Glossary:

- 1. Water activity (a_w) : It is the partial vapor pressure of water in a substance divided by the standard state partial vapor pressure of water. In the field of food science, the standard state is most often defined as the partial vapor pressure of pure water at the same temperature.
- **2. Relative humidity:** The amount of water vapor in the air at any given time is usually less than that required to saturate the air. The relative humidity is the percent of saturation humidity, generally calculated in relation to saturated vapor density.
- 3. Proteolytic enzymes: the enzymes which have the ability to digest proteins.
- **4.** Fermentation: Fermentation is a metabolic process that converts sugar to acids, gases, or alcohol. It occurs in yeast and bacteria, and also in oxygen-starved muscle cells, as in the case of lactic acid fermentation.
- **5.** Growth factors: a substance which has the ability to support the growth of the microorganisms.
- 6. Stale food: Any foods which are tasteless or unpalatable from age.
- 7. Catalytic activity: the ability to catalyze any enzymatic reactions.
- **8.** Food acidification: Acidified foods are low acid foods to which acid or acid ingredients are added to produce a final equilibrium pH of 4.6 or below. Equilibrium pH means the final pH measured in the acidified food after all the components of the food have achieved the same acidity.
- **9. Vapor pressure:** Vapor pressure or equilibrium vapor pressure is defined as the pressure exerted by a vapor in thermodynamic equilibrium with its condensed phases (solid or liquid) at a given temperature in a closed system.
- **10. Lag phase:** a brief period in the course of the growth of a bacterial culture, especially at the beginning, during which the growth is very slow or scarcely appreciable.
- **11. Redox potential (Eh):** Reduction potential is a measure of the tendency of a chemical species to acquire electrons and thereby be reduced.
- **12. Micro-aerophilic:** A microaerophile is a microorganism that requires oxygen to survive, but requires environments containing lower levels of oxygen than are present in the atmosphere (i.e. <21% O2; typically 2–10% O2).
- **13. Antioxidants:** An antioxidant is a molecule that inhibits the oxidation of other molecules. Oxidation is a chemical reaction that can produce free radicals, leading to chain reactions that may damage cells.
- **14. Essential oils:** An essential oil is a concentrated hydrophobic liquid containing volatile aroma compounds from plants. Essential oils are also known as volatile oils, ethereal oils, aetherolea, or simply as the oil of the plant from which they were extracted, such as oil of clove.
- **15. Facultative anaerobic:** Facultative anaerobe a microorganism that can live and grow with or without molecular oxygen.