

## ABSTRACT

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### **QUANTIFICATION OF PHENOLIC COMPOUNDS AND THE ANTIOXIDANT CAPACITY IN THE FLESH OF FIVE INDONESIAN MANGO CULTIVARS**

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Mango is a fruit that is widely bred and consumed in Indonesia. Mango flesh contains various bioactive compounds that have potential health benefits, such as phenolics, flavonoids and carotenoids. The flesh extract of Harumanis, Indramayu, Madu, Golek and Manalagi cultivar are checked for their total phenolics, total flavonoids, total carotenoids and their antioxidant capacity using DPPH assay.  $IC_{50}$  of the mangoes extracts ranged from  $2.92 \pm 0.22$  mg/L (Indramayu) to  $4.41 \pm 0.17$  mg/L (Manalagi). Phenolics, flavonoids, carotenoids and organic acid show positive correlation with antioxidant capacity, while carbohydrate has negative correlation. Synergistic interaction between the groups measured is well-known, and further research on mangoes is much needed, especially for Indramayu which has high potential as functional food ingredient and similarities in antioxidant compounds content to foreign mangoes. This research can also be used as a leverage to promote the production and export of local mangoes.

Keywords: antioxidant, carotenoids, DPPH, flavonoids, mango flesh, phenolics

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