



Application Note AN N209

FT-NIR Quality Control of Meat and Meat Products

Meat comes - like all natural materials - in a wide range of variation. For the meat industry it is essential to know the composition of raw meat and other ingredients in order to adapt the recipes for high quality sausages, salami, ham or other types of meat products. In addition, the testing of intermediates as well as the finished goods before delivery to the end customer is a crucial step for consumer satisfaction.

With the growing global demand for meat and meat products it can be a challenge to keep the standard quality requested by the customers. FT-NIR technology being able to provide analysis results in less than a minute has the potential to complement or even substitute a wide range of classical test methods for the quality assessment of meat and meat products in the laboratory as well as online.

Bruker Optics MPA II and TANGO are easy to use FT-NIR spectrometers, which help you analyze the composition of your sample with little to no sample preparation. The minced meat or meat product is filled in either glass or disposable polystyrene Petri dishes and placed on the integrating sphere for measurement in reflection mode.

Benefits of FT-NIR technology

- Rapid analysis results
- Optimized product quality
- Savings on raw material
- Increased productivity

At the push of a button, the analyzer evaluates your sample and displays results for protein, fat, moisture, salt content and other parameters simultaneously.

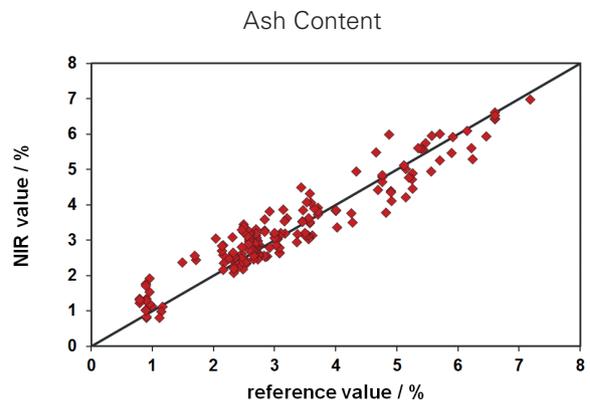
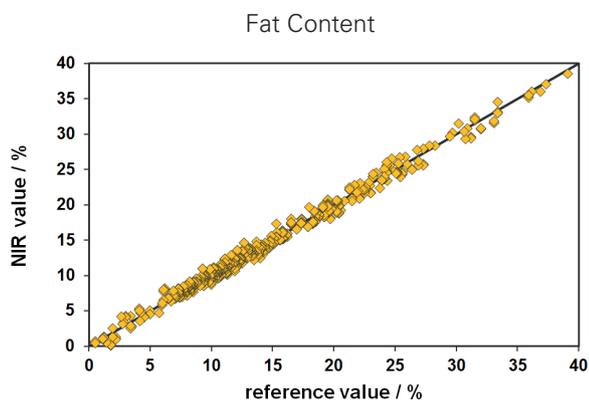
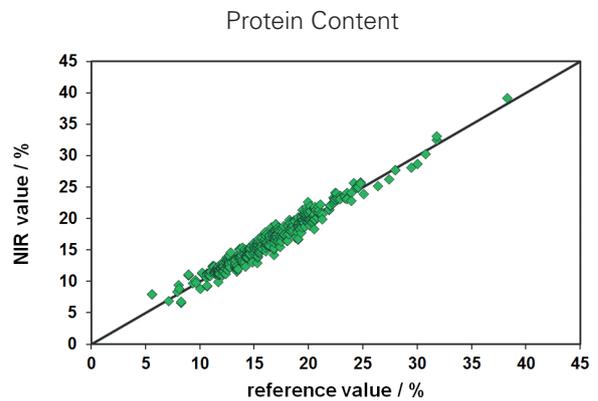
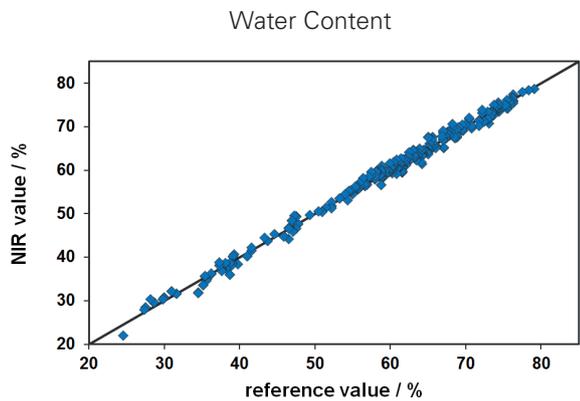
The Bruker Meat Calibration Package contains methods for the analysis of raw meat as well as meat products like ham or cooked and raw sausages.

Parameters commonly analyzed with FT-NIR

- | | |
|------------|------------|
| ■ Fat | ■ BEFFE* |
| ■ Water | ■ Ash |
| ■ Protein | ■ Salt |
| ■ Collagen | ■ pH Value |

*Meat protein free of connective tissue protein
(German: "bindegewebsproteinfreies Fleischprotein")





FT-NIR Spectrometers: Bruker Optics offers various FT-NIR spectrometer models for lab, at-line and on-line applications:

TANGO



Touch-screen operated FT-NIR analyzer for routine use in the lab and atline.

MPA II



Multi Purpose Analyzer for maximum flexibility with ease-of-use.

MATRIX-F



Process monitoring with probes and contact-less sensor heads.

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