

NEW FluorLite™ Cutting Time Control Technology

Version 01 2017 06 14

- ❖ **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 milk coagulation process has three phases: enzymatic; aggregation; and gel firming. The FluorLite Cutting Time Control Technology responds during the last phase – the gel firming stage. This milk coagulation sensor technology (patent pending) provides more consistent cutting time control than any other technology because the time parameter derived from the response is very close (about 25 minutes into a 30-minute coagulation period) to the coagulation endpoint. Thus, the endpoint becomes very easy to select.

It is expected that the benefits of this new technology will shine in plants that are increasing the solids content of their cheese milks because the different protein sources tend to have different protein reactivity.

Laboratory testing of this new technology has shown that the fluorescence time parameter is highly correlated with curd texture. Please contact the company should you wish to discuss further.

A FluorLite sensor and PLC software (data processing algorithm and a prediction model) are used to implement this technology.

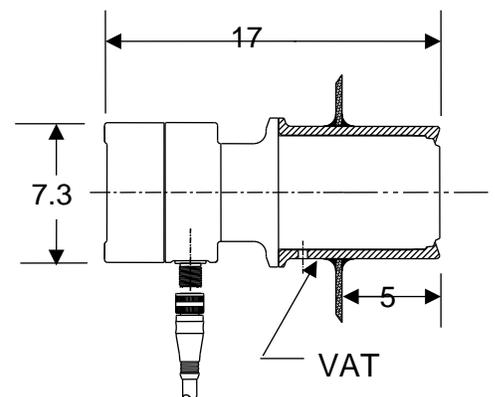
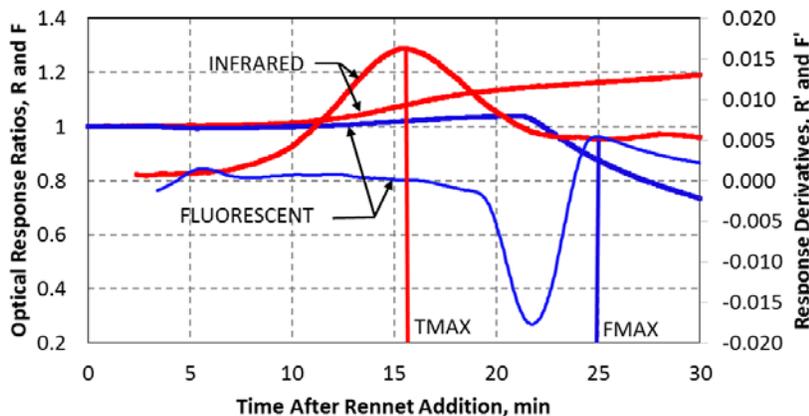


The FluorLite with Vat Ferrule and Tri-Clamp.

CoAguLite Technical Specifications

- ❖ Standard Compliance: NEMA 4X (water tight, corrosion resistant);
3A Sanitary Standard 46-03 (pending)
- ❖ 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 5 pole, quick disconnect, SS nut, 5 m standard
- ❖ Operating Temperature Limits: Head, 60 °C; Probe, 100 °C
- ❖ Connections: 2.5" Tri-Clamp
- ❖ Power Supply: 24 VDC, 100 mA max., low noise (5 mV peak to peak).
- ❖ Serial Number: Etched onto SS (S/N plus mfg. date: year-month-day)

Milk Coagulation Showing Infrared and Fluorescent Responses 2015 12 22



Comparison of the infrared (red lines) response to the fluorescent (blue lines). The infrared signal yields a time parameter TMAX of 15 minutes. The fluorescent signal yields a time parameter FMAX of 25 minutes. The FMAX is much closer to the coagulation endpoint.

The FluorLite uses the same vat ferrule as the CoAguLite.