

Application Note

Flour



Introduction

Many parameters are of interest for the production of flour in order to have production within specifications and to obtain an end product with the desired performance. FoodQuant B3 will provide a fast and accurate result for these parameters, e.g. moisture, protein, gluten and many more.

The FoodQuant B3 is perfectly suited to replace traditional laboratory methods which are cumbersome, expensive and require trained personnel. The results are obtained on the FoodQuant B3 in less than a minute, enabling tighter process control and faster reaction in production.

Analyser: FoodQuant B3

The FoodQuant B3 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
- Strong software package with InfraQuant and Horizon QI
- Very low maintenance costs. The FoodQuant B3 has no scheduled maintenance and the light source has an expected lifetime of 10 years

The sample is analysed by reflection measurement in petri dishes, which can be made of either glass, plastic or Teflon depending on local requirements. Teflon is especially suited for production sites where glass and plastic is not allowed on-site.

Analysis:

The sample to be analysed is loaded into a petri dish, which is then placed on the analyser. The analysis is initiated in the software and the result is obtained in less than a minute.

The petri dish is spinning during the analysis, ensuring that the FoodQuant B3 is seeing a large part of the sample and reducing effects from product heterogeneity. This is especially important for heterogenic products like flour.

See a video presentation of the FoodQuant B3 on our homepage: www.q-interline.com and experience how easy it is to perform an analysis on the FoodQuant B3

Calibration and calibration performance.

Calibration work has been preformed on various types of flours, including treated soft, treated hard, untreated soft, untreated hard, cake flour, noodle flour and general purpose. Below the performance obtained on the FoodQuant B3 can be found.

Property	Interval	secv
Moisture	9.8 - 14.0	0.19
Protein	8.0 - 14.0	0.25
Ash	0.3 - 0.8	0.03
Gluten	24 - 40	0.55
Water Absorption	52-68	0.8
Granulation	96.8 - 99.8	0.3
Speck Count	4.5 - 50.75	0.3
Lightness (L)	89 - 94	0.4
Falling Number	350 - 450	15
pH	3.9 - 6.6	0.09

Conclusion

The FoodQuant B3 is a powerful tool for fast analysis of many parameters in flours, e.g. moisture, protein and gluten.

The FoodQuant B3 can be placed in the laboratory or in the production area. The intuitive InfraQuant software guides the operator through the steps of the analysis and the results are displayed with easy to understand colour codes.

Q-Interline have starter calibrations available for different types of flour, which will enable a faster start-up for the FoodQuant B3 in your laboratory or production.