Spectrometer Feed Sensor

Summary of Content

Spectrometer feed sensors use NIR or FT-NIR technology to rapidly analyze feed composition, enabling real-time optimization of livestock nutrition and feed quality.

Overview

Spectrometer feed sensors are devices that measure the chemical composition of animal feed using near-infrared (NIR) or Fourier Transform NIR (FT-NIR) spectroscopy. They provide rapid, accurate, and non-destructive analysis of key feed parameters such as protein, fat, fiber, moisture, starch, and ash content without the need for extensive sample preparation . These sensors are essential for feed mills, farms, and laboratories to ensure consistent feed quality and optimize animal nutrition.

Types and Technology

• Handheld or portable NIR spectrometers: Devices like ZEISS AURA® or trinamiX PAL Two allow on-farm analysis, providing real-time data for immediate decision-making on feed formulation .

• FT-NIR spectrometers: Instruments such as Bruker's TANGO or MATRIX-F II offer high-speed, in-process analysis in production lines, with options for contactless measurement heads or diffuse reflection probes .

• Laboratory-based analyzers: Systems like EXPEC 1370 are designed for rapid multi-component analysis of raw materials and finished feed, suitable for granules, powders, pastes, and other feed types .

Applications

Article Content

SCIO Cup: Portable Lab-Quality NIR Analyzer | SCiO

Our patented optical head is just a few millimeters in size, providing sensitivity and accuracy comparable to

Feed & Ingredients

Feed analysis to ensure product quality and livestock health. Discover how FT-NIR and XRF enable the precise control of feed

X-ray fluorescence

A X-ray fluorescence spectrometer with automated sample feed in a cement plant quality control laboratory

NIR-Spectrometers and sensors

Whether in food production, feed and agriculture or on-harvester applications, Polytec NIR spectrometers deliver reliable real-time

NIR Spectrometers

Find here NIR Spectrometers, Infrared Spectrometer manufacturers, suppliers & exporters in

Feed Analysis with FT-NIR | Bruker

FT-NIR spectroscopy provides a fast and effective solution for analyzing raw materials as well as finished

Spectral Sensing Technology | ams OSRAM

Optical spectroscopy is typically associated with expensive spectrometer devices that cost tens to

NIRONE® SENSOR S

The sensor can be driven across the whole wavelength range or it can operate only at selected wavelengths. The sensor''s intelligent

AGRINIR: Your Portable Lab for Precision Agriculture

Powered by advanced near-infrared spectroscopy technology, it provides fast and accurate on-site nutrient

NIR spectrometers

For food & feed, the OMNIS NIR Analyzer is very suitable to measure moisture, protein, ash, fiber and fats.

MEMS based Spectroscopy Systems

Fraunhofer IPMS develops miniaturised spectrometer systems for mobile use in a wide range of

The Use of Sensors for Monitoring the Feeding Process and Adjusting

Then, we detail how we test the sensors for the calibration. The proposed system is able to change the feed supply

AS7341 Spectral Sensor: Build a DIY

Discover how to build a DIY spectrophotometer using the AS7341 sensor for measuring

AURA® analyzer | Portable NIR-spectrometer for feed

AURA ® analyzer provides instant insight on site, allowing you to optimize milk yields and feed costs.

Precision Farming | NIR sensor technology in agriculture

Analyze key constituents like dry matter, protein, starch, or N-P-K in real time with lab-level accuracy, right

Spectral Sensing Technology | ams OSRAM

Chip-scale spectral sensing from ams OSRAM makes this possible. This technology can be used to measure an ever-increasing

Contact Us

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