

FluorLite Protein Meter

Measures Protein in Dairy Permeates

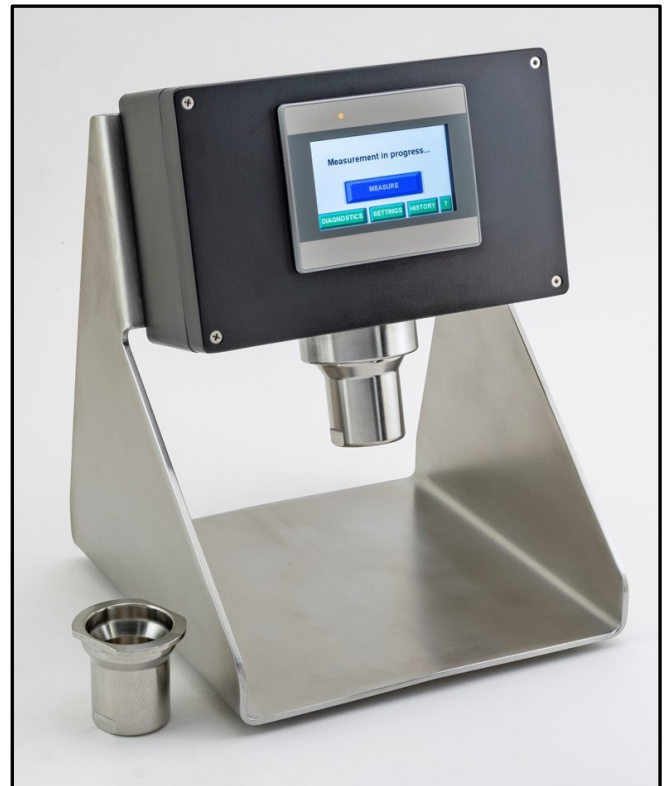
Updated: April 9, 2024

- ❖ Rapid Testing: Measures protein content in 10 to 40 seconds
- ❖ Measures up to 0.5% Protein
- ❖ Readability: 0.001%
- ❖ Ignores NPN (non-protein nitrogen)
- ❖ Automatically compensates for solids content
- ❖ Measures protein from tryptophan fluorescence
- ❖ Use in a Lab or At-Line on plant floor
- ❖ No disposables required

Membrane performance and leakage testing can be quickly and easily accomplished with rapid and repeatable testing.

The FluorLite Protein Meter measures protein while ignoring non-protein nitrogen and automatically correcting for permeate solids.

Designed for Lab or At-Line use, a 50 ml sample is poured into the Sample Cup, positioned on the meter, and a measurement is displayed in as little as 10 seconds.



FluorLite Protein Meter with stainless steel stand, Cup, power supply, and touch screen HMI.



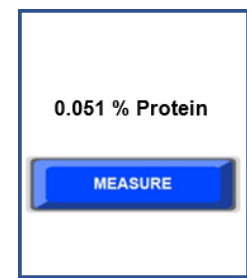
Pour sample in Cup



Position and insert



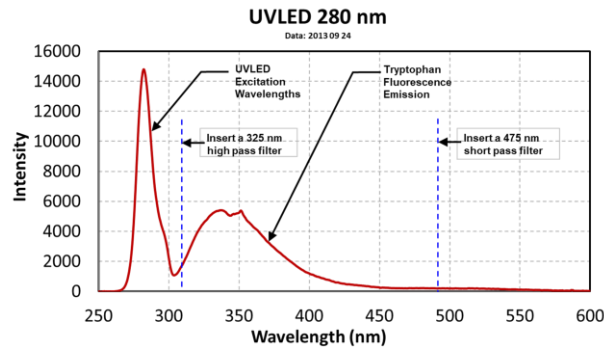
Rotate to retain



Press "Measure"

FluorLite-Protein Meter

The FluorLite Protein Meter was developed to measure “true” protein concentration in dairy permeate corrected for permeate solids concentration. The meter uses tryptophan fluorescence as a tracer for protein and emits UV light at 280 nm to excite tryptophan and measures the resulting fluorescence at and around 350 nm as shown in the Figure below.

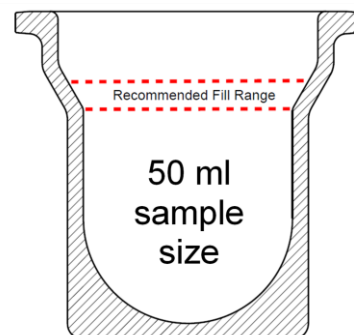
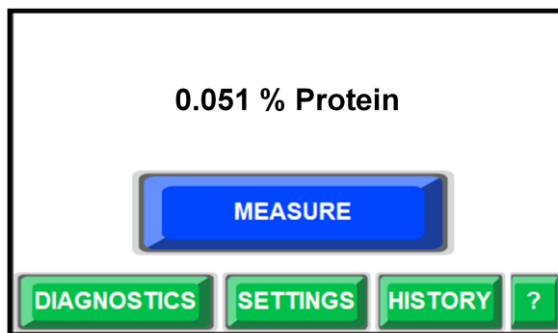


The FluorLite Protein Meter features high sensitivity at low protein concentrations in permeate solids concentrations up to 10%. An additional advantage is that it measures “true” protein and is not influenced by non-protein nitrogen (NPN), which does not fluoresce.

The FluorLite Protein Meter was designed to operate in a lab or near the processing operation. A 50 ml sample is poured into the Sample Cup and tested to determine protein content in 10 to 40 seconds. The meter thus facilitates a rapid measure of the performance of multiple membrane units.

The measured protein concentration information can be used to monitor membrane performance, provide a threshold alert for excess leakage, and facilitate membrane replacement decisions.

The FluorLite Protein Meter corrects for temperature as fluorescence decreases 1.12% per °C or 0.62% per °F. The temperature of the sample is measured using a thermistor, positioned near the optics. The measurement will need to be repeated if the temperature has not come to equilibrium. This temperature correction is not perfect; for maximum precision, it is highly recommended the samples be at or close to room temperature.



The TOUCH SCREEN DISPLAY with the MEASURE screen. The DIAGNOSTICS, HISTORY, SETTINGS and “?” screens are activated by pressing the respective buttons. Pressing the button of the current screen returns the MEASURE screen.



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