

Exercise 3.

Cylindrical anaerobic, Gram-positive bacteria producing endospores.

Genus: *Clostridium*

Theoretical issues:

Methods of culturing anaerobic bacteria.

Characteristics of bacteria of the genus *Clostridium*:

- Morphology
- Physiology
- Types of pathogenicity and classification due to pathogenicity

Diagnostics of invasive infections (histotoxic species)

Enterotoxaemia diagnosis

Diagnostics of diseases caused by non-invasive anaerobes (neurotoxic species)

Practical part:

Liquid cultures: *Clostridium difficile* and *Clostridium septicum*

Microscopic examination:

- Gram staining
- staining by the Schaeffer-Fulton method

Breeding study:

- inoculation on a liquid medium with the liver (Liver broth), on blood agar, on brain heart infusion agar (BHI)

Discussion of the culture results and their interpretation.

Overview of the features of single bacterial colonies: *Clostridium difficile* and *Clostridium septicum*.