

Report on the bergeys manual

[Literature](#), [Russian Literature](#)



This manual identifies bacterium according to their functional attribute as well as according to their structure and arranging them according to a certain specific familial arrangement (University of Idaho 1). For instance, in this study and using Bergey's Manual, we are supposed to identify the species and genus of a sample of bacteria. By using the Bergy's manual and through identifying the bacterium according to their functional attribute as well as according to their structure and arranging them according to a certain specific familial arrangement; the following is derived

- Gram-positive cocci bacteria
- Micrococcus spp, Staphylococcus spp,
- Streptococcus spp,
- Enterococcus spp
- Catalase positive bacteria
- Micrococci species
- Mannitol positive bacteria

1. Staphylococcus aureus

2. Staphylococcus epidermidis

The three identified bacteria in this category which fit all the tests for; cocci, gram, phenol lactose acid (no gas), phenol glucose acid (no gas), urea -, oxidase -, casein hydrolyse -, phenol mannose, VP , MR , citrate -, indole -, catalase , DNase -, malonate -, phenol sucrose, and TSI slant yellow with yellow butt are therefore the; Staphylococcus aureus, Staphylococcus epidermidis and Escherichia Coli bacteria as shown in the flow chart below;

Vero cytotoxin-producing E. coli 0157(VTEC 0157) is an Escherichia genus in the family Enterobacteriaceae. It is a gram-negative rod, motile with a

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flagella antigen and facultative anaerobic. The strains are oxidase-negative and produce gas from glucose (Dale & Park 58). Diagnosis of Escherichia Coli remains a challenge since these bacteria occurs in the stool and patients who have diarrhea. Swabs from stools or from rectum have visible stains of these bacteria. It is therefore ideal to collect specimen at the onset of diarrhea. Treatment with antibiotics hinders the recovery of E. coli. It is therefore recommendable not to give the patient antibiotics 48 hours before the specimen is collected.

Gram staining helps in identifying the enterobacteriaceae from which E. coli is a genus on oxidase test, the gram-negative rods further divides the group in enterobacteriaceae and pseudomonas. At this stage, E. coli can not be identified. In lactose fermentation test, two bacteria are identified. Lactose fermentors and non-fermentors. E. coli falls under lactose positive bacteria. On Indole test, E. coli is indentified as indole positive bacteria. For further indentification of E. Coli, in citrate test, E. coli appears to be citrate negative. For identification of E. coli, IMVIC tests should be done. These includes; Indole, methyl red, Voges-proskauer and citrate tests. Three test tubes are inoculated with tryptophan and MR-VPP broths (Dale & Park 65).

Work Cited

Dale, Jeremy. & Park, Simon. Molecular genetics of bacteria. London UK: John Wiley and Sons, 2004. print

University of Idaho. Bergey's Manual of Determinative Bacteriology, 2010.

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