

Title Titrateable acidity in kiwifruit, a comparison of different methods of analysis
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Abstract

Kiwifruit vary in acid content between 0.6 and 1.5% and the acid-sugar balance is an important characteristic governing the consumer preference. It is a common practice to analyse titrateable acidity (TA) but we are aware of two different approaches. Juice can be squeezed from the fruit so that TA in grams per 100 g juice is reported, or alternatively a measured weight of tissue can be sampled. TA measurements in fruit grown in warm climates have also been shown to drop quickly (up to 50%) after only 1-2 months in storage. This could be a feature of either the methodology used (juice titration) or of the climate. We therefore compared titrateable acidity measurements from juice and tissue samples from the same fruit in several different orchards in Italy and New Zealand. Although, juice TA declined by up to 30% after 4 weeks' storage in one orchard, in a few orchards an increase in juice TA was observed during the same storage period. By contrast, the results for TA using a measured amount of tissue were much more stable and showed no significant difference after storage. It seems that the pronounced drop in titrateable acidity reported in warm climates is a feature of the TA of the juice sample only. We recommend titrating a fixed amount of tissue as this measurement has previously allowed correlation with fruit taste and with orchard variations such as dry matter.