

# Quant - the FT-NIR analyser for Agri Feed Dairy Biofuels Food



Quant

# When state of the art technology

If correct results matter to you, the Quant FT-NIR Analyser is the right choice. The analyser is used for quick non-destructive analysis of powder and liquids. It not only provides spectra with cutting edge specifications, it is also simple to install and easy to use. It will deliver reliable and constant results at a very low cost of ownership. Essentially, the Quant has no scheduled maintenance for five years.

## Sampling and precision is essential

Proper sampling is vital to ensure correct analysis results. This is why light and product have to be correctly aligned under the right conditions. In that way, no information is lost. To obtain this, the Quant comes with a number of accessories designed to protect the integrity of the samples.

The new Quant Analyser offers you more than that:

- Source and laser with an average 10 year lifetime. No wear of components. No components to replace or adjust. No hygroscopic optics. No purge required.
- 2 years warranty
- Latest FT-NIR technology
- Lifetime warranty on interferometer scanning mechanism and on all optical components of the interferometer against damage or degradation by moisture.

The enclosure of the Quant is a rugged, all-metal frame with integral handles. It is designed to resist heat, dust and water resulting in the most reliable FT-NIR system available.



# Quant and sampling go hand in hand

## Three powerful Quant applications

Furnished with the right accessory, the Quant can be configured for a variety of powerful applications. The accessories are designed to protect the sample from the point where they are analysed via NIR until they reach laboratory reference analysis, without interacting with the ambient air. The accessories ensure excellent spectral quality and are seamlessly transferable between spectrometers.

### LipidQuant - for edible oils, fats, biofuels and similar liquids

The configuration employs a heatable vial holder for analysis in transmission. The vials are inexpensive and easily filled with pipettes. The vial holder is available for 5, 8 or 12 mm vials. The temperature of the vial holder is controlled in the range from ambient temperature to 100 °C. The set point and actual temperature is displayed on the front of the controller.

### AgriQuant – for feed, flour, soils, agricultural samples and dairy powders

Suitable for handling of homogeneous and heterogeneous samples. To minimise effects from inhomogeneity due to inconsistent mixing or large particle size distribution, the sample is continuously mixed during analysis by spinning sample bottle. The bottle can also be analysed standing on the diffuse reflectance window.

### General purpose Quant

Highly adaptable, the spectrometer behind the Quant series offers a versatile lab analyser for various tasks. Three different detectors are available: DTGS, InAs and InGaAs. One of the powerful features of the Quant analyser is the Fiber Interface QIA1250. This accessory allows the user to mount a range of fiber optical probes for reflectance and transmission measurement and work remotely from the spectrometer. A large number of other accessories are available on request for general purpose work.



AgriQuant is available  
with INGOT calibration

**CAL** INGOT®

# InfraQuant software

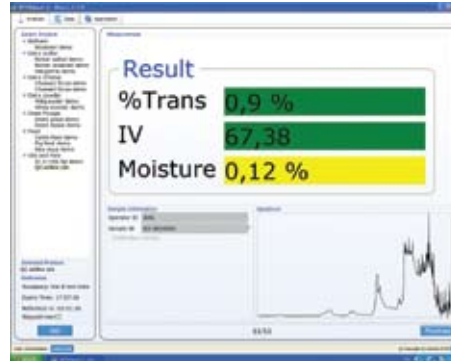
## - the perfect match for the Quant

In collaboration with NIR users Q-Interline has developed InfraQuant, the next generation of NIR operator software. Use InfraQuant to collect, save and present results. The software will allow laboratory staff or operators on the production line to monitor and trim the process with real-time data leading to improved yields and quality.

### Analysis Manager

A wizard guides the operator through the steps of the analysis sequence - in most cases in their native language. With information messages, warnings and reminders, the wizard ensures consistent results independent of operator skills and experience.

The results page presents the analysis results as clearly visible figures with integrated colour codes. The colour codes reflect the validity of the results measured against pre-set criteria.

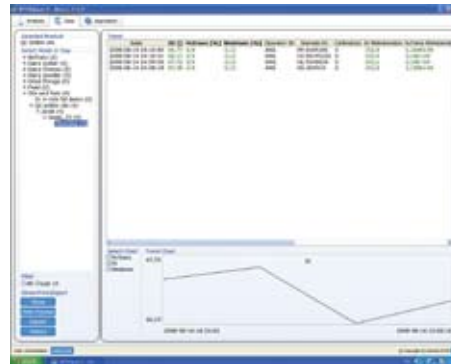


### Data Manager

Find and review analysis results using the data manager. All results are stored by product group in chronological order.

