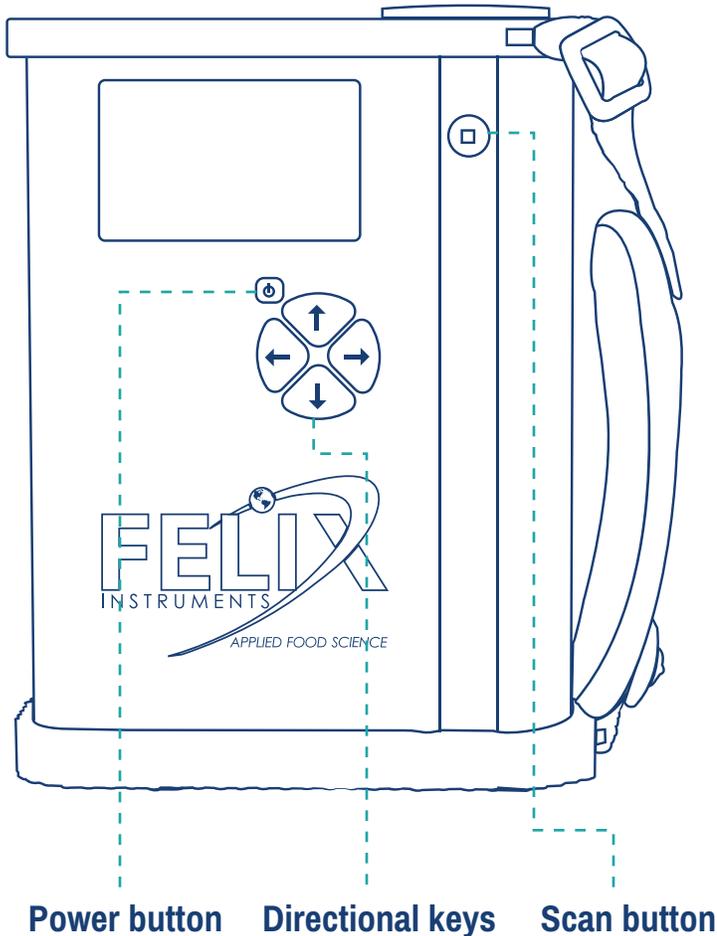


F-750

Produce Quality Meter



Tailoring Models

The process of tailoring models on your F-750 is important in a few different scenarios:

- 1) You would like to use one of the starter models provided on the Felix website with your own commodity
- 2) You would like to use a model created with one F-750 on an additional F-750 Produce Quality Meter
- 3) You would like to add in temperature variation to an existing model that was built at one temperature only.
- 4) You've had significant season-to-season variability in the performance of your calibration model

The first and second scenarios require model tailoring. It is not recommended that one uses one of the starter models without tailoring it nor that an individual transfers a model to an additional F-750 without tailoring that model to the different equipment. The error that this introduces would likely be too high for acceptable predictions.

Furthermore, the different sources of variation do not result in directional bias that can be easily accounted for. Sources of variation include instrument variation in the components of the optics as well as commodity variation (varietal, climate grown in, and season-to-season variation).

F-750

Produce Quality Meter

QUICK-START GUIDE

Tailoring models requires the collection of destructively measured samples, approximately 20% of the original sample population, for effective transfer with an acceptable prediction accuracy. After tailoring, the model should be validated with additional samples. Following validation, the F-750 can be used continuously for non-destructive measuring.

1. Save original model

This original model could be:

- A starter model from the Felix website that you are tailoring to your own F-750
- An original model from a first-generation F-750 that you want to transfer to a second-generation F-750

Note: It is important to keep a copy of this original model untailored for future modification. When you tailor this model following the continuing steps, **save as a separate file.**



2. Gather samples to tailor model

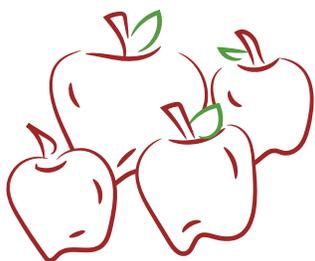
- The number of samples required to tailor the model is approximately 20% of the original sample population. For example, the Apple Starter Model was built with 80 specimen. To tailor this model, you would need to gather 16 samples.
- The range should represent maturation stages the user will want to evaluate.

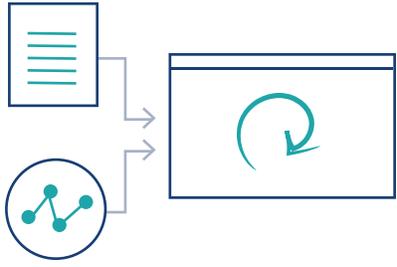
3. Create a training set and scan your tailoring samples with the F-750

- Scan a uniform unblemished portion of flesh.

4. Destructively measure your tailoring samples to obtain reference values

- The reference values will not be collected with the F-750.
- The reference value will be taken from the exact location of the scan, not the whole fruit!
- Reference value collection will differ depending on the trait one is desiring to predict with the F-750.





5. Load your training set into the F-750 Model Builder software as an addition to the original model.

- Open the original model
- Select 'import' to import the training set file with your additional specimen
- Select 'No' when it asks if you would like to overwrite the existing training set, as you want to add your tailoring samples to the original mode

6. Insert your reference values into the model

- Under the 'reference values' tab, input your destructively collected reference values
- Ensure that your specimen numbers under the training set tab match the specimen numbers under your reference values tab

7. Build the tailored model and save it

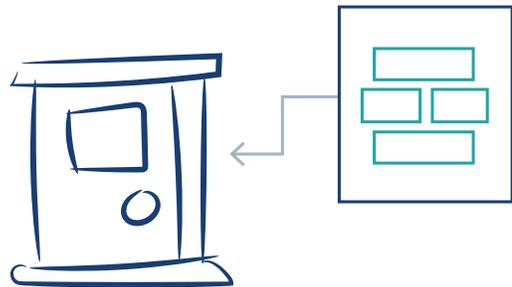
- Select 'build'
- Review your results in the 'model performance analysis' tab
- Select 'Save as' to save your tailored model as a separate model from the original model

8. Load the tailored model onto the second-generation F-750

- Save the model onto the SD card under the 'models' folder

9. Validate the tailored model by scanning more fruit

- Now you're ready to scan additional fruit to validate your model!
- Use your selected reference method (used to calculate reference values in step 4) to verify that the values displayed on the F-750 are accurate.



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