

Thesis Title	Development of a solar grill
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### ABSTRACT

The aim of this thesis was to investigate the feasibility of the direct use of solar energy for cooking purpose. Application was made for designing a solar grill for private use in Thailand. The solar grill was made by a wood box and two stainless reflectors. It can contain six skewers corresponding approximately to 0.5 kg of meat.

The box dimensions are as follows: 30 cm wide: 30 cm long: 7 cm high. The product was chicken cut into 2 cc pieces.

Investigation was mainly made for two design: with the first, the solar grill was of simple design without any storage medium whereas with the second, a sand layer was located below the absorber.

The experimental tests indicated that the temperature of product in the solar grill with sand was higher than that without sand ensuring, therefore, the achievement of cooking process. The cooking time was about 35 min. To improve the taste of product a metallic grill should be layed out on the skewers with a fine oil layer. Moreover, the developed solar grill can be used during cloudy and unsunny days; to this end charcoal could be placed inside the box acting therefore as a common BBQ. Finally, as the cost of the designed solar cooker is rather low, about 800 Baht, the potential for its promotion is, therefore, very promising.

Keywords : BBQ / Cooking / Skewer