

APPLICATION NOTE

5.01 FOOD & BEVERAGE

DAIRY - MILK FAT

- 0.1 – 60% total solids in dairy products
- Product identification & differentiation
- Separator control & optimization
- Detection of leaking valves
- Quality monitoring & control

The [Kemtrak TC007](#) is an optical in-line analyzer suitable for continuous total solids content monitoring of dairy products including milk, cream and cultured dairy products such as yoghurt and cream cheese.

The [Kemtrak TC007](#) utilizes high resolution VIS/NIR backscatter reflectance measurements for the accurate determination of the total solids content. Measurements are undertaken continuously and in real time using a hygienic process connection that is engineered to withstand the high temperatures and chemicals present in CIP & SIP cleaning cycles.

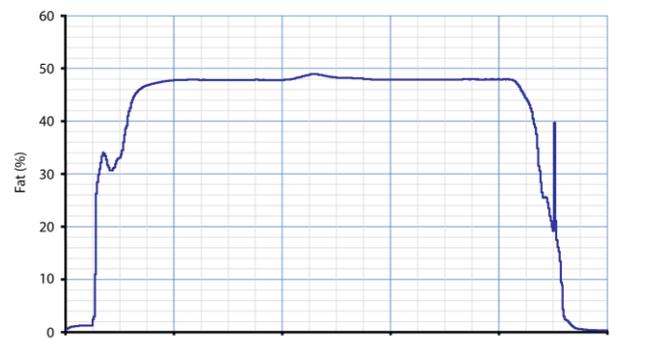


APPLICATION

The [Kemtrak TC007](#) high resolution backscatter photometer simplifies the measurement of high concentration suspended solids, making it possible to accurately monitor, in-line and in real time, the full range of milk-fat concentrations anywhere in the dairy or creamery.



Traditional turbidity based optical measurement instruments lack resolution and are not reliable at concentrations above 1% suspended solids due to the high optical density of the process media. This limitation is overcome with the [Kemtrak TC007](#) and for the first time the operator can monitor and have complete control over their dairy process at any concentration.



Continuous in-line monitoring of extra thick double cream.

INSTALLATION

The recommended installation for dairy applications is to mount the [Kemtrak sanitary backscatter probe](#) with integrated DN25/1" sanitary clamp pipe coupling directly on any size pipeline greater than DN25/1" diameter.

The sanitary backscatter probe is manufactured in 316L stainless steel with a robust scratch resistant sapphire window. The highly polished unbroken probe surface ensures freedom from fouling and suitability for sanitary applications.

Fiber optics are used to connect to the sanitary

backscatter probe which contains no electronic components. The standard probe will withstand constant operating temperatures of 120°C making it suitable for high temperature SIP cycles. Higher temperature probes are also available.

A unique benefit of the [Kemtrak sanitary backscatter probes](#) is that it will not go blind at any concentration of suspended solids. The output of the [Kemtrak TC007](#) will continue to increase with sample concentration ensuring a reliable measurement at any concentration. The TC007-SCAT (low range) analyzer is recommended for process concentrations up to 10% total solids, while the TC007NIR-SCAT (high range) analyzer should be used for accurate monitoring of suspended solids exceeding 10%.

