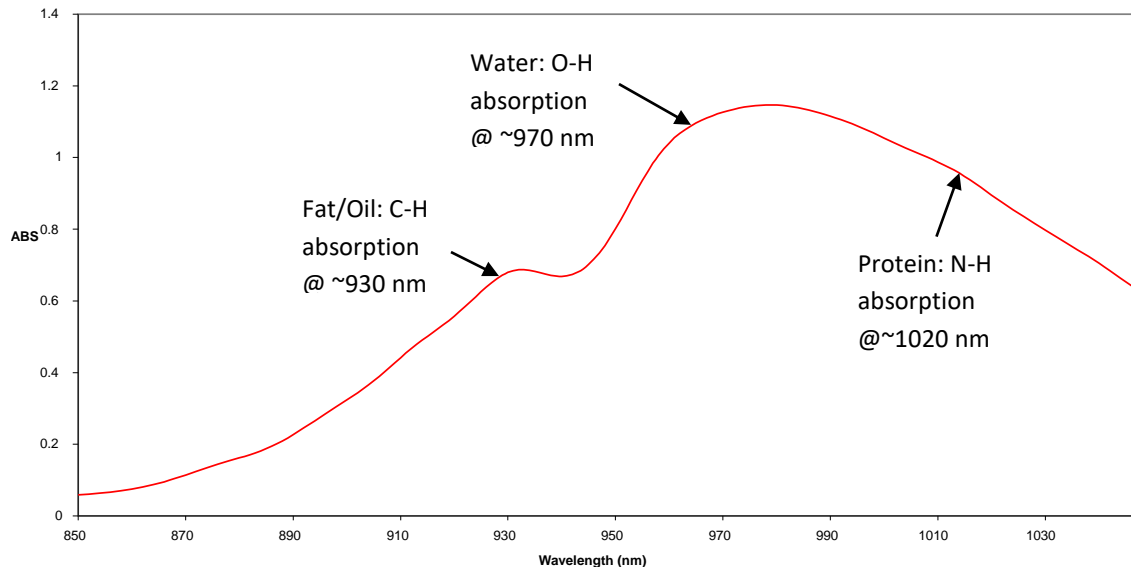


Application: Fluid Milk

ProSpect Analytical Technology's Near Infrared (NIR) In-Line Analyzers are designed to deliver continuous analysis and control of process systems. Utilizing NIR transmission spectroscopy, ProSpect's analyzers work within existing process systems to provide accurate and efficient organic constituent predictions approximately every 20-30 seconds as the product is being produced.

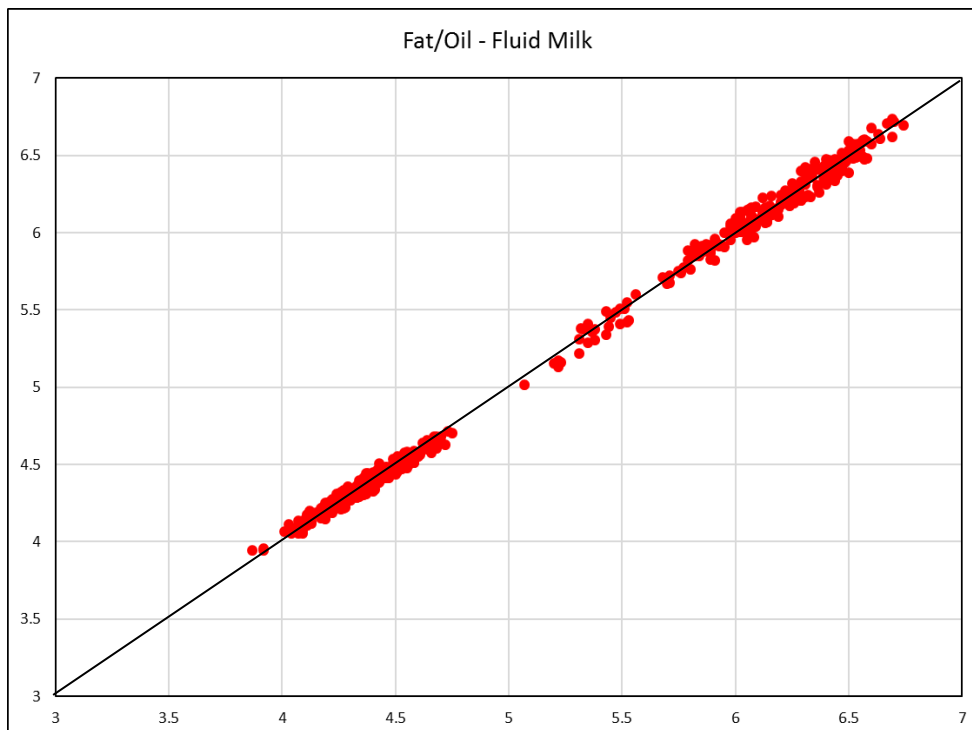
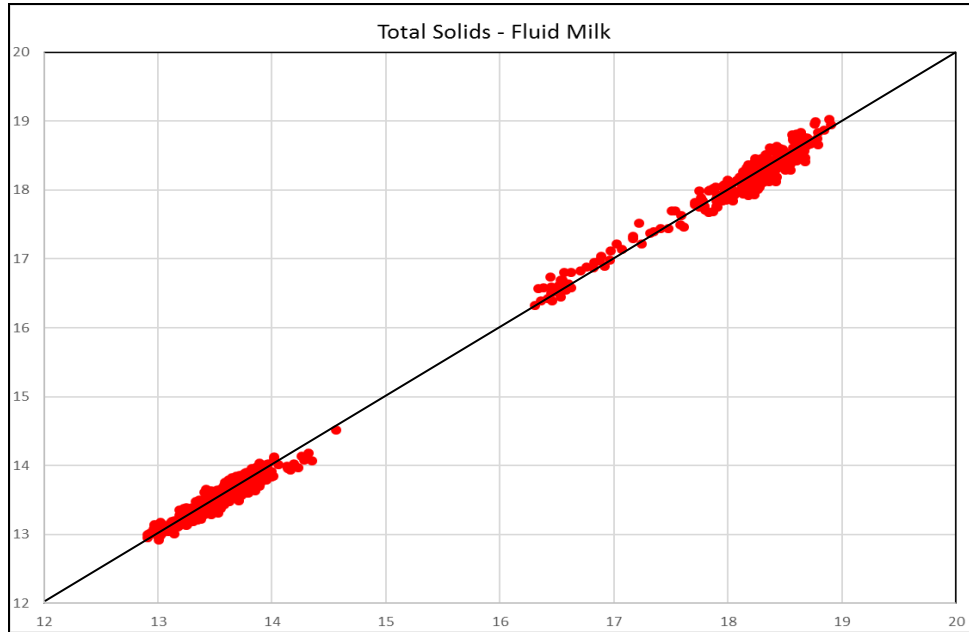
ProSpect's single Model TS-30 and dual process Model TD-30 analyzers have the capability to communicate with a broad array of programmable logic controllers (PLCs). As a ProSpect analyzer computes the level of concentration in the constituents of interest, i.e. fat/oil, protein or moisture, the data is sent in real time to the factory PLC. The factory PLC can then use the information to make continuous adjustments to the process set points enabling the final product to be controlled to tighter variances, yielding a 50% reduction in standard deviation on average.

