



## Application Note AN N284

# Efficient Supply Chain Management with FT-NIR

FT-NIR is widely used in the Dietary Supplement Industry to test the identity of incoming raw materials, to check the homogeneity of inprocess blends; and to verify the quality of final products. FT-NIR, a valuable component of a cGMP compliance program, requires no sample preparation - operators easily scan materials in seconds.

Based on principles of Fourier Transform Near Infrared (FT-NIR) Spectroscopy, implementation involves developing methods that are "fit for purpose". For identity methods, the unique spectral fingerprints of traceable reference materials and/or certified lots are used to establish numerical pass/fail criteria. Blend homogeneity methods use conformity index to measure spectral variance as compared to the spectra of "good" batches. Quantitative methods are established for key parameters by correlating the FT-NIR spectra to values obtained by traditional reference methods. Once developed, methods are transparent to the routine operator, who simply activates the scan using a simple user interface. No interpretation is needed; results and reports are automatically generated and archived.

### Companies rely on FT-NIR to:

- Comply with cGMP-mandated identity testing
- Reduce inventory management costs and qualify new suppliers
- Detect Economically Motivated Adulterated (EMA) raw materials
- Ensure consistent quality throughout the supply chain
- Cut costs while improving quality
- Real-time results – save time and money by preventing costly mistakes
- Archive data for future review of complaint samples and to avoid unfounded litigation

## FT-NIR Traceability: From Raw Materials to Finished Products



Raw Materials suppliers verify ID and screen for economically motivated adulteration

### About Bruker Optics

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