Abstract:

The purpose of study was to model texture acceptability of apples including the effects of normal, CA and ULO storage conditions. As texture quality attributes, the hardness, juiciness and crispness were analysed. During sensory assessment each of above texture attributes were judged in two aspects; gnostic and emotional. At the end panelists had to make a decision about the overall texture quality (in acceptability scale). Using stepwise regression analysis those attributes were determined that have a significant impact on the overall texture acceptability. The investigations covered 'Elstar', 'Jonagold' and 'Gloster' cultivars.

The importance of particular attribute in determining the overall texture acceptability depends on apples cultivar and may be additionally modified by atmosphere used for fruit storage. When the apple quality is considered in relation to storage atmosphere used, the importance of hardness preference in overall texture acceptability significantly increases. Irrespectively of cultivar and storage atmosphere this attribute explains up to 83% of overall texture acceptability. The firmness measurement could be useful in prediction of consumer's satisfaction provided that this would be considered in relation to storage atmospheres.