

**Title** Cutting edge technologies in postharvest research: journey to the centre of the fruit  
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### **Abstract**

Food microstructure is at the base of many food quality properties. The EU project InsideFood focuses on the application of high technological techniques to inspect internal quality of fruit. Tomographic techniques such as magnetic resonance imaging, X-ray computed tomography, optical coherence tomography and confocal microscopy can be used to obtain information about the 3-D microstructure of the fruit which is believed to affect quality attributes such as texture. Optical techniques such as spatially or time resolved reflectance spectroscopy may also be used to obtain information about fruit microstructure. This microstructural information can be incorporated in multiscale simulation models to predict the cellular gas concentrations in fruit. Such models aid towards a better understanding of, for instance, controlled atmosphere storage of apple and postharvest behaviour of fruits and vegetables in general.