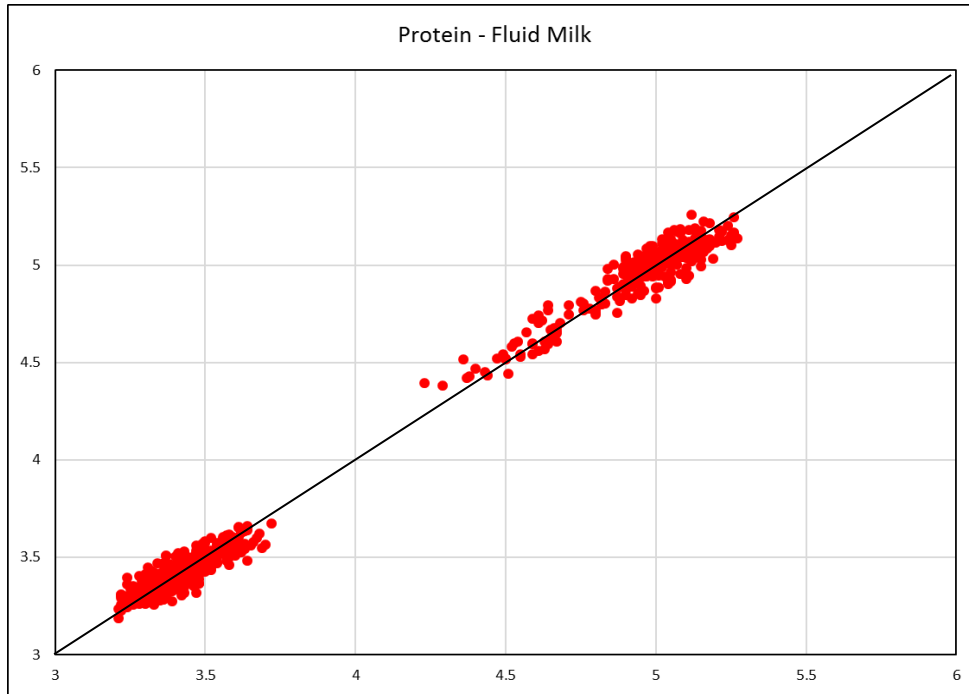
Fluid Milk



The C-H absorbance band due to fat or oil is at 930 nm. The O-H band due to water is visible at 965 nm. The N-H band due to protein is at 1020nm. The amount of energy absorbed at these wavelengths is directly proportional to the concentration of the individual constituent. The collection of the data across these wavelengths occurs simultaneously resulting in output of multiple components at the same time.

	Range	SECV	R²
Total Solids	12.9-20%	0.10%	0.9981
Fat/Oil	3.8-6.8%	0.04%	0.9979
Protein	3.2-5.3%	0.06%	0.9940





- R^2 = The correlation between the lab reference value and the ProSpect predicted value
- SECV = Standard Error of Cross Validation. Error of differences between ProSpect Predicted and Lab Reference Value

AMETEK MOCON
7500 Mendelssohn Ave. N
Minneapolis, MN 55428 USA
info.prospect@ametek.com
www.mocon.com

