

#### Abstract:

This study was conducted to evaluate an interactance method as a non-destructive technique to detect internal breakdown in peaches and nectarines. Optical measurements at 550-950 nm range are able to clearly differentiate fruits with internal defects from healthy fruits. A classifier based on the ratio of the transmission at 805 and 720 nm was chosen as criterion to classify healthy and affected fruits. This transmission ratio and visual rating were correlated and the threshold between good and defective fruits was determined. The developed PCA model could correctly classify 82% of nectarines. From the remaining percentage 10.3% were defective nectarines classified as good. Errors of classification were mainly due to overlapping data between the threshold limits.