

Environmental testing



Based on their characteristics microscopically, the organisms can be grouped into their respective genus. Again, on grounds of the macroscopic view, it would facilitate group the organisms in their specific species group. The microscopic characteristics of the bacteria: stain gram negative, rod-shaped and their tendency to occur in pairs put them in a bacteria genus called *Arcobacter* (Alcamo 22-31). On the other hand, the fungus is filamentous in form with radiating spores under the microscopic view. This puts the fungus in the *Ceratostomella* genus (Cannon 11-12). Therefore, the fungus is not in the same genus with the two bacteria because they have marked differences in their microscopic view.

Specific names

Specific identification of the organisms comes from the microscopic view. The microscopic view helps in grouping the organisms into living things that can closely relate and interbreed. Thus, the results used in this kind of group help in categorizing the organisms into species. The bacteria forming way yellow translucent colonies on blood agar closely falls under a different species from the bacteria with Shiny tan translucent colonies on blood agar. This can be either *butzleri* or *cryaerophilus*.

Generally, the scientific naming of living things is a formal system through which these organisms could easily be identified and categorized. Though they may belong to a long list of categories, like Kingdom, Phylum/Division, family, class, order, genus and species, the last two categories are used to name the organism. Therefore, the organism's name will comprise two parts in the end; the genus and species name. The two names use grammatical

forms of the Latin language (Alcarno 22-31). Thus, the first section identifies the genus of the species of a particular organism whereas the second section is the species within the particular genus. The genus part is a broader classification whereas the species name part is a more specific classification. Organisms in the same species can interbreed.

Well, the grouping of living organisms in their species and genus can only be achieved through microscopic and macroscopic views in a laboratory. Microscopic view gives a general view whereas the macroscopic one gives a more detailed analysis useful in categorizing the living things in their particular species group (Cannon 11-12). This approach was thus utilized in giving the right genus and species of the bacteria and fungus in this study. The use of binomial nomenclature is at present governed by a number of codes of rules which are recognized internationally. The two code of rules which are considered the most useful are the International Code of Zoological Nomenclature (ICZN) for the animals and on the other hand for the plants is the international Code of Botanical Nomenclature. The generic principles may be different in the two codes precision is always high. The ultimate goal is to differentiate through identifying and classifying different living things in their species category which brings out the difference between different organisms. Therefore, the organisms in this case are different and belong to specific categories as discussed above.