

Advanced Quality Control in Dairy Industry

with DASGIP pH Monitoring Systems

pH Quality Control

In milk industry one part of the quality control is the accurate tracking of the acidification activity of dairy cultures by continuous pH monitoring.

DASGIP AG has developed a tool for continuous pH measurement and automated data analysis, which includes the direct matching of all collected data with predefined quality criteria and the documentation in MS Excel. The DASGIP technology facilitates the operation of up to 16 vessels in parallel. This helps users to speed up the quality check of the dairy products and eases the data storage.

- **Parallel pH Calibration**
- **Continuous pH Measurement**
- **Automatic Documentation**

pH Monitoring Modules

DASGIP pH Monitoring Modules allow continuous and parallel pH monitoring in up to 16 vessels. PH shifts in individual vessels are simultaneously recorded within one measurement process.



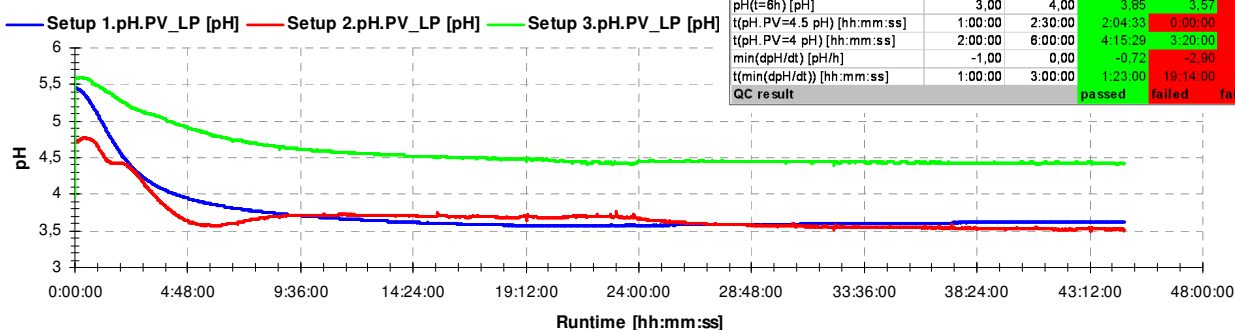
DASGIP pH Monitoring Module PH4

The customised mode of operation and easy-to-use pH monitoring elements make the DASGIP pH Monitoring Modules valuable for daily use in Quality Control as well as applied research in dairy industry.

During the fermentation process pH values are monitored continuously and the individual temperature values of the respective vessels can be adjusted by entering the offline temperature data into the process screen. Optionally an automatic temperature monitoring can be provided.

The Modules PH4, PH8 and PH16 support standard pH sensors. One or two point calibration for all individual electrodes in parallel is available.

pH Quality Control in yogurt production using different *L. casei* inoculation cultures



DASGIP pH Quality Control Software used in yogurt production

Application Dairy Industry

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Quality Control Software

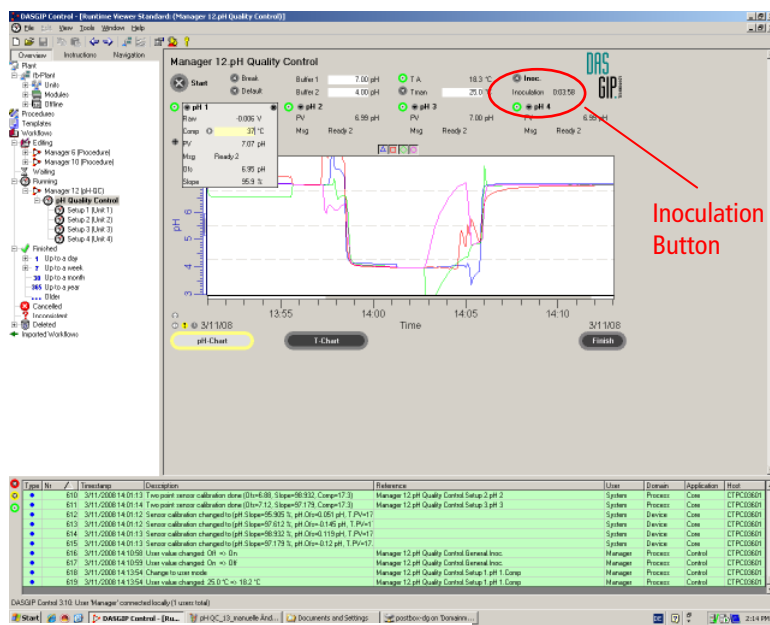
The DASGIP pH Quality Control Software speeds up the quality check of dairy cultures by supporting parallel pH calibration, continuous pH measurement and automatic documentation.

By pressing the *Inoculation*- button users can start the inoculation clock. The process overview screen (s. graphic on the right) allows permanent observation of the pH tracking during the entire process.

Pressing of the *Finish* button terminates the process and the data are exported to MS Excel and automatically evaluated regarding the predefined quality criteria.

Data are matched with predefined minimum and maximum values and results of the analyses are displayed in the "QC Results Row" (s. graphic above). Measured values which differ from the user-defined quality criteria lead to direct discrimination of the corresponding datasets.

Predefined set-points are displayed in a final output table whereas the general quality control results, classified to passed or failed are clearly arranged by colour encoded illustration. A quality documentation sheet will be generated for print out and archiving. To meet enhanced security requirements DASGIP provides an option for an automatic conversion of all relevant data into unchangeable PDF documents.



DASGIP Process Overview Screen

Application Dairy Industry

Benefits

DASGIP pH Quality Control fulfills the demands of the upcoming quality standards in milk industry.

The example shown demonstrates the application of the DASGIP pH Quality Control tool for the continuous and parallel pH measurement and calibration combined with automatic data analysis. This also includes the direct evaluation of the collected data regarding predefined quality criteria and the documentation in MS Excel. This tool can be used without the need of any programming skills. User benefits from an accelerated quality check of dairy cultures and an easy data documentation according to international quality standards.