Impact of Different Fresh-cut Components in Apple and Cherry Tomato on Respiration Rate and Physicochemical Factors

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The fresh-cut fruit and vegetables consuming market have been shown remarkably extended to many different multi-component mixed produce in the market. The literature is limited regarding processed and mixed fresh-cut products, especially, there is no study on the effect of multi-component fresh-cut to overall respiration and physicochemical factors in Korea. In this study, we aimed to investigate on respiration and their physicochemical factors of the different combinations of fresh-cut apple slices and cherry tomatoes. The respiratory quotient (RQ) and physicochemical factors were evaluated at different components of fresh-cut at room temperature. Firstly, we found how many apple slices can be maintained the most stable gas condition of container with cherry tomatoes. The RQ value in 2 apple slices with various cherry tomatoes components was more stable compared to 1, 3, or 4 slices. The 2 apple slices with all components of cherry tomatoes were effective to stabilize their RQ and delay the enzymatic browning and taste deterioration. This result help to quantify the respiration rate and rate of multi-component mixed fresh-cut fruit, which can be used for packaging design of fresh-cut produce.

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