You can also:

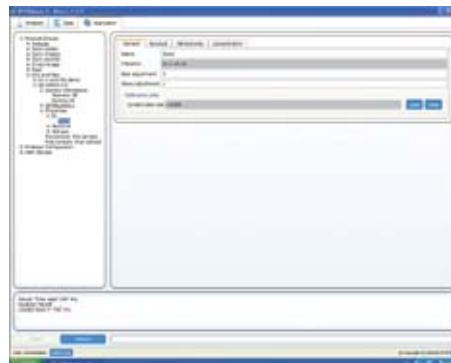
- View trend curves
- Print
- Export
- Delete
- Sort and display historical data



### Application Manager

Use this administrator only password-protected module to set up procedures, define wizards and edit the parameters used in the analysis manager. The preset examples will allow you to get started fast.

The built-in instrument validation provides a high level of security and is automatically performed on every reference collection.



## A safe choice ready for the future

InfraQuant is based on Microsoft .NET and WPF. All configurations and data are saved in a scalable SQL database. This technology provides a safe and accessible platform facilitating integration to a LIMS system.

InfraQuant is compatible with the powerful models generated by PLSplus/IQ from Thermo Galactic.

InfraQuant is just as useful with the QFA-focus, QFAflex and the MB3600 and FLTA2000 series from ABB Bomem.

# Specifications of the Quant Analyser

## SPECTROSCOPIC PERFORMANCE (typical, at 25 °Celsius with InAs detector)

Spectral Range 3,700 to 14,885  $\text{cm}^{-1}$

Signal to Noise (60 s, 16  $\text{cm}^{-1}$ , at peak response) > 900 000: 1

Frequency Repeatability (@ 7300  $\text{cm}^{-1}$ ) < 0.006  $\text{cm}^{-1}$

Frequency Accuracy (@ 7300  $\text{cm}^{-1}$ ) < 0.01  $\text{cm}^{-1}$

Absorbance Reproducibility (toluene) < 0.002 AU

## OPTICAL BENCH

Beamsplitter Material ZnSe (non-hygroscopic)

Interferometer Mechanism (patent pending) High-throughput double pivot Michelson, fully jacketed

Source (with electronic stabilization) Quartz Halogen, 10-year expected life

Solid-state Laser Maintenance Free

## DATA COMMUNICATIONS

Hardware Port Ethernet, 10/100 Mbps

## INSTRUMENT ENCLOSURE

Material Rugged Design, all-metal frame with integral handles

Size 435 mm (W) x 280 mm (D) x 372 mm (H), Weight 24 kg

## ENVIRONMENTAL

Universal Power Supply 120-240 VAC, 50/60 Hz, 65 W

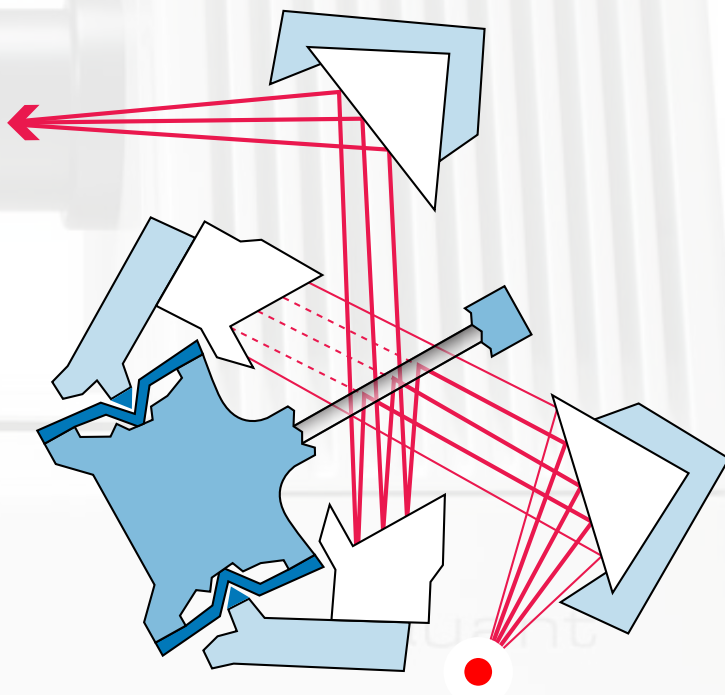
Operating Temperature 10 °C to 35 °C

Operating Relative Humidity 5 % to 80 %, non-condensing

Regulatory Certification and Compliance TUV, CE and RoHS

## FT-NIR Technology

The Quant Analyser is powered by the latest ABB Bomem FT-NIR technology. FT-NIR is short for Fourier Transform Near Infrared and measures the entire spectrum of the sample. This technique generates a large amount of high-quality spectral data, which makes it possible to accurately determine various components such as fat, moisture, protein, lactose etc.





