

Title Systems to characterise internal quality of fruit and vegetables  
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### **Abstract**

In this paper an overview will be given of recent developments in systems to measure the internal quality of horticultural produce. First vibration and impact based techniques to nondestructively measure the firmness of fruit will be introduced as an alternative to Magness-Taylor penetrometry. Next optical techniques (NIR and ATR-FTIR spectroscopy) to measure taste components of intact fruit and juices will be discussed. Novel techniques such as time and space resolved spectroscopy for the estimation of light absorption and scattering properties of vegetable tissue, as well as NIR hyperspectral imaging techniques will be addressed, as well as electronic tongues and biosensor arrays. This overview will be concluded with some recent developments in systems to measure aroma such as headspace fingerprint mass spectrometry and electronic noses.