

F-750

Produce Quality Meter

QUICK-START GUIDE

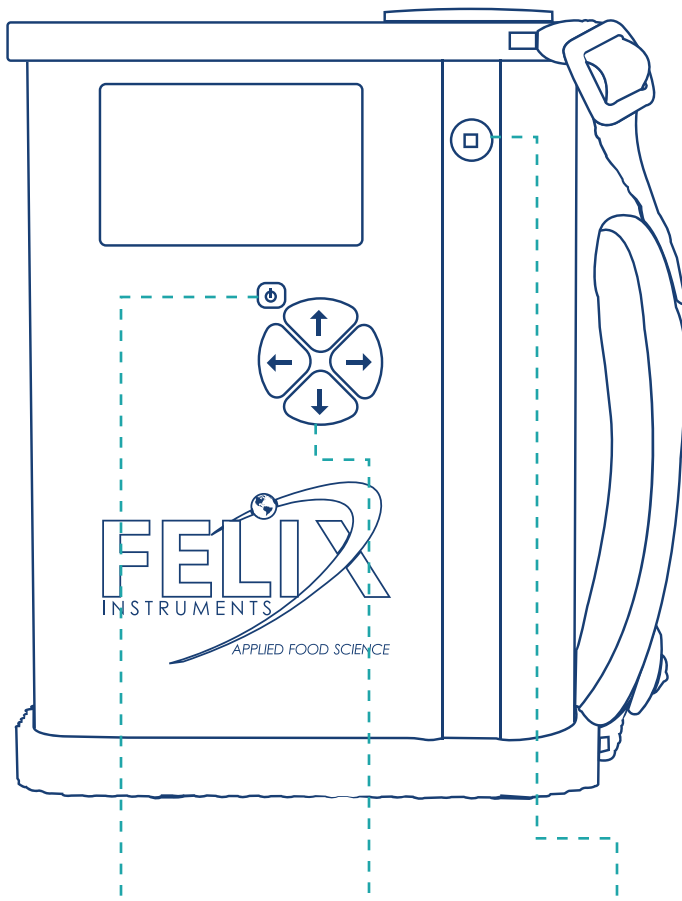
Out of the box

Use your F-750 Produce Quality Meter to measure the contents of brix or Total Soluble Solids (TSS), Dry Matter, Titratable Acidity, internal color, external color, and many other user-selectable traits in a range of materials and commodities.

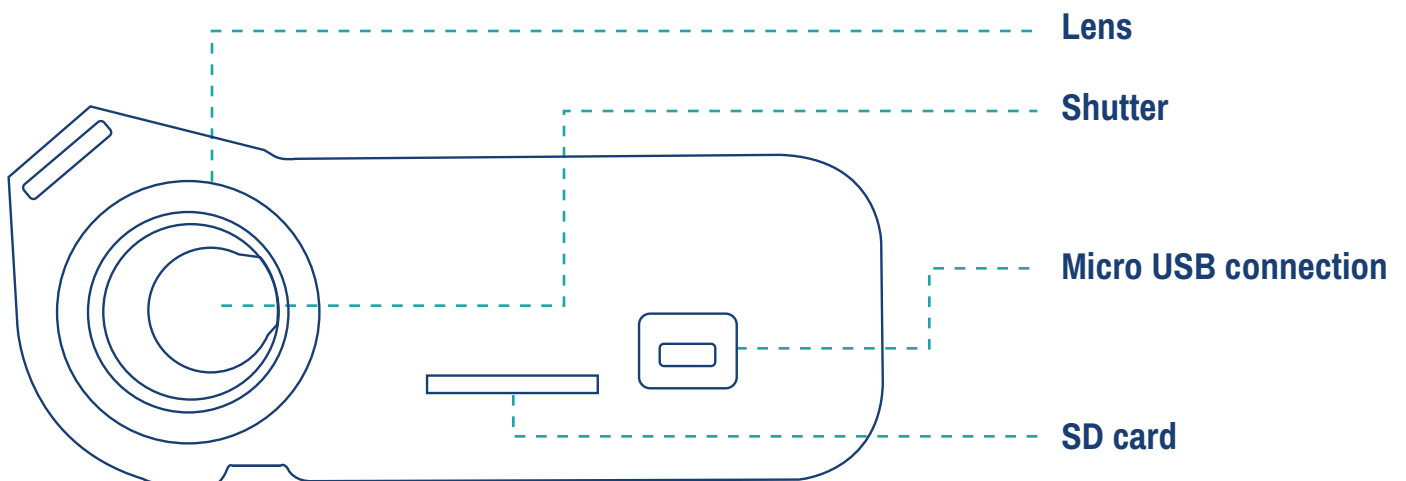
Your F-750 comes with pre-programmed demo models for:

- Apples
- Grapes
- Kiwi
- Mandarins
- Mangoes
- Pears
- Persimmons

Try these models to familiarize yourself with the F-750 and to begin making relative measurements right out of the box. For precise measurements, create a custom model using the Quick-Start Guide: Model Building procedure on the following page.



