

SUMMARY

In normal cases an orderly increase in the quantity of the cellular components is considered as growth. However in bacteria growth is always followed by cell division leading to doubling the number of bacterial cells. Bacteria always multiply by binary fission and the number increase in geometric proportion. Under favourable conditions, many bacteria can divide in less than 15-20 min. However, the generation time is not the same to all the organisms and not the same for same organism under different conditions. Some bacteria it may be a few minutes and for some others, it may be several hours. It depends on several physical and chemical factors. Bacterial growth curve is a graphical representation of various growth phases of a bacterial population. It has 4 phases i.e., lag phase, log phase, stationary phase and death phase. Of these log phase is most active phase and is used in fermentations. Diauxic growth is the growth of a bacterial population, wherein growth can be seen in two separate phases due to the preferential use of one carbon over the other. A population of cells all having at the same stage of the growth can be achieved by synchronizing its cell division. In a food system, several factors can influence the growth of microorganisms. They include factors pertaining to the food itself (intrinsic factors), factors associated to the environment in which the food is stored (extrinsic factors), factors associated to the microorganisms themselves (implicit factors), factors related to the processing of the foods (processing factors) and interaction among these factors. It is a complex system the combined effects may either promote or decrease the growth of microorganisms.