
About the Cover



The cover illustrates grapefruit juices prepared with different combinations of dilution rates and soluble solids concentration ($^{\circ}$ Brix, adjusted using sucrose); and subjected to varying heating temperature and time. The ranges for dilution rates and sucrose concentrations were based on approved levels in fruit beverages, while heating temperature and time combinations were based on the thermal inactivation kinetics of *Escherichia coli* O157:H7, a pathogen commonly associated with fruit juice-borne outbreaks. The various combinations of these factors were established using a Central Composite Design of Experiment with the objective of characterizing and quantifying their effects on color changes in grapefruit juices through Predictive Model Building. The study was able to establish and validate models for the various Commission Internationale de L'éclairage color value coordinates (lightness-darkness, redness-greenness, yellowness-blueness, etc.), which can be used to estimate color quality changes in heat treated grapefruit juices. The models established in this study may be used together with previously established *E. coli* inactivation models for a more comprehensive understanding and control of food quality and food safety. To learn more, go to page 65–79.

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