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**COMPARISON OF THE RESULTS OF RESEARCH OF MILK COWS WITH  
MASTIDINOVOJ PROBE AND METHOD OF CULTURAL THE SELECTION OF  
STAPHYLOCOCCUS AUREUS**

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*In comparative terms the results of researches 85 samples of milk cows using mastydynovoyi samples and cultural method for the selection Staphylococcus aureus. With mastydynovoyi samples obtained positive results in 20 (23.5 %) cases, and cultural methods - 34 (40.0 %). Of the 41 samples of milk volume of 10.0 ml of culture isolated St. aureus in 34 (82.9 %) cases, 1.0 ml – 25 (61.0 %) and 0.1 ml – 22 (53.6 %) cases. In 13 (65.0 %) of 20 samples of milk, which reacted with mastydynam, the results of both tests coincided, in 7 (35.0 %) – no.*

**Keywords:** *cow's milk, golden staphylococcus, mastidin, toksikozi.*

**Statement of the problem.** Of milk is a food product for humans and an indispensable food for young animals. Its quality largely depends on the degree of contamination of the endogenous flora bakterijnoû (inflammation of the mammary glands) and exogenous origin (violation of conditions, feeding and care; sanitary conditions obtain and primary processing of milk; people-carriers of staphylococci, etc) [1] is often milk is the source of the bacteria is dangerous for people's health, which include and conditionally-pathogenic Staphylococcus ( St.) aureus.

The role of milk and milk products in the case of staph toxicosis is constantly growing, reaching now over 30% of the number of all cases of massive toxicoses of people, above all children [4]. There are about 30 agents and diseases which can be transmitted through milk [2]. They are quite common and causing significant economic damages caused by the carrying out of diagnostic studies and treatment of sick people, and livestock through animal performance, their deaths, etc.

**Analysis of the basic research and publications, which highlights this problem.** Total number of bacterial food poisoning Staphylococcal toksikozi only toksikoinfekciâm sal'monel'oznim yield. the role of Staphylococcus in the case of food toxicoses started to learn from the 40-ies of XX century [b. I. Bamm, 1942; k. Turžec'kij, 1955;. C. Baird - Parker, 1960, 1965; Bilibin a. f., 1962; e. a. Nečaeva, 1965; Akatov a.k., 1976; v. Ivchenko, 1985 and others].

Staphylococcal poisoning caused by endotoksinami enterotoksigennih crops St.aureus quite dangerous for people. To accumulate dangerously enterotoksinu in milk for human dose should have in it at least 500 thousand/cm<sup>3</sup> enterotoksigennih cells of staphylococci and the temperature about 20<sup>0</sup> c for six hours.

In milk stored for several hours after the vidoûvannâ (cheese), enterotoksin rarely accumulates because it is pretty fast to cooling and antagonistic effect on staphylococci other bacteria that are in it [2]. Staphylococcal poisoning Because people often are the result of eating dairy products zabrudnûût'sâ St. aureus under the time of their manufacture [4].

Microflora environment constantly delves into cow mammary gland through saskovî channels [1, 4]. the main factors of its destroyed Massa for breast cancer, but some of them, in particular, St. aureus, survives and is involved in the development of mastitis [4]. Such pathogenic staphylococci produce enterotoxin groups a and b, which are poisoning people, especially children [5].

**The goal of research and zavdennâ** -compare the results of research of milk for the detection of mastidinovoû breakdown of hidden mastitis in cows, and the kul'tural'nim method on the selection of cultures of Staphylococcus aureus.

**Materials and methods the study.** For research have 85 samples of raw milk, which kept the temperature of 18-20°C no more than 4-7 hours after vidoûvannâ. Tried with mastidinom set in accordance with the described technique [1]. St. aureus found using the method of Bacteriological samples milk volume 10 ml, 1.0 ml and 0.1 ml in accordance with accepted methods [3, 6] for this elective applied salt broth, žovtkovo-salt agar agar and Bajrd Parker. during the identification of the causative agent also asked the tests for the presence of catalase enzyme, DNA basics and koagulazi, digestion of glucose, maltose and any in anaerobic conditions with the formation of acid and alpha-and beta-gemolizu on blood agar [1].

