

# Microbiologysheet for exercises assignment



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Cysts are ingested in contaminated food and water and develop into trapezoids, which invade the mucosa of the large intestines productiveness accompanied by dysentery. Trapezoids can be found In erythrocytes and feces of an infected person. A. Nucleus- big funny shaped and dark 3.

Bilingualism exists in two forms: a vegetative trophies and a cyst. They are characterized by having two nuclei: a large macromolecules for growth and metabolism and a small macromolecules for cell division. (round circles with hair called cilia on the outside border of the cell) a. Nucleus- dark and cashew shaped . Lila- hairline structures on the outside of the cell 4.

Transoms cause African Sleeping Sickness and American transnational's. They live In the bloodstream and progressive symptoms Include headaches, fever, and anemia. Pronounced fatigue is experienced and most of the time is spent sleeping until death. (flagella is on the beginning and end of the cell, its nucleus and is surrounded by red blood cells) 5. Plasmid that causes malaria. They are sporan parasites with a complex life cycle, part of which Is In various vertebrate tissues, while the other part involves parasites.

The sportiest of the organisms are transferred to a human by the bite of a female Anopheles mosquito. The sportiest enter the bloodstream and migrate to the liver, where they enter the liver cells and transform Into enrollees. Enrollees are released from liver cells and Infect erythrocytes, where they undergo asexual reproduction involving sexual stages. The first is called the ring stage, and the second involves the development of consists. When mature, the sections contains a number of mortises and they are released by lists from the erythrocytes.

The lists of the consists and erythrocytes at once produce symptoms of malaria: chills, which is followed by fever, headache, sweat and malaise. Released merozoites infect new erythrocytes and repeat the cycle. The cycle of attack is 48 to 72 hours depending on the species (picture looks like blood cells: the red blood cells are smaller with either small open circles in them or dark fragments, the white blood cells are huge with fragments and funny shaped nuclei in them) a. Infected erythrocyte 1 OFF Kingdom Fungi 1 . Rhizomes a. Sporangia- dark-colored structures produced by rhizomes . Sporangiospore (asexual spore)- are produced by sporangia at the end of elevated stalks called sterigmata. These spores develop into hyphae identical to those that produced them. ( look like a dandelion with the fuzz blown off of it) c. Zoospore (sexual spore)- Sexual reproduction occurs when hyphae of different mating types (+ and - strains) make contact. Promycelium extend from each hypha and upon contact a septum separates the end of each promycelium into a gamete. The walls between the two genitalia dissolve, the gametes fuse and a thick-walled zygote develops.

The zygote germinates and produces a sporangium. Haploid spores are released that develop into new hyphae, and the life cycle is completed. 2. Aspergillus is an filamentous member of this group. Aspergillus species are opportunistic. One form of pulmonary aspergillosis (fungal balls) involves colonization of the bronchial tree or tissues damaged by tuberculosis. Allergic bronchopulmonary aspergillosis occurs in individuals who are in frequent contact with the spores and become sensitized to them. Subsequent contact produces symptoms similar to asthma.

Invasive speleologist is the most severe form and results in engineering ammonia and may spread to other organs. A. Conditioners (asexual spore)- The Espadrilles fruiting body is distinctive, with chains of conidia containing asexual conditioners arising from a swollen vesicle at the end of a stalk called a conditioner. 3. Penicillin- is best known for its production of the antibiotic penicillin. Conditioners (asexual spore)- Asexual reproduction occurs with a fruiting body, which consists of conidia containing spherical conditioners in chains at the end of elongated branching cells. 4.

Chromosomes the budding yeast Chromosome's a unicellular member. A. Du (asexual spore)- A bud is an outgrowth from the parent cell that pinches off, producing a daughter cell. 5. Candida Albicans is a deterrance that is part of the normal microbial of the skin, in the mouth, and in the vagina. A. Conditioners (asexual spore)- It reproduces asexually by conpires on a long chain of cells. Hilliness (group of Kingdom Mammalian) 1 . Collisions- Collisions genesis, the Chinese liver fluke, begins its infestation when larva called matriarchies, are ingested in raw or undercooked freshwater fish.

