

# F-750

## Produce Quality Meter

The ability to measure apple quality rapidly and consistently is crucial for:

- ✓ Maximizing value
- ✓ Optimizing shelf-life
- ✓ Increasing consumer satisfaction

Traditional methods for measuring apple quality indicators have been destructive, subjective, and time-consuming.



Now, with the F-750 Produce Quality Meter, professionals in the apple industry can have superior control over the quality of their fruit without damaging the product.



### Growers

can accurately predict and anticipate optimum harvest time



### Packers

can systematically cull and classify produce with ease and efficiency



### QA Professionals

can build models based on objective metrics such as flavor index, and consumer preference



### Receivers

can rapidly inspect the quality of their imports for specific markets



## Product Features

- ✓ **Non-destructive tool** for measuring internal qualities of fruits
- ✓ Measures in under 5 seconds
- ✓ Collects data pre- or post-harvest
- ✓ Measures multiple qualities with a single scan
  - o Total Soluble Solids, or "Brix"
  - o Dry Matter
  - o Titratable Acidity
  - o External Color

# Getting Started:

## Building a model with the F-750 for non-destructive measurement of Dry Matter in Apples

In September 2015, the F-750 was used to build a model for apples that will allow for ongoing non-destructive measurement of dry matter with the instrument.

### 1 Collecting the Data

#### Non-destructive Measurement

47 apples were scanned using the F-750 to create a training set for a Dry Matter model.

#### Destructive Measurement

The same apple regions were destructively measured for Dry Matter using our documented Standard Operating Procedure.

### 3 Execution

Use the apple model repeatedly over the course of the season to non-destructively measure Dry Matter.



### 2 Building the Model

Training set values collected by the F-750 were matched with destructive reference values using Model Builder Software. Using a spectral range of 729-975 nm, a new Apple Dry Matter Model was created with an  $R^2$  of 0.72.



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