

# Root nodule bacteria of Pterocarpus macrocarpus Kurz. at Sakaerat forest.

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## **ABSTRACT**

The root nodule bacteria were isolated from *Pterocarpus macrocarpus* Kurz. at Sakaerat Forest, Nakornratchasima province. All of the 20 isolates were Gram negative rod with circular, opaque or translucent and convex colony. Most of them produced alkaline and serum zone in litmus milk while 11 isolates produced alkaline in yeast extract mannitol agar. The pattern of carbohydrate utilization and fermentation were similar among all of the isolates. They were identified as *Rhizobium* spp.

They were inoculated to the seedling of *Pterocarpus macrocarpus* Kurz. and investigated for nodulation and symbiotic nitrogen fixation after 13 weeks. Nodules were formed by 11 isolates that resulted in increasing of the plant dry weight compared to the uninoculated control. The isolate No. 12 was the most effective strain in its ability to form nodules and symbiotic nitrogen fixation with the plant.

Analysis of the soil collected from the area that *Pterocarpus macrocarpus* Kurz. grown in Sakaerat forest showed that the soil was acid and low moisture content. The nitrogen content of the soil was in the range of 0.05 to 0.06 %.