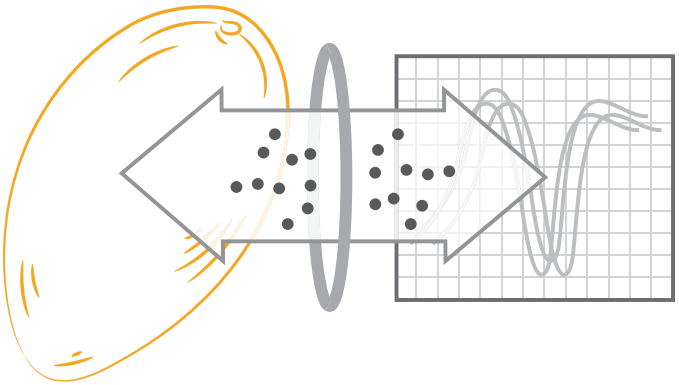
FELIX INSTRUMENTS
APPLIED FOOD SCIENCE

F-750

Produce Quality Meter

The F-750 Produce Quality Meter non-destructively and rapidly analyzes internal traits of fresh produce through near infrared analysis (NIR). The F-750 sends particles of light into the fruit and then measures the light interactance with molecules to assess the quantity of key quality traits. The model-building software included with the device allows for customizable calibration for specific varieties and regions.

Measure produce quality quickly and non-destructively!



Product Features

- Measures traits including:
  - Total Soluble Solids (TSS or brix)
  - Dry Matter
  - Titratable Acidity
  - Internal Color
  - External Color
- Light-weight, portable, and field-ready
- Fast and consistent—scans take 4-6 seconds per sample
- 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

(ES) Equipements Scientifiques SA - Département Bio-Tests & Industries - 127 rue de Buzenval BP 26 - 92380 Garches
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F-750 Specifications

Spectrometer	Carl Zeiss MMS-1 Spectrometer
Range	310-1100nm
Spectral sample size	3nm
Spectral resolution	8-13nm
Light source	Xenon Tungsten Lamp
Lens	Glass, coated to enhance NIR
Shutter	Gold-plated reference standard
Display	Sunlight visible transflective 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 4GB SD card
Body	Heavy-duty anodized aluminum body
Weight	1.05 kg

How to Make a Custom Model

- Scan 80-200 fruit samples with the F-750 Produce Quality Meter
- Destructively measure the desired quality parameter (i.e. measure Total Soluble Solids—TSS or brix—with a refractometer) on the scanned portion of the 80-200 fruit samples
- Using the included F-750 Model Builder Software, combine the spectral data with the destructive data to create a new model
- Now the F-750 can rapidly and non-destructively measure the desired quality parameter, saving you time and money

Applications

- Optimization of crop management and harvest-timing for fresh produce growers:

  Mangoes, avocados, apples, pears, citrus, tomatoes, stone fruit, blackberries, cherries, persimmons, grapes and many more!
- Postharvest quality management in cold storage and ripening rooms
- Import quality assessment
- Retail outlet inspection

Visit our website to learn more about how the F-750 is being used around the world.

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F-750 Analysis Chart

Tested: Proof of concept or initial tests completed Yes: Theoretically possible but not yet tested

Gray square indicates that the trait is not applicable for that commodity

	TSS/ Brix	DM	TA	Moisture	Firmness	Starch	Skin Color	Internal Color	Calcium	Vitamin C	Anthocyanin	Total Tannins	Capsaicin	Total Fat	Total Protein	Pack Density	Application note/video
Apple	tested	tested	yes	yes	yes	yes	yes	yes									✔
Avocado		tested		yes	yes		yes	yes									✔
Berries																	
Blackberry	tested	yes	tested	yes	yes		yes	yes			yes	yes					✔
Blueberry	tested	yes	yes	yes	yes		yes	yes			yes	yes					
Cherry	tested	tested	yes	tested	tested		yes	yes	yes	yes	yes	yes					
Citrus																	
Mandarin	tested		tested	yes	yes		yes	yes	yes	yes							✔
Navel Orange	yes		yes	yes	yes		yes	yes	yes	yes							
Grape																	
Table Grape	tested		yes	yes	yes		yes	yes			yes	yes					✔
Wine Grape	tested		yes	yes	yes		yes	yes			yes	yes					
Kiwi	tested	tested	yes	yes	yes		yes	yes									
Mango	tested	tested	yes	yes	yes		yes	yes									✔
Onion	yes	yes	yes	yes	yes	yes	tested	yes			tested						

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Pear	tested	tested	yes	yes	yes	yes	yes	yes									✔
Pepper	yes	yes	yes	yes	yes		yes		yes	yes	yes		yes				
Persimmon	tested	tested	yes	yes	yes		yes	yes									✔
Potato	yes	yes		yes	yes	yes	yes	yes			yes						
Stone Fruit																	
Apricot	yes		yes	yes	yes		yes	yes	yes	yes	yes	yes					
Nectarine	yes		yes	yes	yes		yes	yes	yes	yes	yes	yes					
Peach	tested		yes	yes	yes		yes	yes	yes	yes	yes	yes					
Plum	yes		yes	yes	yes		yes	yes	yes	yes	yes	yes					
Tomato	tested	yes	yes	yes	yes		yes	yes	yes	yes	yes						
Wax Apple/ Jambu	tested	yes	yes	yes	yes	yes	yes	yes									
Other Commodities																	
Espresso	tested		yes	yes								yes					
Meat				yes										yes	yes		
Powders				yes												yes	

Tested: Proof of concept or initial tests completed Yes: Theoretically possible but not yet tested

Gray square indicates that the trait is not applicable for that commodity

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