Power button **Directional keys** **Scan button**



Lens

Shutter

Micro USB connection

SD card

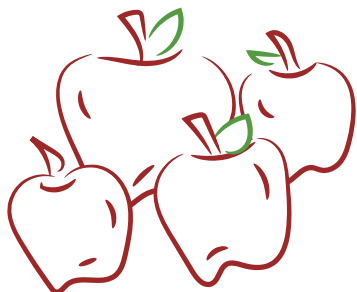
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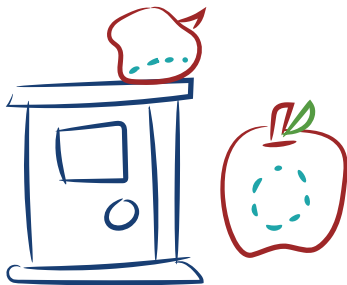
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Model building

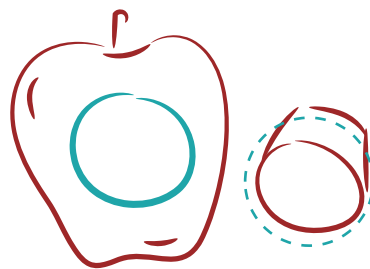
- 1** Gather samples across a range of maturity



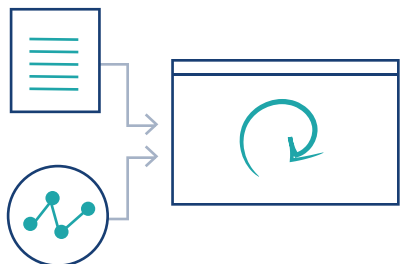
- 2** Create training set and scan samples



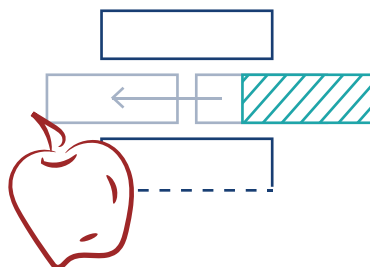
- 3** Destructively measure samples



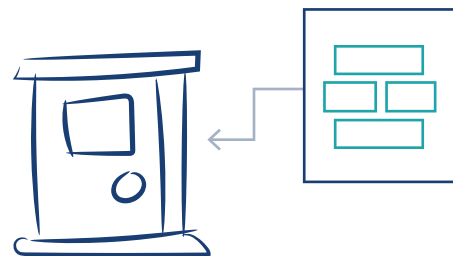
- 4** Load training set and reference values



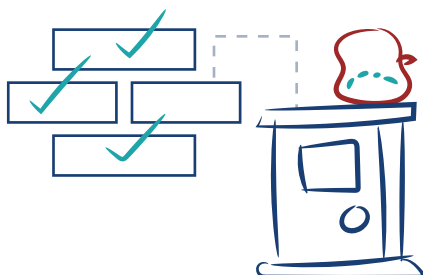
- 5** Build model



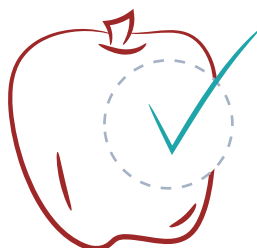
- 6** Load model onto F-750



- 7** Validate model



- 8** Start taking measurements non-destructively!



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Model building

The Model Building process is meant to enable the user to calibrate the instrument to their specific commodity. This process will result in a model which can then be used continuously on the F-750 for non-destructive measuring. This Model Building Quick Start Guide is meant to serve as an overview to the entire process. This document is supplemented by other training resources, like Training Slides and Training Videos. Please visit www.felixinstruments.com/support/F-750 to obtain these materials or e-mail support@felixinstruments.com for further questions.

1. Gather your samples

Aim for a broad range of maturities, varieties, or both.

- The range should represent maturation stages the user will want to evaluate.
- A good range will have a standard deviation of greater than 2 values from the mean.

2. Create a training set and scan your samples with the F-750

- Scan a uniform unblemished portion of flesh.
- Scan the fruit at 2-3 temperatures that are close to the temperature where you plan to use your finished model (ie 4 °C for cold storage models, room temperature, and 30 °C for preharvest use). This will result in 2-3 scans per sample.
- Scan in the exact same location each time.

Video guidance for this step can be found at: www.felixinstruments.com/support/F-750/video as “F-750 Model Building - Part 01 - Building the Training Set” and “F-750 Model Building - Avocado” and in the User Manual under “Creating a Training Set”.

3. Destructively measure your samples to obtain reference values

Your model results depend greatly on the accuracy of your reference method!

- The reference values will not be taken with the F-750.
- The reference value will be taken from the exact location of the scan, not the whole fruit!
- For each sample of fruit, there will be one representative reference value.

Video guidance for this step can be found at: www.felixinstruments.com/support/F-750/video as “F-750 Model Building - Part 01 - Building the Training Set”.

4. Load your training set and reference values into the F-750 Model Builder software

- Select 'import' to load the training set file into the 'training set' tab from the F-750 SD card.
- Import or paste your reference values into the 'reference values' tab.
- Ensure your specimen numbers match-up between the 'training set' and the 'reference values' tab!

Video guidance for this step can be found at: www.felixinstruments.com/support/F-750/video "F-750 Model Building - Part 02 - Using Model Builder".

5. Build a model and save it

- Select 'build'.
- Review your results in the 'model performance analysis' tab.
- Select the number of principle components you wish to use for the finished model.
- Hit "Save" to successfully complete the new model.

Guidance for this step can be found at: www.felixinstruments.com/support/F-750. See the FAQ: "How do I Determine Model Quality?" and the User Manual under "Using the Model Performance Analysis Tab".

6. Load the model onto the F-750

- The model must be loaded onto the SD card in the 'models' folder.
- Power on the instrument.
- Right arrow to select your model and begin taking scans!

7. Validate your model by scanning more fruit

- Now you're ready to scan additional fruit to validate your model!
- Scan several specimen.
- You can then use your selected reference method (used to calculate Reference Values in step 3) to verify that the values displayed on the F-750 are accurate.

Guidance for this step can be found in the User Manual.

Please visit www.felixinstruments.com/support/F-750 for further support tools or e-mail support@felixinstruments.com for further questions.



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