

# IN-LINE ANALYSIS QVISION 500

Fat, protein and  
moisture analysis



# IN-LINE ANALYSIS

## QVISION 500

The ODENBERG QVision500 is a fat, protein and moisture analysis solution for the meat industry. The QVision500 machine allows suppliers to provide a consistent product quality that brings large savings by increasing profitability and simplifying daily operation.



### TAKE CONTROL OVER NATURAL FAT VARIATION

Nature supplies us with meat with large variations in fat content. Even with carcass classification, cutting patterns and employees with long experience, large variations in fat levels for manufacturing meat is unavoidable.

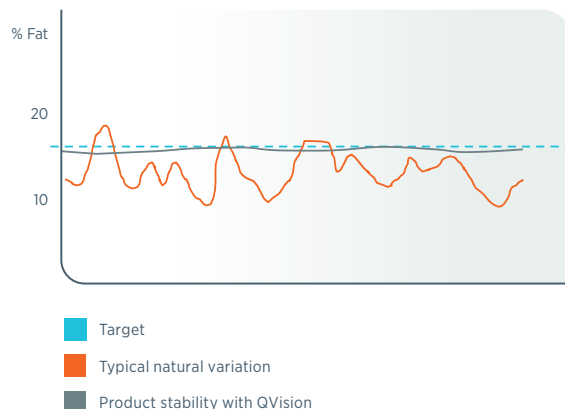
### INCREASE PROFITABILITY AND SIMPLIFY DAILY OPERATION

The QVision500 fat Analyzer can be applied both directly in the trimming lines and after the grinder for standardization and further processing. This yields many benefits.

### BENEFITS OF QVISION 500

- + Large savings in reduced lean give-away
- + Eliminate "out of spec" claims on fat content
- + Eliminate human error
- + Full quality traceability of deliveries
- + Quality control of raw material

### HIT YOUR TARGETS





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## MORE BENEFITS THAN REDUCED LEAN GIVE-AWAY

As we know, there are large savings that can be made in reduced lean give-away. In addition, there are other significant benefits arising from in-line analysis of fat, protein and moisture. If you produce burgers, sausages, minced meat or other products based on ground meat, consistent product quality is key and the QVision500 Analyzer can help you achieve:

- + Stable product shape in forming and frying processes
- + Uniformity after drying of cured products
- + Consistent taste and texture
- + Elimination of time consuming and inaccurate sampling

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## IN-LINE ANALYSIS FINALLY ACCURATE, FLEXIBLE AND EFFICIENT

The unique and cost efficient way of combining *transflection* and near-infrared measurements sets a new standard for in-line analysis. Fat, protein and moisture can be measured in parallel with high accuracy. All types of meat, fresh and frozen, at any grind size can be measured. Also very coarse grind is no longer a problem to measure accurately. Surface effects with near-Infrared analysis are eliminated by the QVision *transflection* system that penetrates deep into the meat. Due to measurement speed, capacity is best in class and 30 tons/hour can easily be achieved.

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## THE MEASUREMENT CAPABILITIES OF THE QVISION500 ANALYZER

- + Fat
- + Protein
- + Moisture
- + Color
- + Temperature
- + Weight

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## MEAT THAT CAN BE ANALYSED



# SIMPLIFIED PRODUCTION



## AUTOMATION ACCORDING TO YOUR NEEDS

Integrating real-time analysis directly in the production lines will simplify your operating process and help you save time. The QVision500 Analyzer can be implemented seamlessly in many different ways depending on your needs. Some implementation examples are shown below.



