

Exercise 1

Rod-shaped, Gram-negative bacteria.

Family: *Enterobacteriaceae*

Genus: *Escherichia, Klebsiella, Enterobacter, Proteus, Yersinia*

Theoretical issues:

Characteristics of bacteria belonging to the *Enterobacteriaceae* family:

- Morphology
- Physiology
- Differentiation
- Pathogenicity

Diagnostics of diseases caused by bacteria of the family *Enterobacteriaceae*.

Overview of selective-differentiating media.

Practical part:

Broth bacterial cultures - *Escherichia coli, Salmonella Anatum, Proteus vulgaris*

Microscopic examination - the Gram method

Breeding study - inoculation of bacteria on:

- base medium - nutrient agar
- selective-differential medium - MacConkey agar
- differentiating media - Kligler, Christensen

Discussion of the culture results and their interpretation.

Overview of the features of single bacterial colonies: *Klebsiella pneumoniae, Proteus vulgaris, Serratia marcescens*.