

Portable Milk Analyser

Summary Information:

- ATR Mid Infrared Spectroscopy
- Measures Fat, Lactose, Protein and contaminants
- Cloud Connectivity via LTE standard
- Portable and battery operated
- 500 measurements without recharging



Product Description:

The Milk Analyser uses ATR Spectroscopy, to extract the Fat, Lactose, Protein and contaminant concentrations from a raw, homogenised milk sample. The Analyser is basically maintenance free being exclusively constructed from solid state dispersion elements, a black body infrared emitter and infrared sensor element. It is very robust with an outstanding battery lifetime. The Analyser comes with a sophisticated but user-friendly software which is run from an-situ tablet. Data can be streamed to a cloud server via the LTE telecommunications hardware.

Application:

The portable milk analyser has been developed for remote farming applications for use at the raw milk collection sites where farmers bring their milk. These systems are used for quality control screening checks for standard nutritional milk parameters such as protein, fat, lactose concentration (m/m%) and milk adulterants such as melamine, urea, glucose, added water, flour, baking soda. The measurement data can be sent to a cloud server via the on-board LTE hardware and this allows our field service engineers to access the data and optimise measurement programs for regional milk variations.

How to use:

The milk sample is placed on the ATR crystal which forms part of the spectrometer. This is done easily with a pipette of approximately 0.5-0.75ml. The measurement is started from the software. After about 30s the concentrations % of the sample will be displayed. The user can add traffic light specification (green/yellow/red) limits to aid the interpretation of the results.

Specification:

- Size: 39cm(W)*31cm(L)*17cm(D)
- Weight: 8kg
- Windows 10 Operating System

Nutritional Parameter	Measurement Range	Accuracy
Fat	3-6%	<0.2% m/m
Protein	3-6%	<0.2% m/m
Lactose	3-5%	<0.2% m/m
SNF		<0.2%
Total Solids	9-15%	<0.2%

Adulterant Parameter	Accuracy
Urea	1.0g/kg
Melamine	0.23g/kg
Glucose	0.64g/kg

Other regional Measurable Adulterant Parameters
Added water, flour, sugar, baking soda, bacterial load

Special Features :

- Cloud Connectivity via LTE standard
- Fixed internal batteries – no need for exchanging.
- Long battery charge life
- Fold-away Bluetooth keyboard and integrated touchpad.
- Microsoft Surface tablet (touchscreen)
- 2 USB Ports and RJ-45 ethernet connection for external access to ATR.
- Large compartment for wipes and pipettes and storage of fold-away keyboard