

INSPECTRA

Unlocking the Invisible in Palm Oil Quality

INSPECTRA is a system for inline palm oil quality monitoring utilising near-infrared (NIR) spectroscopy technology with chemometrics modelling for real-time data analysis. It provides continuous and in-process monitoring of key quality indicators for crude palm oil.



Overview

INSPECTRA offers real-time and inline analytical measurement for palm oil quality monitoring utilising NIR spectroscopy technology. It allows for a rapid, non-destructive and non-chemical measurement of key quality indicators such as free fatty acids (FFA), oil content, water content and non-oil solid that result in process optimisation and higher cost-efficiency.

Key Features

- **Chemometric Data Analysis and Prediction Model**
INSPECTRA offers real-time quality control, a prediction model, chemometric data analysis for crude palm oil (CPO) classification and quantification.
- **Interactive Data Visualisation**
The platform comes equipped with graphical user interface for data acquisition, remote monitoring and data reporting.
- **NIR Spectrometry**
Spectrometry measurement is controlled through optoelectronics and optical signal processing.
- **Inline Process Control**
INSPECTRA enables continuous sampling process, non-destructive sampling, and reagent less measurement. An optical sensor probe is used for process inline interface and withstand high temperature and high-pressure flowing sample.

Technology Benefits

- **Algorithm predictive model mechanism**
INSPECTRA's operating system analyser has a built-in algorithm mechanism process based on chemometric analysis during calibration process

Data Analysis Visualising and Reporting

INSPECTRA provides live data visualisation through web application platform interface (API) and able to access through portable devices regardless of Windows, Android and iOS platform.

Applications

- Palm Oil Mill Extraction Lines
- Quality Control in Refining Plants
- Crude Palm Oil (CPO) Tanker Loading Bays
- Research & Development Labs

