

Abstract

Flesh firmness is one of the most important blueberry characteristics for fresh market consumption, as it relates to consumer appeal and to post-harvest decay of fruit. Berry firmness is also an important attribute because it is considered to be a measurement of its freshness. This attribute is related to both the stage of maturity and the variety itself. Berries lose their firmness by loss of water and/or by changes in their structure. In this study, firmness was measured with a rapid nondestructive instrument (Durofel[®], CTIFL Copa, Technologic, France) and with a laboratory instrument (Texture Analyzer TaxT2i[®] Stable Micro System, UK), using a electrometer test. Samples of berries were collected weekly at different picking dates, then weighed and stored for 40 days under two different conditions: traditional (3°C, 85% R.H.), or innovative (adding ozone to the normal atmosphere). Statistical analysis of data showed a significant correlation between the two methods tested. The Durofel[®] offers an alternative and low cost measurement of blueberry firmness, but the result on the dial is are expressed as a unit of strength, but as a index having only a relative value. On the contrary, tests Will, Texture Analyzer gave a force deformation curve with international parameter of force max (N).