

# Characterizations of major antioxidants at harvest-maturity and edible-ripening stages of three mango (*Mangifera indica* L.) cultivars

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## Abstract

The contents and their dynamic arrangements of six antioxidants and total antioxidant capacity in the three mango (*Mangifera indica* L.) cultivars, 'Tainong No.1' ('Haden' × 'Irwin'), 'Yuexi No.1' (the progeny of 'Carabao') and 'Chunhuang' ('White' × 'Keitt'), were estimated at fruit harvest-maturity (harvesting stage) and edible-ripening stages in South China. The results showed that, both at fruit harvesting and edible-ripening stages, total carotenoid contents and total antioxidant capacity were in the order: 'Yuexi No.1' > 'Tainong No.1' > 'Chunhuang'; the ascorbic acid (AA) content was 'Tainong No.1' > 'Yuexi No.1' > 'Chunhuang'; total polyphenol content was 'Yuexi No.1' > 'Chunhuang' > 'Tainong No.1'; reduced glutathione (GSH) content was 'Tainong No.1' > 'Chunhuang' > 'Yuexi No.1'. At fruit harvesting stage, total flavonoid content was 'Tainong No.1' > 'Chunhuang' > 'Yuexi No.1' and  $\alpha$ -tocopherol content was 'Yuexi No.1' > 'Tainong No.1' > 'Chunhuang'. And at fruit edible-ripening stage, total flavonoid content was 'Yuexi No.1' > 'Tainong No.1' > 'Chunhuang' and  $\alpha$ -tocopherol content was 'Tainong No.1' > 'Yuexi No.1' > 'Chunhuang'. In addition, total flavonoid content at edible-ripening stage was significantly higher than that at harvesting stage in each cultivar, and 'Yuexi No.1' possessed a conspicuous high level at this stage.