



Case Study

Producing safe, high-quality mozzarella



Your Choice,
Our Commitment

Cheese factory protects product quality and ensures consumer safety with SEKO solution

Originating in southern Italy and traditionally made from buffalo milk, mozzarella has seen a spectacular rise in popularity over the last century thanks largely to its use as a pizza topping.

The global market for mozzarella has been valued at \$10.1 billion, with four billion pounds of the semi-soft cheese produced annually in the USA alone. It's big business, and in a competitive marketplace producers can't afford for product quality to fall or for food safety incidents to affect consumers, production, profitability or their reputation.



Protecting their slice of a \$10bn industry

As an operator of a thriving mozzarella production plant, our customer is acutely aware that the presence of unwanted bacteria such as salmonella and listeria could have a detrimental effect on cheese quality as well as putting consumers at risk of illnesses as serious as tuberculosis, diphtheria and scarlet fever.

“Excessive chlorine may kill the Mozzarella’s rennet and spoil the product”

In order to ensure the removal of bacteria, the operator doses sodium hypochlorite into the water bath that the mozzarella passes through during the cooling and firming stage of production.

However, doing so carries an element of risk as excessive chlorine may kill the mozzarella’s rennet – an enzyme which is a key factor in the final quality of the cheese – and spoil the product. To achieve the careful balancing act between protecting consumers and maintaining product quality, the client decided to install a liquid analysis system that would allow the chlorine content of the water bath to be precisely monitored and controlled.

“A liquid analysis system that would allow the chlorine context of the water bath to be precisely controlled”

Requiring a system with the capacity for high accuracy and reproducible results, the customer approached leading water-treatment expert SEKO to deliver a solution. Following a comprehensive on-site assessment and further discussions with the on site team, the SEKO technical team recommended the multi-parameter Photometer System.





High-precision dosing and real-time data

The Photometer System is a wall-mounted light-measurement device that analyses the concentration of a given substance (in this case the water in the cooling bath) and provides real-time values for free chlorine and other parameters vital in food-processing applications such as pH and temperature.

“The SEKO photometer system’s repeatable analysis and superior precision guarantees reliable dosing”

With live and historical information on the chlorine content of the water bath at their fingertips, the client would be able to accurately dose sodium hypochlorite accordingly and guarantee a safe product of the highest standard.

Remote data logging and versatility

One of the most appealing features of this mini laboratory for the client was its Modbus enabled capability that offers remote data recording and monitoring - an invaluable tool for the time-pressed management and technical personnel who are responsible for multiple sites and unable to be present at this plant at all times. In fact, this feature makes the Photometer System popular across multiple applications and industries, including swimming pool dosing, cooling water treatment and wastewater treatment.

Another significant factor in the selection of this system was that analysis of the water bath is made difficult by high turbidity resulting from the presence of fat and suspended solids as the mozzarella passes through.

“The photometer system’s success was confirmed by comparing readings with the client’s portable analyzer”

As photometry relies upon light absorption at specific wavelengths, when dealing with substances prone to high turbidity the analysis system must be capable of exceptional accuracy. The SEKO Photometer System’s repeatability of analysis and superior precision meant that this challenge could be overcome and reliable dosing guaranteed.

Ease of installation

The customer’s engineer reported a quick and simple fitting courtesy of the accompanying SEKO installation kit which included quick couplings for water inlet and outlet fixings. Once the system was fitted and functional, the equipment’s success was confirmed by comparing readings from the SEKO Photometer System with those produced by the client’s portable analyzer.

The plant now operates with complete confidence in the safety and quality of the product, with the added benefit of highly-accurate dosing for a reduction in chlorine consumption.



Mozzarella leaves the treated water bath

Your Choice, Our Commitment

In the modern Globalised world, being a privately owned Company has significant benefits especially for our Customers, our Partners. For over 40 years, SEKO has developed a Global organisation able to take the longer view, manage the pressure of the now, and to plan for the long term, delivering true Partnership for our Customers, with transparency and mutual respect for each other.

Whether it's for our reknown flexibility, our attention to detail, the high-quality products, or just the way we do business, we understand that it's Your Choice to do business with us. It is Our Commitment to fulfill your needs wherever you, our Customers are.



For more information about our portfolio, worldwide locations, approvals, certifications, and local representatives, please visit www.seko.com

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