

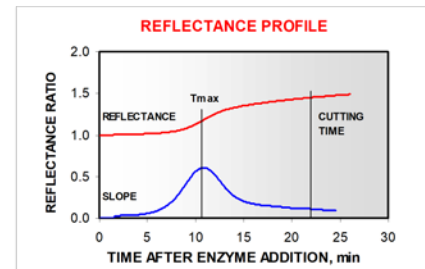
CoAguLite™ Cutting Time Control Technology

- ❖ Improves moisture control
- ❖ Reduces whey fat losses
- ❖ Reduces fines losses
- ❖ Replicates the cheesemaker's cutting time selection
- ❖ Provides consistent selection of cutting time
- ❖ Alerts of non-standard vats
- ❖ Measures coagulation reaction kinetics
- ❖ Easy calibration
- ❖ 3-A Compliant

The CoAguLite Cutting Time Control Technology provides consistent cutting times, reduces whey fat losses, reduces fines losses, and improves moisture control. This CoAguLite sensor determines the enzymatic reaction rate of the coagulating milk, providing the ability to adjust for changes in temperature, pH, added calcium, enzyme concentration, and milk reactivity. Precise measurement of small changes in aggregation of casein is enhanced using miniature optical fibers in a unique optical configuration. A CoAguLite sensor and PLC software (data processing algorithm and a prediction model) are used to implement this technology.

T_{max} is a direct measurement of enzyme kinetics and is obtained from the sensor data and used to predict cutting time as follows:

$T_{cut} = BETA * T_{max}$
BETA is a constant selected by the cheesemaker to calibrate the system. A cutting time prediction model that corrects for protein variation is included.



See the Reflectronics web site for more details.



Fig. 1. CoAguLite sensor, welding ferrule and 2.5" Tri-Clamp connector.

CoAguLite Technical Specifications

❖ Standard Compliance:	NEMA 4X (water tight, corrosion resistant); CE Mark Verified Class A under EN 61326-1 CE Mark Safety EN 61010-1 3A Sanitary Standard 46-03
❖ Probe O-Ring	Viton
❖ Distal Tip O-Ring:	Viton
❖ Sensor housing and ferrule:	316 SS
❖ Plastic probe:	Ertalyte
❖ Optical Window	Sapphire
❖ Output signal:	4-20 mA
❖ Cable:	DC Micro shielded 5 pole with SS nut
❖ Operating Temperature Limits:	Head, 60 °C; Probe, 100 °C
❖ Connections:	2.5" Tri-Clamp
❖ Required Power Supply:	24 VDC, 100 mA max.
❖ Serial Number:	Etched onto SS (S/N plus mfg. date: year-month-day)

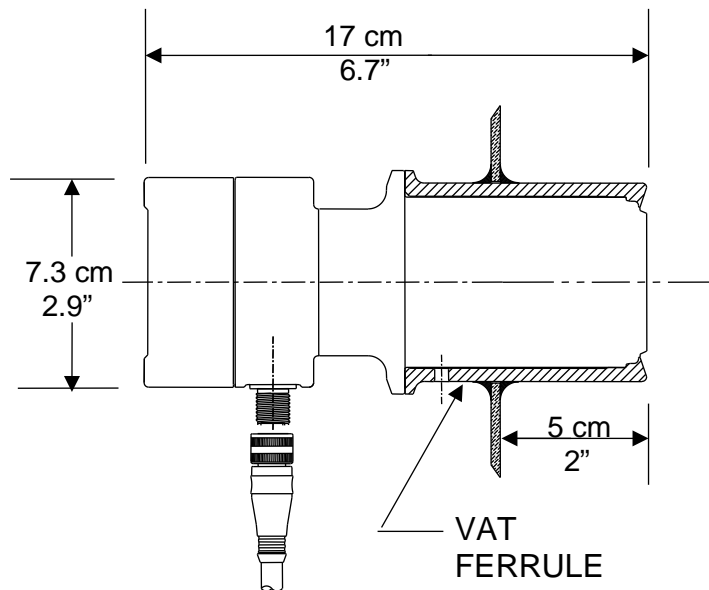


Fig. 2. Vat mounted configuration of the CoAguLite sensor.