

## Assessment of antioxidants, anti-radical and anti-lipid peroxidation activities of three honey samples

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### ABSTARCT

Most of the chronic diseases prevalent today are associated with oxidative stress. Prevention of this oxidative stress could be one of the effective means of managing these diseases. This, therefore necessitates the supplementation of antioxidants so as to delay, prevent or remove oxidative damage. Honey is one of the well-known dietary antioxidant and it also possess many medicinal effects. It has also been proven that the therapeutic potential of honey is always associated with its antioxidant effect against reactive oxygen species. In the present study the antioxidant activities based on free radical scavenging and lipid peroxidation inhibition were investigated in three different varieties of honey and the results were correlated with the total phenolic acids, flavonoids and total antioxidants of the respective samples. From the results obtained it was observed that the highest free radical scavenging activity and minimum IC<sub>50</sub> value was recorded with Manuka honey, followed by Native, and commercial honey. The lipid peroxidation inhibition was also observed to be maximum in Manuka, followed by native and commercial honey. The antioxidant contents were also found to correlate strongly with the antioxidant activities. From the results it has been speculated that the natural honey possess significant antioxidant properties when compared to the processed commercial honey and in addition it has been observed that the activity of Indian native honey was almost equivalent to the gold standard Manuka honey.