

DAIRY PLANT AUTOMATION Au2mate Standardization Unit - ASU

Automatic milk standardization - high precision standardization ensuring high quality and efficiency in dairy production

APPLICATION

Au2mate standardization unit is applied for automatic high accuracy standardizing of the fat % in the cream line and the milk line after a milk separator. The standardization unit can be applied in new as well as existing installations. The standardization unit can operate as stand-alone or seamlessly integrated with a factory control system. The unit is pretested and delivered ready to install in the dairy plant.



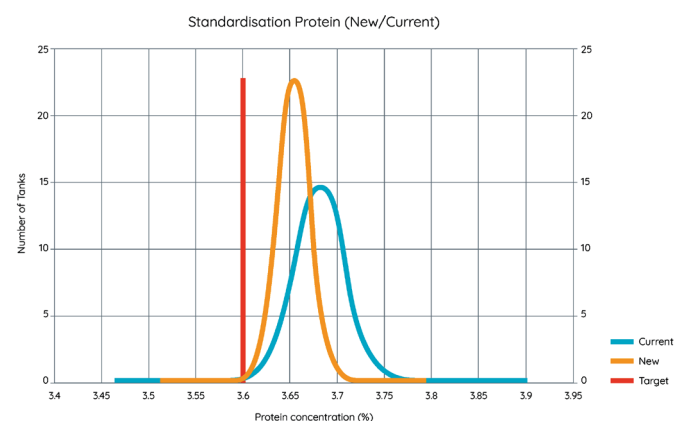
OPTIONS

The Au2mate standardization unit can as an option be delivered with or without local operator panel and with seamless integration to the factory control system via an ISA88 based hand-shake interface. Furthermore, the unit can be expanded with an interface to a high accuracy milk in-line/at-line analyser, analysing the fat, the protein and SNF in the milk line for high accuracy regulation and tank standardization of the of the milk fat & protein ratio.

PERFORMANCE

- Accuracy milk standardisation 0.02g/100g
- Accuracy tank standardisation 0.01g/100g
- Accuracy cream standardisation 0.15g/100g
- Test procedure according to standard distribution
 - 68.2% of samples within +/- 0.020g/100g
 - 95.4% of samples within +/- 0.040g/100g
 - 99.7% of samples within +/- 0.060g/100g
- Test to be conducted under stable process conditions
- Milk temperature 45-65 degrees Celsius

PROTEIN STANDARDIZATION



BASE CONFIGURATION

Au2mate MASStermate standardization unit is pre mounted, wired, and tested on frame and includes the following equipment:

- Control panel
- 2 pcs mass flow transmitters
- 1 pc flow transmitter
- 2 pcs regulating valves
- 2 pcs process valves
- 2 pcs manometers

OPTIONS

- ISA88 integration with factory system
- Interface to milk analyser
- Tank standardisation
- Connectivity for remote service

TAILORED FOR YOUR DAIRY

Designed for seamless integration into both new and existing facilities, this advanced solution can operate as a standalone unit or as part of a fully automated factory control system.

Au2mate's Standardization Unit (ASU) fits seamlessly into any dairy production process and is available with four different software tiers:

Fat Standardization (FS): The foundational application reblends cream into skimmed milk according to the desired fat percentage and standardizes cream in the same step.

Inline Dosing (ID): Adds a FOSS instrument and a dosing line to achieve precise fat and protein ratios. Typically applied directly before an evaporator for drying.

Virtual Batch Standardization (VBS): Builds on Inline dosing by standardizing a batch, calculating accumulated fat and protein content in the batch, enabling compensation for disturbances or errors across the entire batch time, not just in real time.

Enhanced Tank Standardization (ETS): Extends VBS by using a digital twin of the plant to calculate content in pipes, accounting for factors like water or product pushes during batch changes. This flagship application offers unmatched performance in the fat percent of the raw milk to the separator.

