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Design, Fabrication and Performance Evaluation of Solar Dryer for Thai Glutinous Rice, Khao Tan Rice Cracker Herbal

Thai glutinous rice, khao tan rice cracker herbal is a popular Thai traditional snack, which is economically important for local entrepreneurs in Mahasarakham province, Thailand. Drying process is an important step in acquiring good quality for final products. The main scope of this research is to assess the feasibility of using the heat demand –temperature function for heat demand forecast. The dryer capacity was about 100 kg. Drying time was about 19 hr to reduce initial moisture content of the khao tan rice cracker herbal from approximately 90% dry basis to below 8% dry basis. The physical properties of dried khao tan rice cracker herbal were found to be acceptable. Based on resultant energy efficiency, the new solar energy dryer. Overall, the proposed solar energy dryer proved to reduce operational energy consumption, operating cost and still provide acceptable products qualities.

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