F-750
Produce Quality Meter

OPERATION TIP

Don't press so hard!

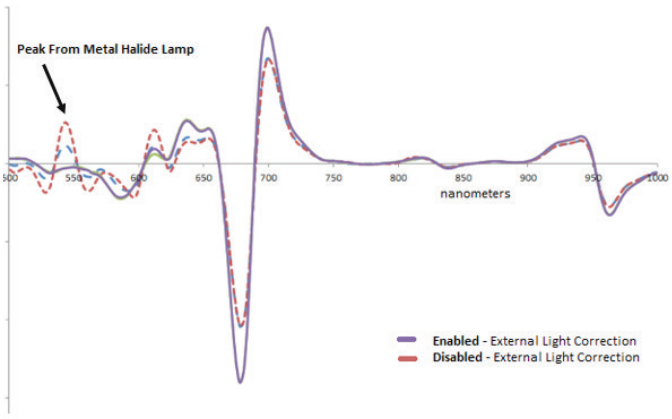
How the reference measurement compensates for stray light so you don't have to.

Problem

Often when scanning fruit with the F-750 Produce Quality Meter, users are concerned about small air gaps where the optics contact the fruit. To mitigate these gaps, users may press the fruit into the lens of the F-750, resulting in a light mark or bruise on the fruit. Bruising the fruit is not necessary to achieve stable and consistent readings with the F-750, and needlessly compromises the quality of the product being tested.

Solution

The F-750 Produce Quality Meter features a built-in reference measurement to account for external light penetrating through or around the fruit during a scan.



Validation

To verify that the correction routine is properly accounting for external light, the following test was conducted:

1. A table grape was centered on the lens of the F-750 Produce Quality Meter and spectra was collected with the correction routine enabled and disabled.
2. As shown in the red dashed line of the graph, when this correction is disabled there is a peak at ~550nm due to the Metal Halide ceiling lights at the Felix Instruments headquarters.
3. When the correction is enabled the 550nm peak is not apparent.
4. Dry Matter or Brix calibrations use the spectra window of 729-975nm. There is only a small difference between 729-975nm when the external light correction is enabled or disabled.