Photon Mission

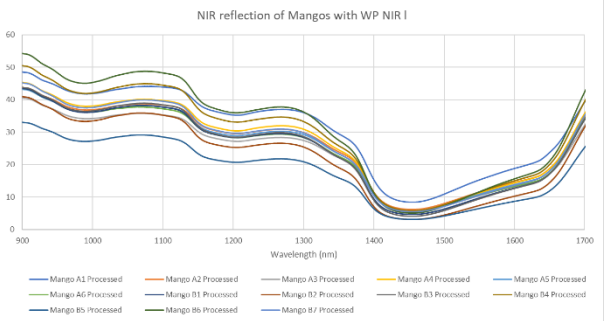
Photon Mission B.V. - Ratelwacht 3, 6641 EN, Beuningen, The Netherlands
+31 6 83938557 - info@photonmission.com - www.photonmission.com

Application Snapshot: NIR Reflection measurement of mangos

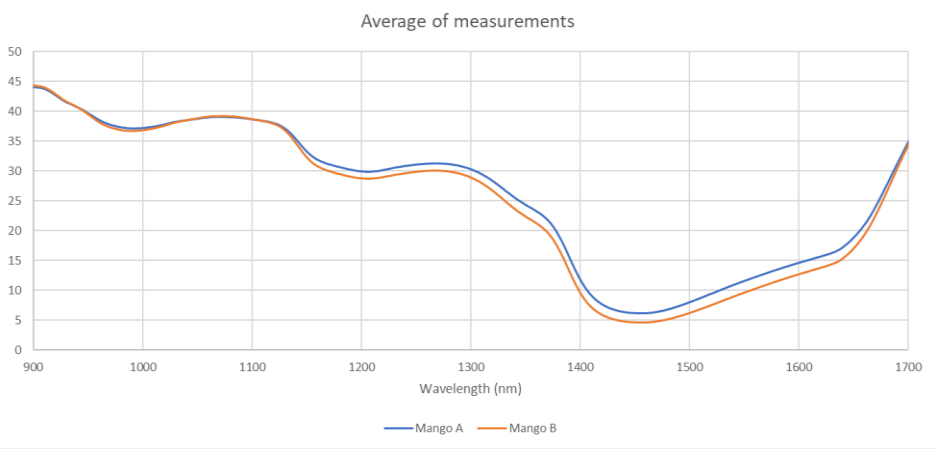
Mangos are stored in your local grocery, but before that they have already made a great journey. How do we know the quality of the mango you have in front of you? Or how do you know the shelf life of that mango?

NIR spectroscopy is being used more and more to determine these parameters for fruits and for vegetables. The NIR light penetrates trough the skin (of the mango) and is absorbed by certain molecules within your fruit or vegetable. By accurately and reproducibly measuring what is reflected back you can determine what is inside of your sample. And this can tell something about its quality.

The high throughput transmissive design with patented VPH grating enables you to do NIR reflection measurements with a miniature spectrometer faster than you have ever done them before. Speed is important; higher measurement speed means more samples can be measured every second, minute, hour and day.



In this graph we plotted the average of multiple measurements that were taken over the surface of the Mango.



Equipment used:

* WP NIR I spectrometer
* Halogen light source
* Reflection probe
* White standard
* WP Enlighten software

Tech tip:

Did you know that irregularities on the surface of fruits and vegetables can give you big variations between your measurements?

By taking multiple measurements and averaging these reproduce measurements can be obtained.