



**CHEMICAL COMPOSITION OF BREAST MILK AND
BENEFICIAL ASPECTS FOR NEWBORN CALVES.**

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ABSTRACT

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The initial colostrum has a sweeter-soupy taste, yellow, yellowish color, after 3-4 days its organoleptic indicators are similar to ordinary milk

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Table 1
Chemical composition of colostrum (according to G.S. Inihov), %

| From my birth next milk order | Total protein | Casein | Albumin and globulin | Milk sugar | fat | Mineral substances | Sourness, 0 T | Density 0 A |
|-------------------------------|---------------|--------|----------------------|------------|-----|--------------------|---------------|-------------|
| 1 | 14,9 | 5,1 | 8,4 | 4,0 | 6,3 | 1,01 | 53 | 40 |
| 2 | 9,9 | 4,1 | 4,8 | 4,3 | 5,7 | 0,96 | 42 | 39 |
| 3 | 6,6 | 3,4 | 2,3 | 4,5 | 5,5 | 0,83 | 42 | 38 |
| 4 | 5,9 | 4,5 | 1,7 | 4,8 | 5,2 | 0,87 | 40 | 36 |
| 5 | 5,0 | 3,1 | 0,8 | 4,7 | 4,9 | 0,82 | 32 | 38 |
| 10 | 4,5 | 3,2 | 0,6 | 4,8 | 4,7 | 0,80 | 28 | 34 |
| 15 | 4,2 | 3,0 | 0,5 | 4,7 | 4,8 | 0,77 | 25 | 32 |
| 20 | 4,0 | 3,0 | 0,6 | 4,7 | 4,2 | 0,71 | 22 | 32 |
| 25 | 3,8 | 2,9 | 0,4 | 4,4 | 4,2 | 0,77 | 21 | 30 |
| 30 | 3,6 | 2,5 | 0,5 | 4,6 | 3,9 | 0,77 | 20 | 30 |



The yellow color of colostrum is explained by the large amount of carotenes in its composition. Colostrum is thick, stretchy, sometimes grainy.

It is defined by the abundance of albumin and globulin in its composition, and its amount gradually decreases. Albumin and especially globulin participate in the formation of the immune system of a young animal. Sometimes the amount of total protein is up to 23-24 %, including albumin and globulin is 20 %. Colostrum is very high in fat because it is a source of energy in the calf's body. It decreases with each milk and returns to normal at the 30th milk. Milk sugar is less at first and reaches the medium from the 3rd-4th milking. Density and especially high acidity (500 T) creates an acidic environment in the gastrointestinal system of a newborn animal and prevents the development of various unpleasant microorganisms that enter the body.

The fat of colostrum is dark-yellow in color, because it contains a lot of carotene, which is 3.4-8.1 mg/kg, 10-20 times more than milk. It is high. It was also found that the content of vitamins D and A in colostrum is higher than in milk.

Colostrum contains many immune cells, antitoxins, enzymes and hormones, which increases its biological value.

Colostrum has an important physiological value, its composition resembles the composition of blood, so the newborn animal receives the nutrients it consumed in the mother's womb. Its composition changes day by day, from milk to milk, and during this period the calf gets used to new conditions and becomes very fit. The globulin is absorbed from the intestine and

passes into the blood of the calf, which does not yet have immune cells, and protects against various bacteria. Antitoxins protect against various infectious diseases. Due to the high content of magnesium in colostrum, it accelerates bowel movements, resulting in the possibility of releasing primary feces.

The composition of cow's colostrum depends on the type and level of feeding during the pre-partum rest period, its duration (45-60) and fatness.

Colostrum has a sour-salty taste, hard coagulates under the influence of rennet enzymes, fat does not coagulate at all. Therefore, it is not used directly as food and in the production of dairy products. If such bull's milk is added to the milk during cheese making, the biochemical processes during cheese ripening will be disturbed, the cheese will be of low quality, in this regard, milk for the preparation of cheese and butter is taken 7 days after the cow gives birth. Colostrum is given to the cow's own calf, and if the cow gives a lot of milk, the rest of her calf is given to other calves instead of skimmed milk. Recently, butter has been made from colostrum and used in medicine, and it can also be used for colic in calves.

Depending on the individual characteristics of cows, they begin to give normal milk after 7-10 days, however, the composition and properties of milk change throughout lactation.

The milk obtained in the first month of lactation is characterized by a high density, a high content of dry matter, fat and protein, and a low level of milk sugar.



In the third month of lactation, in most cases, a slight decrease in dry matter, fat and chlorine is observed, then these indicators increase up to 8 months. These

indicators increase sharply from 8 months and reach their peak at 10 months of lactation.

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