

Introduction to Pharmaceutical Chemistry

Pharmaceutical Science: It is the study of substances that are useful in treating diseases. It involves not only the knowledge of medicines and compounding, but also their identification, preservation, analysis, formulation, biological actions, standardization, etc.

Pharmaceutical Chemistry: It is the one of the branches of pharmaceutical sciences dealing with the study of chemistry of medicinal substances. This branch studies the known structure, analysis of drug, standardization of pharmaceuticals etc.

Inorganic Pharmaceutical Chemistry: Inorganic pharmaceutical chemistry is a science that makes use of the laws of chemistry to study inorganic substances as drugs, i.e. their preparation, chemical nature, composition, structure, influence on an organism, etc.

Scope

- Its scope finds mainly in pharmaceutical research & development
- Scope of the subject is to impart basic knowledge on the chemical structure, storage conditions & medicinal uses of organic & inorganic chemical substances used as drugs & pharmaceuticals
- Identify the drug in the formulated products
- Determination of active ingredient or additional impurities
- Stability of the drug
- Rate of drug from its formulations
- Identity & purity of drug that meets specification
- Concentration of specified impurities
- Concentration of drug in plasma or biological fluids
- Determine pKa values, partition co-efficient, solubility of drugs under development

Objectives

Pharmaceutical analysis is the subject which deals mainly with the quantitative analysis of those chemicals & dosage forms associated with the practice of pharmacy

2 Textbook of Pharmaceutical Chemistry

- Learn the various tools & techniques available for the analysis of drugs, impurities testing & basic quality control tests
- Chemical classification, chemical structure, chemical name
- Pharmacological uses, doses, stability & storage conditions
- Principles of various conventional analytical technique
- Expression of various concentrations & preparations
- Application of pharmacopeial purities & identity tests for various drugs & inorganic compounds
- Different types of formulations/dosage form available & their brand names
- To trained students for research work
- To provide the skill about quantitative & qualitative analysis
- To improve the skills of safe handling & awareness of hazards