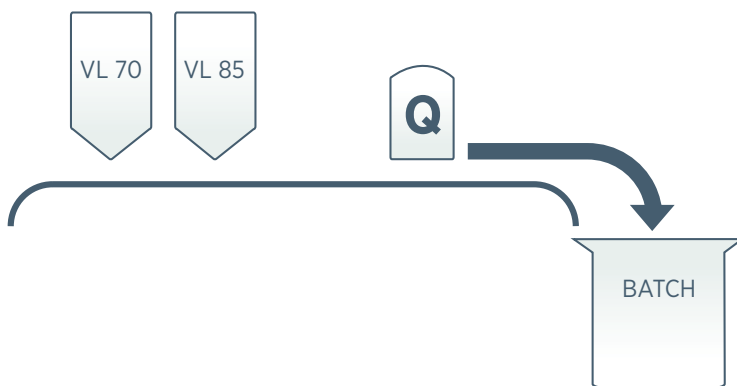
## REAL-TIME FEEDBACK AND COMPENSATION

Letting the trimming crew take an active part in getting the fat content right, is both motivating and efficient. The actual fat content of the batch being produced can be monitored on one or more large displays, letting the trimming crew compensate as the batch fills.



## RECIPE INTEGRATION

Least-cost formulation and other recipe optimization schemes can be implemented. Accordingly, the operator can get running guidance on what raw material to use. This is driven by the instant analysis of the ongoing batch.



## FULLY AUTOMATIC SOLUTION

Using silos, other buffer storage or automatically controlled conveyor belts, the blend of a batch can be created automatically according to fat target and other restrictions. Such fully automatic solutions can be implemented both for trimmings and for ground meat.

# EASILY ACCESS DATA



## OPERATOR IN FOCUS ON THE PRODUCTION FLOOR

The key information is directly available on a self explanatory touch screen. Great effort has been made to make the machine as intuitive and efficient in use as possible. It is made to be a working tool for the operator and can be taken in use with minimal training.



## BRINGING IT TOGETHER IN THE OFFICE

Managing food production is demanding. Having the right data and tools at hand simplifies the daily operation and enables you to focus on profitability and quality.

- + Track production yield
- + Monitor raw material quality
- + Modify recipes
- + Deliver production documentation to customers
- + Ensure due diligence with track record

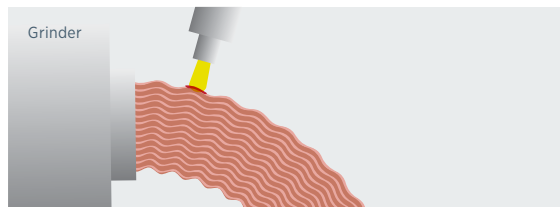
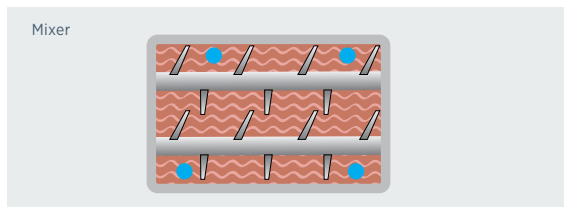
## ODENBERG'S UNIQUE TRANSFLECTION TECHNOLOGY DELIVERS PRECISION

Near-infrared analysis has already become the preferred method for accurate laboratory measurement of fat in meat. QVision's combined transflection and near-infrared technology delivers the accuracy and consistency to do the same for process analysis. All problems previously associated with applying near-infrared analysis directly in the production lines are solved.



“The QVision machine we bought last year opened up opportunities for meat analysis that were previously not possible, we now aim at analyzing every single trimming we produce.”

- Head of Division Quality and Processing Animalia - Norwegian Meat and Poultry Research Centre

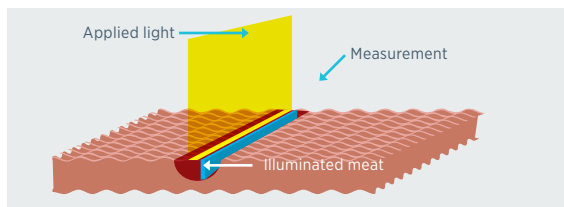


### TRADITIONAL SAMPLING ANALYSES < 0,5 % OF A BATCH

Traditional sampling is time consuming and costly. And since only a very small portion of the meat is analysed, it is very difficult to get a representative sample. As a minimum, all corners of a mixer should be sampled from top to bottom. That is easier said than done and even when achieved, it does not necessarily deliver a representative measurement.

