

## **Influence of leucosis on composition and properties of milk**

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### **Summary**

Differences of chemical composition and physical-chemical properties were revealed for milk from clinically healthy cows and from cows infected by leucosis.

According to WHO expert's estimation, human health depends on socio-economic life conditions and way of life on 50 %. Nutrition plays the most important part in the human life.

Poor-quality food is a source of human diseases and most often it occurs then raw material from which they are produced, is received from sick animals.

Infectious diseases are most dangerous. Leucosis is one of most widespread diseases among them in cattle herds of Ukraine. About 16 % of cattle were infected in Ukraine in 1998. In 2003 spreading of leucosis decreased to 9 % with simultaneous decrease of common number of cattle.

Bovine leucosis is a slow infectious illness of tumour nature. Malignant growth of cells of blood creating organs, infringement of their maturing caused to diffuse organ infiltration by these cells, tumour creation are the main attributes of this disease.

Animal leucosis are diagnosed almost all over the world. Polymerase chain reaction is the most sensitive and direct method of leucosis diagnostics nowadays. It has permitted almost completely eliminate the infected animals from cattle herds of developed countries. Reaction of immunodiffuse giving the large error is the most widespread diagnostic method in Ukraine. Taking into account this circumstance, we can assume that in Ukrainian dairies it is impossible to guarantee the receiving of gathered milk free of milk dash from leucosis infected cows for processing.

The aim of our work was to investigate quality characteristics of milk received from leucosis infected animals.

We have studied milk drawn from 13 animals which was diagnosed on leucosis by PCR. According to results of investigation, milk from sick cows has less parameters of chemical composition in comparison with milk from clinically healthy animals. So, in milk received from sick animal percentage of protein was at an average 1,24 times less, percentage of casein – 1,12 times less, percentage of fat – 1,29 times less, percentage of solids – 1,07 times less, solids not fat – 1,13 times less, percentage of milk sugar – 1,09 times less than in milk from healthy animals.

Physical-chemical parameters of milk also changed. Decrease of specific gravity in 0,9 times and increase of acidity in 1,2 times were revealed in milk from sick cows in comparison with healthy animals.

These occurrences can cause worsening of technological properties of milk and then – decrease of quality of dairy products, especially cheese, manufactured from milk with dash of milk from leucosis infected cows.