Determination of L-Ascorbic Acid in Hayward Kiwifruits by HPLC

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Liquid chromatographic methodology for determination of L-ascorbic acid in differently harvested “Hayward” kiwifruit were developed. High performance liquid chromatography (HPLC) Hewlett-Packard (USA), HP 1100 instrument equipped with UV detectors set at 254 nm was used to estimate the L-ascorbic acid content using on C18 column at 300°C. The influence of harvest time total soluble solid (TSS) contents of ‘Hayward’ kiwifruits (Actinidia delicosa) and NA cold storage on L-ascorbic acid content changes were studied to evaluate during 5 month storage. Kiwifruits were harvested periodically according to their total soluble solid (TSS) contents at levels of 4.5-5.5%, 5.6-6.5%, 6.6-7.5%, and 8.5-9.5%. The ‘Hayward’ kiwifruits were stored for five months at 0°C and 85-90% RH under NA storage conditions. Finally, in all results showed that storage conditions and harvest time according to TSS contents of ‘Hayward’ kiwifruits was affected the L-ascorbic acid content changes at 0°C during 5 months. These results suggest that the best harvest time of ‘Hayward’ kiwifruit for long term storage is the third or fourth period (6.6-7.5% and 8.5-9.5%, TSS content to conserved L-ascorbic content during long storage.