

Abstract:

X-ray computer tomography (CT) was used to image interior regions of intact 'Summerred' apples once a month during a storage period from September to January. The storage conditions were 3-4% O₂ + 1-2% CO₂ (CA) or normal air (NA) as control, 2°C (±1) and R.H: 90-95%. Full three-dimensional images of samples from the storage trials, using computerised tomography technique, are presented. The X-ray CT-images can be used to discriminate between apple flesh, skin, stem or calyx ends, in addition to structures like the core, seeds and the vascular bundles. It is also possible to detect the contrast between firm and soft apple tissue visualised as bright to darker colours. CT-scanning of fruits and vegetables can also be used to detect internal defects. The potential of the method is discussed.