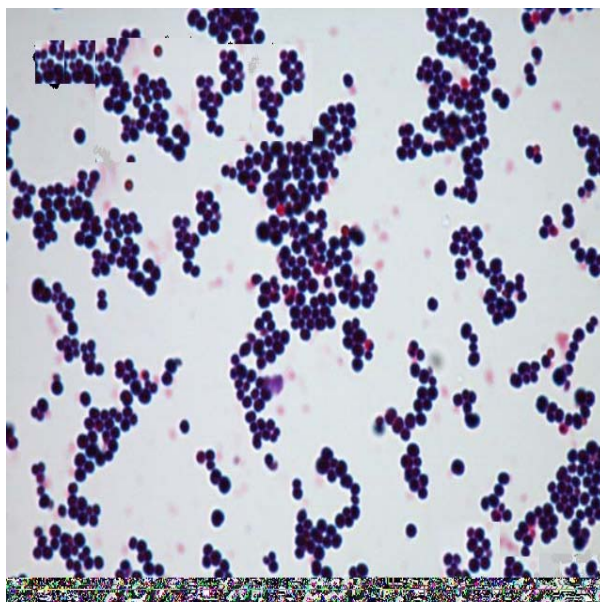
**The results of research.** In 41 (on) with 85 and the milk samples obtained positive results in both tests, given in the table.

***Comparison of research results 41-hallmark of milk with the help of mastidinom test method and cultural selection St. aureus***

Test from mastidinom	Bacteriological study of samples of the milk in'êmì, ml			Options the results of the	
	10.0	1.0	0.1	abs. number	%
+	+	+	+	12	29.3
+	+	-	-	1	2.4
+	-	-	-	7	17.1
-	+	+	+	10	24.4
-	+	+	-	3	7.3
-	+	-	-	8	19.5
20	34	25	22	41	100.0

Note: the + positive result; - negative.

The table shows that using the mastidinovoj sample obtained positive results in 20-s (23.5%) cases with 85 and the sampling of milk, and the cultural method – 34 (40.0%). in addition to the 41-volume of the milk sample of 10,0 ml of isolated culture of *St. aureus* in 34 (don't%) cases, 1.0 ml 25 (61.0%) and 0.1 ml-20 (53.6%) cases in 13 (65.0%) out of 20 samples of milk, which reacted with mastidinom, the results of both tests come in seven (35.0%). on the other hand, 21 (51.2%) with 41 case with positive results regarding the selection of *St. aureus* not received reactions from mastidinom in the microscopy of smears of cultures *St. aureus* on the glass observed that leaf's grampozitivni cocci rozmišivalis' in the form of grape or currant fruits brush, as shown in the picture.



*Fig. Smear on the glass with agarovoj culture St. aureus. Col. x675.*

The selected culture cocci owned the lecithinaznoû activity of blood plasma rabbit, was dissolved in glucose and mannitol maltose in anaerobic conditions, caused DNA depolimerizaciû and had a yellow pigment they belong to the genus Staphylococcus, the type aureus (golden). From 49 samples of milk are also isolated culture St. epidermidis who did not have the enzyme koagulazi, mannitol and glucose was dissolved in part of the cases culture cocci were associated with streptococcus and diplokokami.

The discrepancy between the results application mastidinovoj sample and the cultural method, is probably a consequence of the fact that with their help reveal different sides of contamination of milk. Mastidinova sample shows the process of changing the quality of milk because of the inflammatory process in the dairy gland. Using the cultural method turns out to be a lot more sources of contamination of milk bacteria, including St. aureus-with the affected breast inflammation during milking, storage and transportation, i.e., through contact with the utensils and hands of dairy enterprises. Kul'tural'nij method-much çutlivišij to indicate contamination of milk bacteria, primarily in the study of his sample in volumes within 1.0-10.0 ml. It should be noted that among the pathogens mastitis in cows, except St. aureus can be enterobakterij, they, in particular, Streptococcus agalactiae, etc. [1].

#### **Conclusions:**

1. Of 41 with 85 the milk samples obtained positive results in both tests. In the test of mastidinom reacted 20 (23.5%) with 85-s sampling milk and St. aureus identified in 34 (40.0%). The positive results of both tests overlapped in 65% of cases, there were only mastidinom at 35.0%, and only in the culture method in 51.2% of cases.

2. St. aureus is one of the pathogens of mastitis in cows and producentom enterotoksiniv in a ratty him milk, not cooled immediately after vidoûvannâ.

3. To prevent a suspicious sample of toxicosis of milk and products with him in'intensive is not less than 1.0-10.0 ml to investigate the discovery of St. aureus kul'tural'nim method.

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