**Název programu**: Food Chemistry

**Forma**: prezenční (en)

**Název**: Study of the biodegradation and environmental fate of selected polyester-based polymers

**Školitel**: prof. Ing. Stanislav Obruča, Ph.D.

**Anotace**: The food industry generates a significant amount of solid waste composed of polymeric materials, particularly arising from the use of polymers in food packaging. In recent years, there has been an effort to replace resistant synthetic polymers with biodegradable materials, primarily based on polyesters. The objective of the proposed dissertation is to investigate the biodegradation of these materials in various environments, assess the mechanism and kinetics of their decomposition in the context of diversity and activity of the present microflora, identify the main microorganisms involved in biodegradation processes, and also focus on the risks associated with the potential formation of microplastics, including an assessment of their stability in specific environments.