

THE STUDY OF THE STABILITY OF THE MICROFLORA FERMENTS "SIMBILAKT" AND "BIFIVIT" TO DIFFERENT GROUPS OF ANTIBIOTICS

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Currently the interest in the intestinal microflora and its role in support and prevention of human health is increased. Intestinal microflora has a huge potential and metabolic and performs hundreds of biochemical processes. According to the World Health Organization, each year up to 30% of the population in industrialized countries are exposed to diseases of the gastrointestinal tract of various etiologies. Changing the quantitative and qualitative composition and enzymatic properties of the intestinal microflora leads to dysbiosis. Recent studies have shown that the expression of dysbiotic disorders are more common not only in children but in adults, they are associated with poor compliance nutrition and widespread use of antibiotics, hormonal, immunosuppressant, enveloping, laxative, choleretic and other medications, stress and adverse environmental conditions. One way of correcting and preventing dysbiotic disorders is use of functional foods cooked on the basis of live bacterial starter cultures. Today in Ukraine sourdough Vivo widespread, they are produced GP "Institute of Technology bacteria ferments milk and meat "Alba Timm" and they were the objects of this study. "Bifivit" and "Simbilakt" - sourdough fermented drinks recommended for correction of the microflora of the gastrointestinal tract, contain the following types of microorganisms: *Acetobacter aceti*, *Lactococcus lactis* subsp. *diacetylactis*, *Lactococcus lactis* subsp. *cremoris*, *Lactococcus acidophilus*, *Bifidobacterium bifidum*, *Bifidobacterium longum*, *Propionibacterium freudenreichii*. The purpose of this study was investigation of the resistance of some sourdough microflora to different groups of antibiotics, namely, semisynthetic penicillins, polyene, biosynthetic penicillins, carbapenems, aminoglycosides, lincosamides, imidazole derivatives, polyenes, macrolides, rifamycins, tetracyclines, triazoles, cephalosporins, cephamycins, semisynthetic cephalosporin III generation, cephalosporins. «Method of disks» was used to determine the resistance of microorganisms to antibiotics. In the first stage, the microorganisms were in liquid beef-broth nutrient medium (water meat peptone, sodium chloride), they were cultured 18-24 hours at temperature $37\pm 2^{\circ}\text{C}$. After inoculation, the microorganisms were sown on the surface of dense nutrient medium MRS (dry enzymatic peptone, sodium chloride, meat extract (meat cattle)) in a Petri dishes and there paper disks impregnated with the appropriate antibiotics at a concentration of 1 mg/ml were placed. After culturing in an incubator at temperature $37\pm 2^{\circ}\text{C}$ for 48 hours the resistance of microflora ferments to these types of antibiotics was evaluated by the presence of zones around colonies stunting discs.

Research results showed that these sourdough resistant to antibiotics: amphotericin, penicillin, vancomycin, kanamycin, clotrimazole, metronidazole, nystatin, fluconazole. Therefore dairy products based on sourdough "Simbilakt" and "Bifivit" can be recommended for using during antibiotic therapy.