

Tárgytematika / Course Description Food Microbiology

N_DMA48

Tárgyfelelős neve /

Teacher's name: dr. Varga László

Félév / Semester: 2023/24/2

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 0/0/0

Tárgy féléves óraszám /

Teaching hours(sem.): 30/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

The main objective of this course is to help students develop an understanding of environmental factors that affect the activities of microorganisms associated with food spoilage, foodborne diseases, and food fermentation. This seminar focuses on microbial ecology, metabolism, and growth conditions; thereby enabling the destruction of harmful microbes and the stimulation of beneficial ones. A detailed description and characterization of foodborne microorganisms is also provided. "Food microbiology" is closely connected to "Applied microbiology".

TANTÁRGY TARTALMA / DESCRIPTION

1. Occurrence of bacteria, yeasts, molds, viruses, and protozoa in food raw materials and food products.
2. Microbial ecology of foods.
3. Metabolism of microorganisms.
4. Growth and death of microorganisms.
5. Spore-forming bacteria and their endospores.
6. Microbial contamination and spoilage of foods of plant origin.
7. Microbial contamination and spoilage of foods of animal origin.
8. Foodborne pathogens.
9. Microbiology of food processing.
10. Microbiological aspects of food preservation.
11. Lactic acid bacteria.
12. Probiotic microorganisms.

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESSMENT'S METHOD

Meeting the conditions set by the supervisor.

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

Montville, T. J., Matthews, K. R. (2008): Food microbiology: an introduction (2nd ed.). ASM Press, Washington, DC.

Roberts, D., Greenwood, M. (2003): Practical food microbiology (3rd ed.). Blackwell Publishing, Oxford, UK. **Original research papers and up-to-date reviews published in top-tier scientific journals, e.g., *Food Microbiology, International Journal of Food Microbiology*, etc.**

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL