

# INSPECTRA™

## Inline NIR Spectroscopy Analyser

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 of 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 optimization and higher cost-efficiency.

### Features

INSPECTRA provides following 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 reagentless measurement. An optical sensor probe is used for process inline interface and withstand high temperature and high pressure flowing sample.

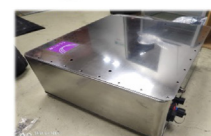
### Technology Benefits

The main impacts of INSPECTRA are:

- **Algorithm predictive model mechanism,**  
INSPECTRA's operating system analyser has built-in algorithm mechanism process based on chemometric analysis during calibration process.
- **Data Analysis Visualising and Reporting**  
INSPECTRA provides live data visualization through web application platform interface (API) and able to access through portable devices regardless Windows, Android and iOS platform.

### Applications

Plantation and Refinery (Palm Oil) Mill



INSPECTRA system in a palm oil mill environment

