



Premium meat products by using BUCHI NIR-Online®

NIR-Online® Micarna SA in Zurich (Switzerland) controls its meat mixing process with BUCHI NIR-Online®

1. Introduction

Micarna SA is the leading meat, poultry and seafood producer in Switzerland for more than 50 years and makes essential contribution to the business success of Migros. More than 2 million consumers in Switzerland and Europe enjoy top-rate Micarna SA products daily. Its four-core values origin, responsibility, sustainability, and product form the basis for confidence and long term economic success, make Micarna the Swiss market leader.



Figure 1: Micarna logo

2. Real time quality control

The Micarna SA meat processing plant in Zurich produces 3500 tons of processed meat annually. Controlling the quality of such production volume by conventional methods is very challenging, since such methods are tedious, time consuming, and represent only one moment of the production. Increasing the frequency of sampling would significantly higher cost for analyses – but still would not enable detection of process deviations between two sampling events.

Micarna SA recognized this as the best chance for extending its continuous process- and quality improvement. Following its core values, Micarna SA searched for innovative alternatives to traditional laboratory methods and found the X-One process analyzer by BUCHI NIR-Online® most suitable. Within seconds, this process analyzer measures parameters, e.g. fat. Thanks to its continuous operation immediate corrections are possible in case deviations occur. It's monitoring, reporting, and documentation of individual recipes closes the gap between conventional sampling, thus extends the influence of quality management systems. Additionally, the laboratory efforts are greatly simplified and can be reduced to a minimum.



Figure 2: BUCHI NIR-Online® Process Analyzer

3. Smooth integration and simple handling

In Zurich the process analyzer is implemented in the production line directly on the meat mixer, see (Fig. 3). The integration of the device into the process control system was realized by the local engineering office Kundert Ingenieure AG. The pre-selected meat is transported into the mixer. The process analyzer provides directly information of the current production, enabling the product manager possible corrections and full documentation.



Figure 3: NIR-Online installation point

Statement from Kundert Engineering.:

Partner for NIR-Online Solutions since 2008. Micarna is one of our complete meat solutions. The focus here has been easy and fast manufacturing directly in process. Efficient use of raw materials and a reliable track and trace by daily reports.

4. Sensor Details

The measuring principle of the process analyzer is based on near infrared (NIR) diode array technology, which means no moving parts and strong robustness by design. Within seconds this process analyzer measures several parameters such as fat, protein, moisture, and other parameters simultaneously. The design of the device perfectly suites the rough industrial conditions.

The process-orientated and user-friendly software with its patented AutoCal® feature make the launch of the device very fast and daily usage easy to maintain. All this results in most efficient resource utilization and increased economical return – 100% in accordance to Micarna's core values.

5. Contact

For further information, please contact your local BUCHI affiliate or visit our webpage.

www.buchi.com/nir-online

www.kundert-ing.ch/de

www.micarna.ch/en