

**Title** Antioxidant activity of fruits produced in Taiwan  
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### **Abstract**

Antioxidant activity in mature fruits of 36 species and varieties produced in Taiwan was analyzed by the ferric reducing antioxidant power (FRAP) assay. Mulberry, guava, *Rubus pectinellus*, and grapes had the highest values (>70mmol/100g edible part); strawberry, ponkan, sweet orange, papaya, sugar, apple, litchi, shaddock, and *Rubus formosensis* had high values (40-70 mmol/100g); red pitaya, pineapple, tankan. Indian jujube, carambola, persimmon and mango had medium values (20-40 mmol/100g); Japanese apricot, yellow pitaya, banana, wax apple, and white pitaya had low values (10-20 mmol/100g); and pear had very low values (<10 mmol/100g). Antioxidant values varied with different varieties in litchi, shaddock, persimmon, mango, and pears. The contents of soluble free phenolic (SFP) compounds and ascorbic acid were measured and had low correlation with antioxidant values. Grapes extracted with peel and pulp had higher antioxidant activity, vitamin C, and SFP content than with only pulp. Wax apple harvested in the winter had higher antioxidant activity while those in the spring had more SFP content. No significant difference in antioxidant activity was found in strawberry once it reached the color-turning stage. On the other hand, ponkan harvested in October had the highest antioxidant activity, those harvested in October and November had higher vitamin C content; whereas, those harvested in November showed the highest SFP content. Antioxidant activity and vitamin C content decreased with an increasing storage period in ponkan; whereas, SFP content reached the lowest value at the second month of storage. These results suggest that the antioxidant activity of fruits varied with fruit species, varieties, maturity, tissues, production season, and storage period, and the antioxidant value did not seem well correlated to SFP or vitamin C content.