

# Mechanical expression of oil from grated and preheated coconut meat

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### ABSTRACT

Coconut oil was extracted from grated coconut using a hydraulic pressing method after the coconut gratings were preheated at heating medium air temperature in the range of 30-90°C and heating durations ranging from zero to 45 minutes. Oil yields from the preheated copra indicated that adding distilled water to fresh grated copra in the ratio of 3:1 prior to heating the mixture in sealed plastic bags resulted in higher oil yield at all heating temperatures when compared to unheated copra. The oil yield also increased with increase in heating medium temperature up to 70°C but declined with any further rise in heating medium temperature. Lowering the moisture content by drying copra in an air oven at 40°C followed by oil extraction resulted in an increase in oil yield. It was noted that the oil yield increased with increase in the duration of preheating at all temperatures although the maximum increase was observed at heating temperatures of 50 and 60°C. Grating the coconut to flakes of approximately 1mm thickness had the effect of increasing oil yield when compared to 2mm thick flakes.

**Keywords:** copra, oil extraction, oil yield, heating temperature, heating duration.