

## **MICROBIOTA CONTROL IN WORKING PREMISES OF THE STUDENT CAFÉ “LABORATORY”**

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In its development, man, like other mammals, has undergone a long stage of coevolution with the microbial community, which is the main environmental factor in the biosphere.

The current level of development of the food industry requires from specialists of each branch a deep theoretical knowledge and practical skills both in the field of technology and equipment, and in the field of microbiological control of production during all technological process.

The main requirements for microbiological laboratories (even catering premises) are cleanliness and sterile conditions. This requires regular hygienic cleaning with detergents and disinfectants and irradiation with bactericidal lamps. Working conditions in the microbiological laboratory require compliance with a number of mandatory rules that ensure sterility at work and prevent the possibility of infection of personnel [1].

Microorganisms play an important role in human life. Some of them we need so much that without them human existence is impossible, others are a source of dangerous diseases.

Therefore, our goal was to analyze domestic and work premises for the presence of sanitary demonstration microorganisms.

Our task was to conduct a microbiological analysis of flushes from the surfaces of tables, dishes, walls, to investigate the microbiological quality of water and to determine the degree of microbiological air pollution in the main work premises in student café “Laboratory”.

On October 1, 2018, the grand opening of the training cafe of the Department of Food Technology and Hotel and Restaurant Business of TSATU took place. The educational cafe is a training laboratory for students majoring in “Hotel and Restaurant Business” and “Food Technology”. Here students have the opportunity to learn the basics of culinary art in real conditions, to get acquainted with cooking techniques in accordance with modern trends, to learn skills at all stages of work [2].

First, before the analysis, we sterilized the dishes. We will need it when collecting samples. Dyes were also prepared, which were used in the morphological description and medium for further accumulation of microorganisms.

Air is the main indicator of the cleanliness of the cafe. Because, firstly, we breathe them, and secondly, and through it there is contamination of the surface in the room. Therefore, for our study, we focused on the requirements of current legislation on the state of the microbiota in the food industry according to sanitary rules [3].

We studied microbiological analysis of air in three rooms on selective media. The analysis revealed that the kitchen in the air is 800 CFU/m<sup>3</sup>. And according to the requirements of sanitary rules, the air in the kitchen is relatively clean. There is 1040

CFU/m<sup>3</sup> in the utility room, so the air is dirty according to sanitary rules [3], but this is a permissible amount in this room. In the hall there is the smallest number of CFU, which is equal of 35, per m<sup>3</sup>. Therefore, the air is especially clean. We also performed microscopic analysis of colonies for air, which revealed 2 genera of molds: Penicillin and Aspergillus. They determined that they were the ones with the peculiar morphological structure of conidiophores. Sanitary indicative microorganisms, which include *Staphylococcus aureus* and *Streptococcus haemolyticus*, were not detected by microscopic analysis.

Therefore, it can be concluded that the cafe "Laboratory" meets the sanitary requirements of current legislation, but it is necessary to carry out regular preventive disinfection measures to control the number of mold fungi.

The main causes of mold:

- ambient air, clothing, workers' hair, raw materials
- high humidity
- lack of adequate ventilation.

The main preventive measures:

- ensuring good ventilation of the basement;
- periodic airing and drying of the room;
- periodic treatment with antiseptic solutions.

The following conclusions can be drawn:

• According to the results of microbiological analysis of the condition of the cafe "Laboratory", the presence of fungi of the genus Penicillin and Aspergillus in the common areas and kitchen was determined, in the utility room the dominant form is Mukor.

• Sanitary indicative microorganisms were not detected, which indicates a satisfactory state of microbiological purity of the cafe.

• Flushing results proved the absence of *E. coli* bacteria on the surfaces of equipment, utensils and walls.

Cafe "Laboratory" meets all requirements, so we recommend it to everybody.

## **References**

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