# Q-Interline – your knowledge partner

Q-Interline is dedicated to spectroscopy. For over a decade, we have developed, produced and marketed spectroscopy-based analysis equipment for quality and process control. We work hard to provide our customers with spectroscopy that makes a difference. We offer courses, maintenance agreements, calibration support and user group meetings for our customers.

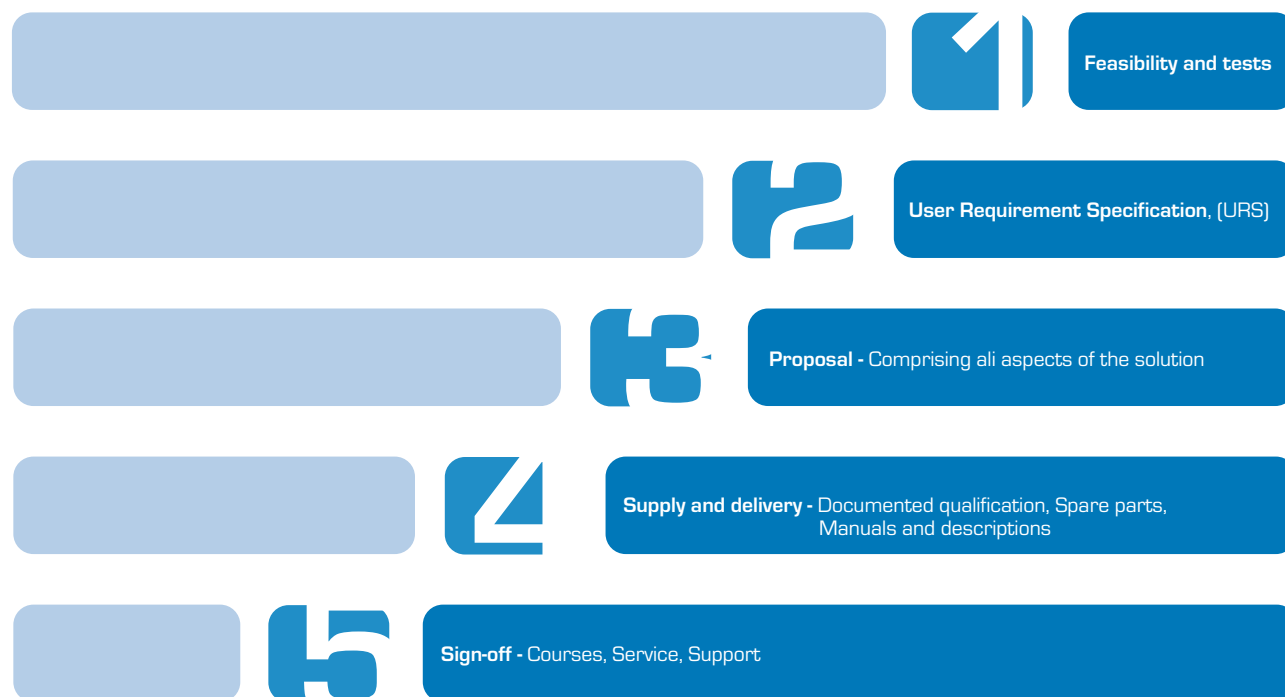
## Highly sophisticated technology combined with dynamic knowledge

Our spectroscopy equipment, accessories and software are based on advanced technology platforms. So we do not have to worry about optics, but focus 100 per cent on tailoring an optimum solution for sampling and ease of use for our customers – and can still provide you with the best technology on the market. With this combination we believe you are in good hands.

## 25 million analysis results per year

Our customers tell us that know-how and experience make the difference. Hundreds of installations in laboratory and process sites and an estimated 25 million analysis results generated annually on Q-Interline instruments speaks for itself. We increase our knowledge every day. A knowledge that we are eager to share with our customers.

## OUR PROJECT FLOW :



The Q-Interline project flow is the best way to fulfil your needs.

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