



test kappa

The importance of K-casein B

k-casein and Cheese Yield

"It is estimated that the actual yield of cheese in a plant producing 20,000 tonnes per year from k-casein AA milk would increase to approximately 21,180 tonnes of Cheddar, or 21,780 tonnes of Mozzarella if made from k-casein BB milk."

R.J. Fitzgerald et al. University of Limerick, Dublin, Ireland

"The yield of Parmigiano Reggiano increases of +6 kg per cauldron if only k-casein milk is processed compared to the yield of Parmigiano Reggiano from only k-casein AA milk."

P. Mariani et al. University of Parma, Italy

"In general, processing k-casein B milk gives a higher cheese yield."

Z. Pa Z. Puhán, E. Jakob - Swiss Federal Institute of Technology, Zurich, Switzerland

k-casein and Milk Processing

"K-casein B milk coagulates in a shorter time and gives firmer curds which can be more easily processed because they form more uniform curd granules, which drain more easily and whose cohesion gives cheese with better rheological properties."

P. Mariani et al. University of Parma, Italy

"K-casein BB milk coagulates better compared to k-casein AA or AB milk."

M. Alipanah et al. - University of Zabol, Iran

"Milk with a higher K-casein B content has also higher casein, calcium and phosphorus contents."

R.C. Lawrence - New Zealand Dairy Research Institute, Palmerston North, New Zealand

K-casein and Cheese Quality

"K-casein B milk incorporates a higher amount of fat and protein into cheese."

A. S. Marziali and K. F. Ng-Kwai-Hang - McGill University, Montreal, Canada

"Curds from k-casein milk show a better elasticity and are more suitable to syneresis, while the curd from K-casein A milk gives less firm curds."

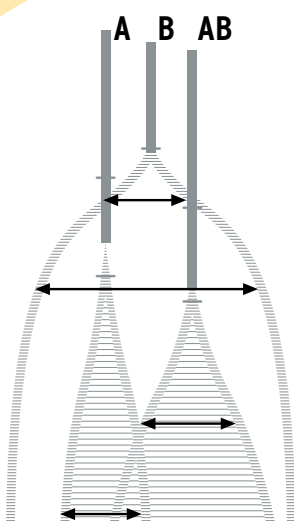
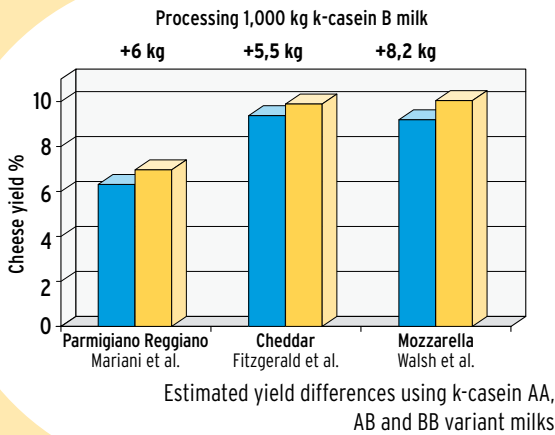
A. Summer et al. - Università di Parma, Italy

"Compared to k-casein A, k-casein B gives the milk better cheese-making properties: a shorter rennet coagulation time and firmer curds and for certain types of cheese, a higher cheese yielding ability (the difference between the two milks ranges from 4% to 8%)."

F. Grosclaude - INRA, France

"k-casein B variant improves the general structure and the sensorial properties of cheese, milk and yogurt."

G. Bobe et al. Iowa State University, Ames, USA



Results of lactodynamograph analysis of milk samples containing different k-casein variants

New quick test for k-casein B

Kappa Test: What It Measures

The test measures the content of k-casein BB in bulk milk samples.

The test has been especially designed to analyse bovine milk, regardless of the breed.

The presence of generic preservative additives or different storing temperatures (from -20° to +5°) does not affect the test results.

The test is easy to use and gives accurate results in a short time.



Kappa Test: Its Scientific Foundations

The main new feature of Kappa Test is the development of an antibody able to bind a specific amino acid sequence of k-casein B. In fact, it binds the amino acid regions 136 and 145, which differentiate casein A from casein B.

The popular ELISA test technique, based on a measurable colour reaction, is used to analyse the milk samples.

On the basis of the colour intensity, the quantity of k-casein B in the milk samples can be assessed.



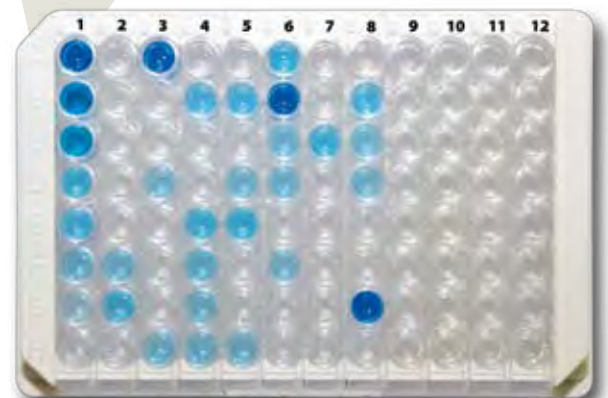
Kappa Test: How To Use It

The test uses a competitive ELISA test which requires materials and equipment common in all ELISA laboratories.

The test protocol is simple and does not require specialized staff. Only a very small amount of milk (10 microliters) is necessary and the samples do not need any pre-treating.

The results of the test are available after only about four hours (96 samples per plate).

Kappa test, designed by Prof. Andrea Summer and Dr. Massimo Malacarne of the University of Parma, is internationally patented (PCT/IB2008/002680) with the name "Method Determination of K-casein in bulk milk samples".





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