Once ingested, the matriarchies move to the bile ducts where they become adults. They are unconscious so a single fluke can produce fertilized eggs that each contains a viable larval form called miracle. The eggs leave the body in feces and enter fresh water. A snail ingests the miracle which undergoes asexual multiplication in snail and emerges as criteria. The criteria encysted in fish muscle tissue and become matriarchies. A. Testes b. Uterus c. Ventral sucker d. Intestine e. Oral sucker 2. Tania a. Immature proctologist (1) scales (2) hooks (3) sucker b. Tauter proctologist (1) genital pore (2) testes (3) uterus (4) ovary c. Gravid proctologist (1) Uterus (2)

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eggs . Trichinae a. Cyst b. Skeletal muscle Exercise II: Aseptic Transfer

Techniques I: Nutrient Broth and Nutrient Agar Transfer Define pure culture.

Pure culture is contains only one type or species of organism. Define aseptic technique. Aseptic technique is or sterile techniques are designed to prevent unwanted microorganisms from contaminating either sterile materials or pure cultures. What is the purpose of culture media? The purpose of culture media to keep the bacteria alive and to study their growth.

Exercise III: Aseptic Transfer Techniques II: Streak Plate and Spread Plate

Methods What is the purpose of the spread plate and streak plate technique?

Methods to isolate individual bacterial cells on a nutrient medium so that during subsequent incubation, a cell grows and divides sufficiently to form a single colony. Exercise IV: Bacterial Fixed Smear and Simple Staining What is the purpose of a simple stain? Allows general shapes, arrangements and morphology of cells to be observed. The use of dye to increase the contrast of the cells to be observed under the microscope. What is the purpose of a fixed smear?

Fixation is a process of killing, monopolizing, and preserving the bacterial cells by coagulating the cytoplasm proteins to make them more visible. In addition, the process adheres the cells to the slide so they do not wash off of the slide during staining. Basic stains are applied to bacterial smears that have been heat-fixed. What are examples or types of simple stains? Crystal violet stain of *Escherichia coli* or Methyl blue stain to *Crematoriums* Exercise W. Bacterial Cultural Characteristics or Morphology What is the purpose of using cultural characteristics or morphology?

Cultural characteristics or morphology may be used as an aid in identifying and classifying some organisms. Be able to recognize characteristic growth patterns in nutrient broths and on agar slants. Be able to recognize different forms and margins of colonies on agar plates. Exercise VI: Differential Staining: The Gram Stain What is the purpose of a Gram stain? The purpose of a Gram stain is classification and differentiation of bacteria. What is the most commonly used differential stain? Gram stain What are the primary stain and countersink used for in the Gram stain?

What is the purpose of alcohol in the Gram stain procedure? To decolonize What color do Gram positive and Gram negative bacteria stain? Be able to recognize Gram positive is purple and Gram negative is red or pink bacteria. Be able to recognize the three different shapes of bacteria various arrangements or patterns they form. Shapes: a. Coccus - round b. Bacilli - Rod shaped c. Spiral - Spiral shaped Arrangements or Patterns: a. Coccus 1. Diplococci- pairs 2. Streptococci- grape-like clusters 3. Tetrad's- four in a square 4. Sarcinae- eight in a cube b. Bacilli 1. Diagonal- pairs 2. Streptococcal- chains c.

Spiral bacteria usually occur singly. Some are very tightly coiled, whereas others are long and slightly curved or only curved at one end. Exercise VI': Special Structural Staining Techniques: Endospore, Capsule, and Negative Stains What are the primary stain and countersink in an endospore stain? The primary stain is malachite green. Safranin is used as a countersink, which is accepted by the vegetative cell and they appear red or pink. What color do endospore and the vegetative cell stain? Under the microscope the

endospore appear as green spheres or ovals and the vegetative cells will appear red or pink.

Be able to recognize a capsule. What is the purpose of a negative stain?

Capsules cannot be stained so techniques, such as the Gim's method, were developed to stain the background and leave the capsule clear. This is referred to as negative staining. A negative stain dyes everything except the structure you wish to visualize. The acidic negative stain has a negative charge and will not penetrate the cell because it is repelled by the negative charge on the surface of the bacterial cell wall. The capsules appear as analog or rings around bacterial cells, and the background is dark.