



The F-750 Produce Quality Meter uses near-infrared (NIR) spectroscopy, as [developed at Central Queensland University](#), to estimate quality metrics such as dry matter, Total Soluble Solids (TSS or brix), titratable acidity, and color. Working like a high-powered flashlight, the F-750 sends particles of light into a commodity, then measures the NIR light interactance with molecular components inside of the commodity to quantify user-selected traits.

The F-750 has a wide range of applications, from determining optimal harvest timing by assessing fruit maturity, to providing an objective analysis of produce quality of fruit in packing houses and upon import.

The F-750 is a handheld, fully integrated system, allowing users to operate it out in the orchard or inside the QA lab. Its simple, intuitive user interface makes it easy for anyone to use, while its model building software makes it customizable and versatile.

Features

- Non-destructive measurements
- Built-in GPS for easy crop mapping
- Transflective display for outdoor viewing
- Rechargeable/replaceable batteries that last all day
- Ability to create unlimited customizable models for specific varieties or locations
- Measures traits including, but not limited to:
 - Total Soluble Solids (TSS or brix)
 - Dry Matter
 - Titratable Acidity
 - Internal Color
 - External Color
- Fast and consistent ; scans take 4-6 seconds per sample



Specifications

Spectrometer:	Carl Zeiss MMS-1 Spectrometer
Range:	310-1100 nm
Spectral Sample Size:	3 nm
Spectral Resolution:	8-13 nm
Light Source:	Xenon Tungsten Lamp
Lens:	Fused silica, coated to enhance NIR
Shutter:	White painted reference standard
Display:	Sunlight visible transfective LCD screen
PC Interface:	USB and SD card
Data Recorded with Each Measurement:	Raw data, reflectance, absorbance, first derivative absorbance, second derivative absorbance
Power Source:	Removable 3100 milliamp hour lithium-ion battery
Battery Life:	1600+ measurements
Data Storage:	Removable 32 GB SD card
Body:	Heavy-duty powder-coated aluminum body
Dimensions:	7.1" x 4.75"W x 1.75" thick
Weight:	1.05 kg

