

## ELECTRONIC MILK ADULTRATION TESTER WITH ANALYSER



### Application

The **Electronic Milk Adulteration Tester with Analyzer (EMAT+)** is an ideal and low cost solution for accurate analysis of milk parameters and to discriminate between genuine and spurious milk. It detects adulterants in raw milk, which are hazardous to human health.

The instrument works on the principle of ultrasonic and detection of specific ions of adulterants present in the milk sample. The detection procedure follows the steps of intake, dilution, mixing and analysis.

Detected signal is processed through embedded software and results are displayed quickly and accurately on a digital display for the convenient read-out by the user.

The instrument is accurate, simple, economical, reliable and rugged for analysis of compositional parameters and to identify adulterants present in the Milk.

The instrument is suitable for the Village Milk Collection Centers, Milk Chilling Centers, Dairy Plants and Milk Testing Laboratories.

### Features

- Check majority of harmful adulterants
- Measures Fat, SNF, Protein, Lactose, density & added water
- Performs 90-100 tests per hour
- Low sample volume
- Inexpensive method for testing of milk purity
- User friendly operations
- Easy cleaning
- Close correlation to accepted standard methods
- Green technology, no hazardous chemical
- Easy to read digital display
- Quick measurement and instant read-out
- RS 232 data output
- Runs on mains or battery
- Online recording of analyses data on SD card

## Specifications

### Performance Data

Milk type : Cow, buffalo and mixed milk.  
Measuring Speed : 90 - 100 samples per hour  
Parameters : Fat, SNF, Protein, Lactose, density & added water  
Calibrated Adulterants : **Urea, Detergent, Ammonium Sulphate, Salt ( Sodium Chloride), Hydrogen Peroxide , Soda ( Sodium bi Carbonate) and Caustic Soda.**

Measuring Range : Fat 0.01% to 25%  
SNF 3% to 15%  
Protein 2% to 7%  
Lactose 0.01% to 6%  
Density 1015 to 1040 Kg/m<sup>3</sup>  
Added water 0% to 70%

Accuracy : Fat  $\pm 0.10\%$   
SNF  $\pm 0.15\%$   
Protein  $\pm 0.15\%$   
Lactose  $\pm 0.20\%$   
Density  $\pm 0.3 \text{ Kg/m}^3$   
Added water  $\pm 3.0\%$

Minimum limits of Detection	Adulterants	Limit of detection %
	Urea	$\geq 0.1 \%$
	Ammonium Sulphate	$\geq 0.2 \%$
	Salt	$\geq 0.2 \%$
	Detergent	$\geq 0.3 \%$
	Hydrogen Peroxide	$\geq 0.3 \%$
	Soda ( Sodium bi Carbonate)	$\geq 0.3 \%$
	Caustic Soda	$\geq 0.3 \%$

Initialization time : Max 10 Minutes  
Sample temperature : Milk temperature: 25 °c to 40 °c.  
Sample volume : 18 ml.  
Cleaning : Easy cleaning  
Display : LCD display  
Data interface : SD Card and RS232

### Installation Requirements

Power supply : 220 V 10% AC, 50 Hz.  
Power consumption : < 90W  
Ambient air temp. : 5 °c to 50 °c.  
Relative humidity : Up to 95%  
Dimensions : W x D x H : 251mm x 194mm x 207mm  
Weight : 13.5 kg

## Regional Offices

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The above specifications are subject to change without prior notice in order to provide you the best available and acquired for continual improvement.