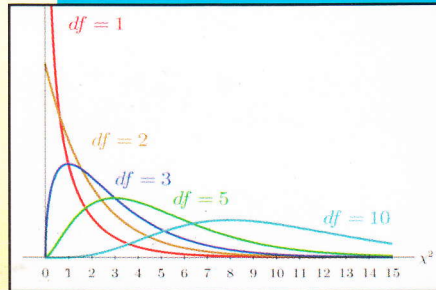
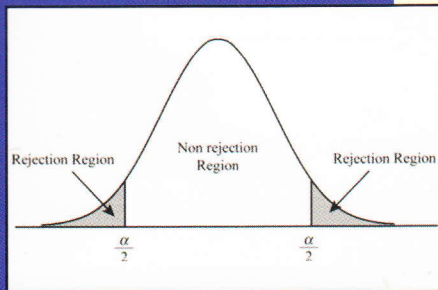
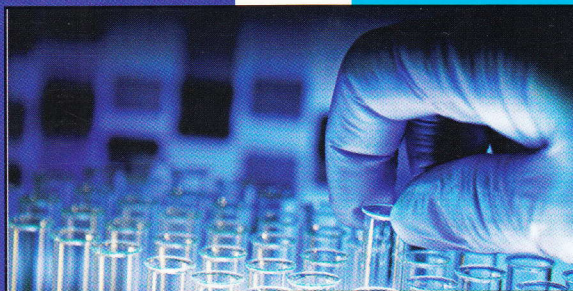


AS PER PCI REGULATIONS
THIRD YEAR B. PHARM.
SEMESTER-VI

EXPERIMENTAL PHARMACOLOGY-III

Dr. GHANSHYAM PANIGRAHI

Dr. ARJUN PATRA



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Experiment No. 1

DOSE CALCULATION IN PHARMACOLOGICAL EXPERIMENTS

(Chapter contributed by Dr. Ghanshyam Panigrahi and Dr. Arjun Patra)

Purpose:

At the end of practical class, the students shall be able to:

1. Know about the calculation of the dose for experimental animals.
2. Know the calculation of volume of vehicle for dissolving the drug for experimental animal.
3. Know about the dosage calculation and dissolution of dose in a suitable vehicle.

Terminology:

Dose: A quantity of drug that prescribed to be taken by a person or given to an animal at one time.

Vehicle: A vehicle is an essential substance that acts as a medium in which a drug is administered to the experimental animals.

Description:

Experiments on animals are necessary in drug discovery and development as well as to advance pharmaceutical, medical and biomedical research. The best means to extrapolate from animal dose to human dose or human dose to animal dose has been an area of interest in experimental pharmacology for a number of years. Dosage calculation and stock solution preparation based on dosage rationale formula are prerequisites to drug administration in experimental animals also has utmost important.

Objective 1: To calculate the dose for experimental animals.

The human or animal dose that is given to other animals is on the basis of weight or relative surface area. It has been argued that body surface area (BSA) provides a more accurate basis for dose calculation, because total body water, extracellular fluid volume and metabolic activity are better paralleled by BSA. If doses of a drug for an animal is unknown then it may be converted from human doses or other animal doses by the help of appropriate conversion factors developed according to the body surface area (as per the Table 1.1 given by Paget and Barnes, 1964).