

Antioxidant and antibacterial activities of different solvent extractions from *Cassia siamea* (Lamk.) leaves

ABSTRACT

The objective of this study was to determine the yield, total phenolic content (TPC), antioxidant and antibacterial activities of the extract from *C. siamea* leaves by using different solvent extractions. The antibacterial potential was tested by disc diffusion method against seven strains of bacteria, *Staphylococcus* sp. BCC 5357, *Bacillus cereus* ATCC 33019, *Vibrio parahaemolyticus* ATCC 17802, *Escherichia coli* ATCC 25922, *Salmonella typhimurium* ATCC 14028, *Salmonella enteritidis* ATCC 13076 and *Pseudomonas aeruginosa* BCC 30506. Methanol extractions showed a significantly higher yield, TPC, antioxidant and antibacterial activity than other solvents ($p < 0.05$). The zone of inhibition of the extracts ranged from 6.30 to 9.30 mm irrespective of the solvents used in the extractions. Gram positive bacteria showed significantly higher inhibition than gram-negative bacteria. This study confirmed that various solvent extractions of *C. siamea* leaves showed antioxidant and antibacterial activities against various microbes.

Keyword: Antibacterial activity; *Cassia siamea* leaves; DPPH; FRAP; Solvent extract