

### Abstract:

Laser-induced fluorescence spectroscopy (LIFS) was non-destructively applied on sound and bruised apples. Furthermore, the technique was tested to measure surface browning of freshly cut banana slices, which were treated with different anti-oxidative additives.

Changes in the apple fruit composition after bruising become visible in intensity variations of the blue-green and red fluorescence. Tissue browning of banana slices was detected by changes in the blue-green fluorescence. Such effects were obtained before the symptoms could be visually noticed. Results of the present study point out the potential of LIFS to non-destructively detect physiological changes of fruit composition during the entire processing chain of fresh fruit.