and clearly, when the temperature exceeds 50 degrees celsius control. Compared to the energy to experiment with nipa plam drying oven.

Compared to the energy to experiment with nipa plam drying oven. The need for electrical power up to 6 kW - hours a day. The cost of using the dryer nipa plam the solar. The amount invested by the prototype dryer with solar energy, compared to electric dryers. The solar dryers are cost effective and energy efficient than electric dryers, electric.

Keywords : Heat pipes, Intensity of solar, Solar drying cabinet, Nipa Palm