Definition:

The word “Toxicology” is derived from the Greek word “Toxicon” which was used as a poisonous substance in arrowheads. Traditionally, the toxicology is defined as the science embodying the knowledge, source, character, fatal effect, lethal dose, analysis of poisons and the remedial measures. A poison is defined as the substance, which is capable of producing injury or death when absorbed. Appropriate dosages can differentiate poison and also the remedial measures. All chemicals can produce injury or death under certain conditions. Hence, a poison can be defined as a substance that is capable of producing detrimental effects on a living organism. As a result, there may be a change in the structure of the substance or functional processes, which may produce injury or even death. The toxicologist is specially a trained expert to examine the role of such substances and their adverse effects. The variety of potential adverse effects and the diversity of chemicals present in our environment contribute to make toxicology a very broad field of science. Therefore, toxicologists are usually specialists to handle various areas of toxicology. The professional activities of toxicologists fall into four main categories i.e. Forensic, Industrial, Clinical and Environmental Toxicology. Forensic toxicology emerged as the hybrid of analytical Chemistry and toxic principle effects. Forensic toxicologists are also primarily concerned with the medico - legal aspects of the harmful effects of chemicals on human and animals. The expertise of forensic toxicologistsis primarily utilized in establishing the cause of death and elucidating its circumstances in post-mortem investigation. The work of forensic toxicologist is therefore considered as highly complicated as small quantities of poisons and their metabolites are to be isolated, purified and quantified from a highly complex matrices.