

**DETERMINATION OF TOTAL PHENOLIC CONTENT AND
ANTIOXIDANT ACTIVITIES IN MANGO PEEL EXTRACTS**

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ABSTRACT

DETERMINATION OF TOTAL PHENOLIC CONTENT AND ANTIOXIDANT ACTIVITIES IN MANGO PEEL EXTRACTS

This study was carried out to evaluate the antioxidant activities and to determine the total phenolic content (TPC) of three types of mango (*Mangifera indica*) peels such as 'Maha' mango, 'Lemak Manis' mango and 'Chokanan' mango. Ethanol was used as a solvent. The phenolic contents measured by using total phenolic content (TPC) test and the antioxidant activity measured by using ferric reduction antioxidant power (FRAP) and DPPH (1,1 – Diphenyl -2- picrylhydrazyl) assays. The results obtained showed that 'Maha' mango peel extract contained a higher value (4858.60 mg \pm 0.0028 GAE/g) and followed by 'Lemak Manis' mango (4632.42 mg \pm 0.0021 GAE/g) and 'Chokanan' mango (4260.00 mg \pm 0.0018 GAE/g). The quantities of phenolic content refer the sour taste of the mango. The antioxidant activity for FRAP method showed the highest phenolic content indicated high reducing power. It proved that 'Maha' mango peel extract had the highest amount of phenolic compounds and high reducing power for antioxidant activity. The DPPH test was showed three types mango (*Mangifera indica*) peel extracts had strong antioxidant activities to trap free radical but lower than BHA/BHT.