Abstract:

The potential of near infrared spectroscopy (NIR) for nondestructive estimation of Brix in strawberries has not been reported. The optical absorption spectra were measured using a spectrophotometer equipped with a fiber optic probe. A commercial spectral analysis program was used for multiple linear regression analysis. The wavelength region used for the analysis was 750 to 1100 nm. The original spectra were converted to the second derivative spectra. The two absorbances in the vicinity of 907 and at 882 nm were selected as the independent variables in regression equations for °Brix. The main contributors to °Brix were sugars (sucrose, glucose and fructose). Absorption of these sugars is included in the vicinity of 908nm. Other researchers had selected similar wavelengths for °Brix prediction in melons, onions, peaches, nectarins and pineapples. Therefore, it is concluded that NIR can estimate °Brix in strawberry fruits.