Application Note
Mould Cheese

Result	
Fat	25.41 %
Moisture	46.09 %
pH	5.49
Salt	1.76 %

interline
spectroscopic analytical solutions

Introduction

For mould cheese producers it is important to control the moisture, fat, salt and pH in the fresh cheese before it is left to mature. Standard chemical analysis are often cumbersome and time consuming. FT-NIR is a well proven method for quick and cost-efficient analysis of moisture, fat, salt and pH in the cheese. The FT-NIR from Q-Interline will provide the result in 30 seconds after the analysis has been initiated. The analyser can be placed directly in the production area and can be operated by plant personnel. The DairyQuant B4 is equally suited for analysis of the mature mould cheese.

Analyser: DairyQuant B4

The DairyQuant B4 is based on the latest generation FT-NIR technology and has the following main features:

- Cutting edge spectral performance and best signal to noise ratio on the market
- Very easy to operate and maintain
- Optimised software suite with InfraQuant and Horizon QI
- Very low maintenance costs. The DairyQuant B4 has no scheduled maintenance

Analysis:

The sample is blended prior to analysis and loaded into a Teflon sample cup. Excess material is removed to secure a flat, homogenous surface for reflectance measurement. The Teflon cup, is rotating during the analysis while analysing a large sample area averages the sample heterogeneity and improves the repeatability of the measurement.

The Teflon sample cup eliminates issues with glass and plastic in the production area. The Teflon sample cup is cleaned after the analysis and re-used many times keeping the cost per analysis very low.

See a video presentation of the DairyQuant B4 on our homepage: www.q-interline.com and experience how easy it is to perform the analysis on the DairyQuant B4.

Calibration

The DairyQuant can be used with customised calibrations, optimised to the customers own products. Customised calibrations are made by adding a number of samples from the actual production line to a set of starter calibrations from Q-Interline. The calibrations are developed against standard reference methods.

Calibration Performances, Example

The performance of the different calibration models can be seen in table 1.

Parameters	Range	SECV
Moisture	34-55%	0,42
Fat	22-50%	0,54
Salt	0,6-2,4%	0,07
pH	4,8-7,5	0,07

Table 1: Performance of the DairyQuant B4

Conclusion

The DairyQuant B4 is designed for analysis of pasty samples with high degree of inhomogeneity. The DairyQuant B4 will measure the cheese sample for parameters like moisture, fat, salt and pH in 30 seconds.

The DairyQuant B4 can be placed in the production area or in the lab. The intuitive software interface means that the analyser can be operated by plant personnel with limited or no lab education.