



## DUPPS NIR SPECTROMETER SYSTEM

ACCURATELY MEASURE THE COMPONENTS OF RENDERING PROCESS STREAMS IN REAL-TIME — WITHOUT TIME CONSUMING AND COSTLY OFF-LINE ANALYSIS — WITH THE INNOVATIVE DUPPS NIR (NEAR INFRARED) SPECTROMETER SYSTEM.



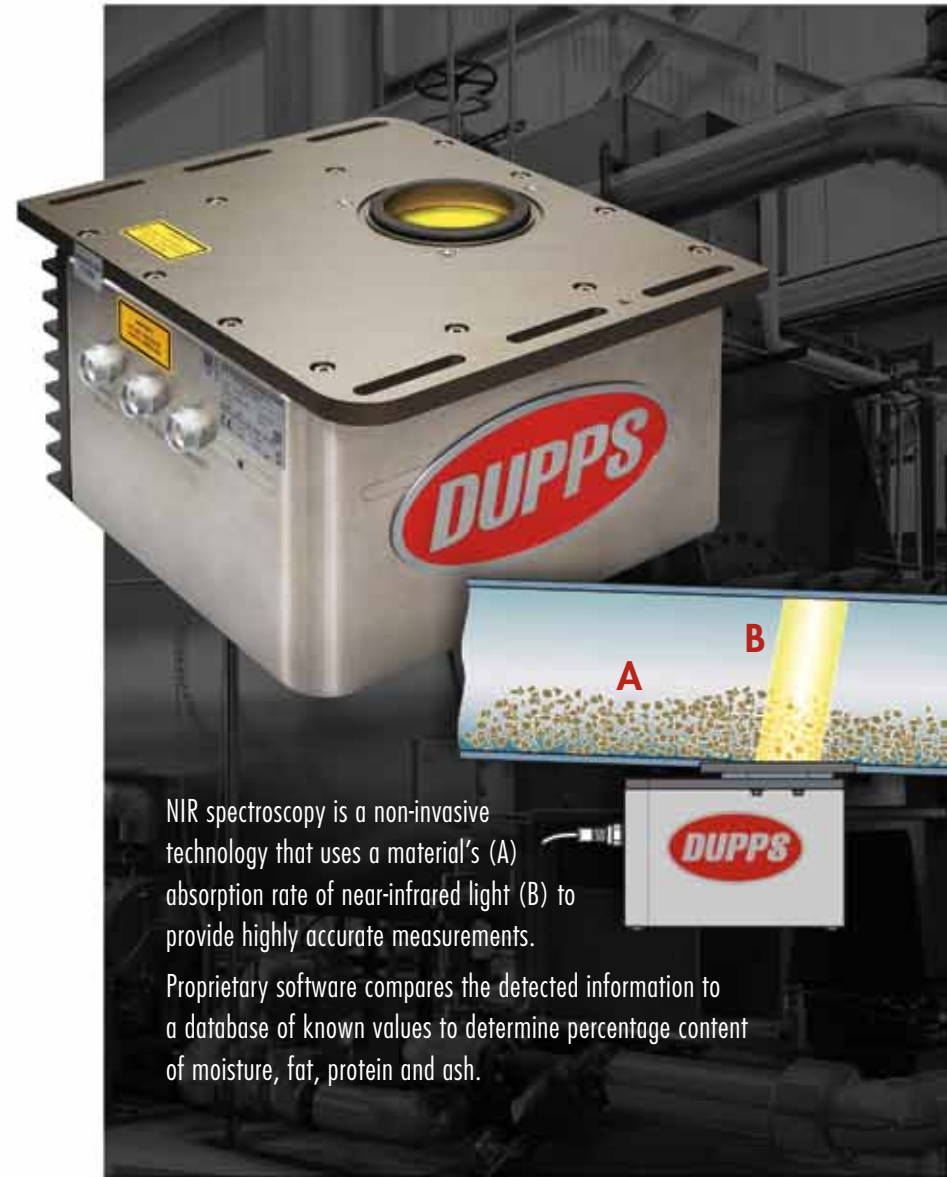
**Dupps' NIR solution offers real-time measurement of fat, protein, moisture and ash without time consuming off-line analysis.**

NIR spectroscopy measures the wavelength properties of light reflected by a rendered product to determine the product's characteristics and composition. Applied to rendering process streams, NIR analysis reveals detailed information about the product as it is being rendered — including protein, fat, moisture and ash content — so that vital production control and product qualities can be optimized and waste minimized.

- Unlike traditional slow and sometimes inaccurate off-line lab testing, NIR analysis can be done continually, accurately and in real-time.
- With continuous monitoring capability, you'll receive immediate notification if product is not meeting specifications.
- You'll get the trending data you need to maximize protein percentage, optimize moisture content, and reduce residual fat in real-time.

Dupps' rendering NIR spectrometer was developed by Carl Zeiss Spectroscopy GmbH — the firm that introduced the first spectrometer nearly 150 years ago, and has since been the world's leading innovator in applied spectroscopy for science and industry. The Dupps system's sensor and other hardware were specifically designed and built to operate in the harsh environmental conditions encountered in rendering operations.

**For more information about integrating Dupps' NIR spectrometer system into your process operation, contact your Dupps representative, or Richard Weeks at 937-855-6555; email [RWeeks@dupps.com](mailto:RWeeks@dupps.com)**



NIR spectroscopy is a non-invasive technology that uses a material's (A) absorption rate of near-infrared light (B) to provide highly accurate measurements.

Proprietary software compares the detected information to a database of known values to determine percentage content of moisture, fat, protein and ash.



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