

## Nutritional Quality and Health Promoting Properties of Tamarillo Fruit from South Africa

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### Abstract

There is a growing interest in the use of Tamarillo fruit (*Solanum betaceum* Cav.) in food formulation due to its low-calorie count, high dietary fibre, vitamins, minerals as well as its health promoting properties. The production of the fruit, which presents an egg-shape, has been commercialized in countries like New Zealand where up to 450 tons are produced per year. Although the nutritional quality and health promoting properties of the fruit have been studied, there is paucity of information on Tamarillo fruit grown in South Africa. Also, varietal and environmental differences are known to influence compositional quality. This study investigated the nutritional components, total phenolic content (TPC) and antioxidant activity of whole fruit (unpeeled), pulp and peels of Tamarillo fruit. The highest protein content occurred with the whole fruit (7.98%), while the ash content was similar (approx. 5.04%) for all fruit parts. Significantly high ( $p < 0.05$ ) crude fibre (37.54 g/ 100g) occurred with peels while the lowest was recorded with the pulp. Potassium was the predominant mineral in all samples (up to 2428 mg/ 100g in pulp) followed by magnesium and calcium (highest in peels). The highest TPC occurred with the whole fruit, while the highest antioxidant activity was recorded in the peels. The findings of this work suggest potential application of Tamarillo fruit to improve the nutritional and bioactive compounds in food. However, the wide variation in compositional quality within the fruit suggests that the application of fruit parts must be specific to the attribute of interest.