### TRADITIONAL IN-LINE NEAR-INFRARED ANALYSES < 2% OF A BATCH

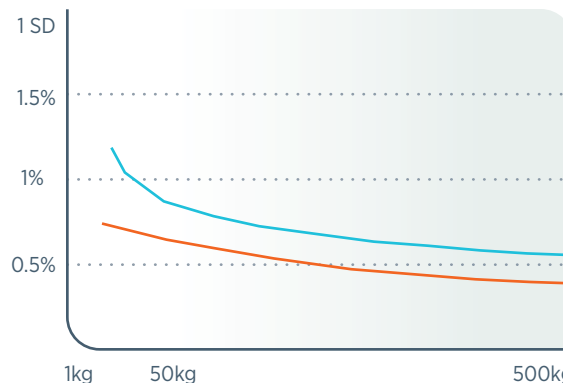
Traditional near-infrared probes have been used in-line in the meat industry for a while. This is better than traditional sampling, but since only the surface is measured in a very small area, performance of this method is limited. Surface effects and the inhomogeneous nature of meat is a challenge for this approach.



### ODENBERG'S COMBINED TRANSFLECTION AND TECHNOLOGY ANALYSES 20-80% OF A BATCH

depending on implementation

ODENBERG has implemented a combination of *transflection* and near-infrared analysis that answers all previous challenges. *Transflection* means that light that has penetrated deep into the meat is measured and gives a very representative measurement, also of inhomogeneous products. In addition, the full width of the conveyor belt is measured and over 500,000 individual wavelengths are analysed per second, resulting in a unique accuracy and no capacity limitations.



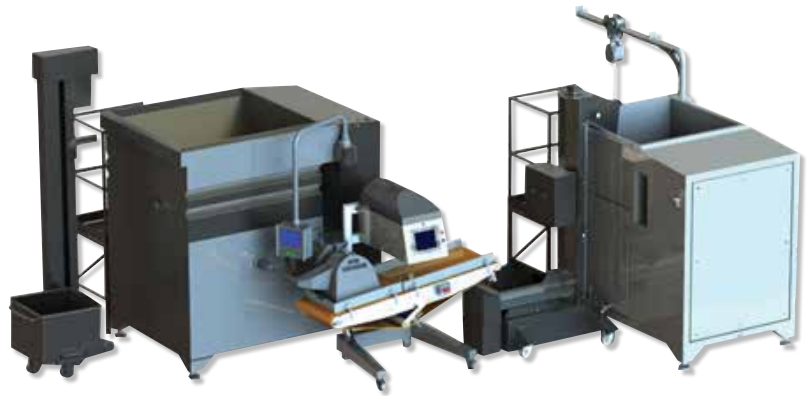
Accuracy depends on application and process. The graph shows how the accuracy increases with batch size for typical applications.



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## DESIGNED FOR THE MEAT INDUSTRY

Great effort has been made to design this product to meet the needs of the meat industry. The result is a machine that can be trusted in all aspects.



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## ROBUST AND RELIABLE

Wash down environments are demanding. Seals and components all hold a minimum of IP 67 and the new IR touch screen eliminates problems associated with traditional touch screens in wash down environments. The core technology inside the QVision machine was first developed 15 years ago by ODENBERG's sister company TITECH. Since then this technology has become ever more mature and accurate and today over 2000 scanners with the same core technology are in use all over the world. Over 400 customers rely on this technology to run large industrial plants.

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## LOW COST

Durability, simplicity and stability are key features of the QVision design. The system is factory standardized and includes automatic reference calibration that ensures no drift over time. Annual maintenance cost of the machine is typically 2-3% of the investment.

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## HYGIENIC

The system has no horizontal surfaces where water droplets can remain. The measurement system is never in contact with the food. The design is open such that all surfaces easily can be visually inspected and accessed with high pressure water without disassembly.



“We have owned a QVision scanner for over two years and it is our most reliable machine.”

- ODENBERG's first customer of the QVision500 Analyzer for meat



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