SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Coimbatore -641035

COURSE NAME : QCSH(BP 806 ET)

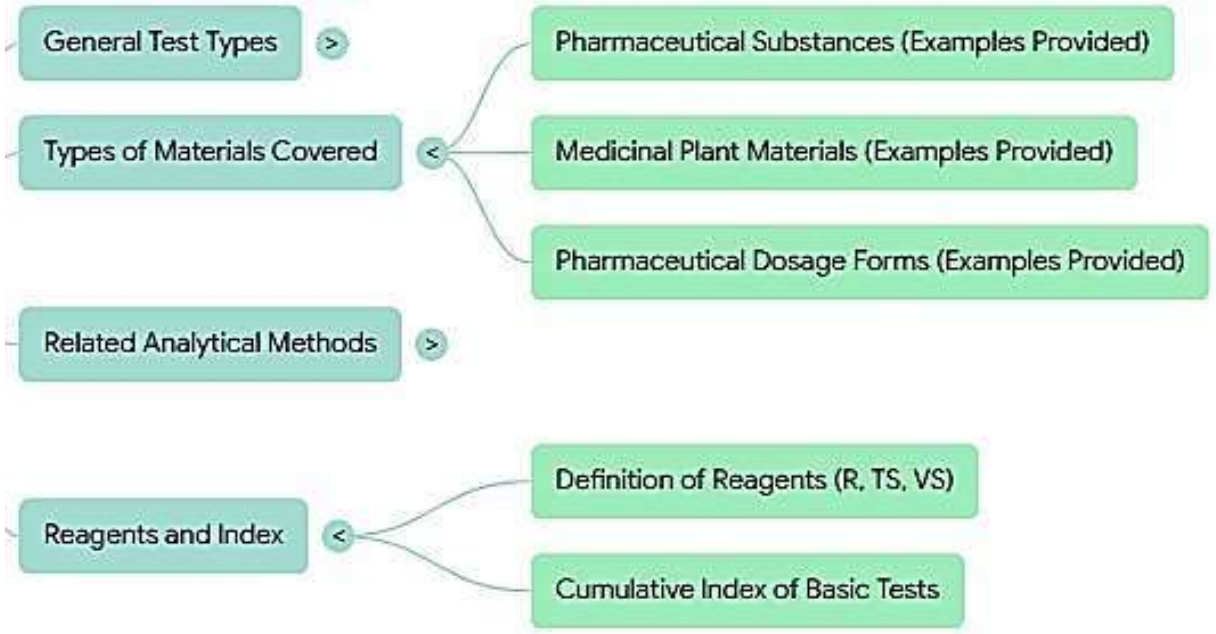
YEAR/SEM : VIII SEM

TOPIC 3 : PHARMACEUTICAL DOSAGE FORM

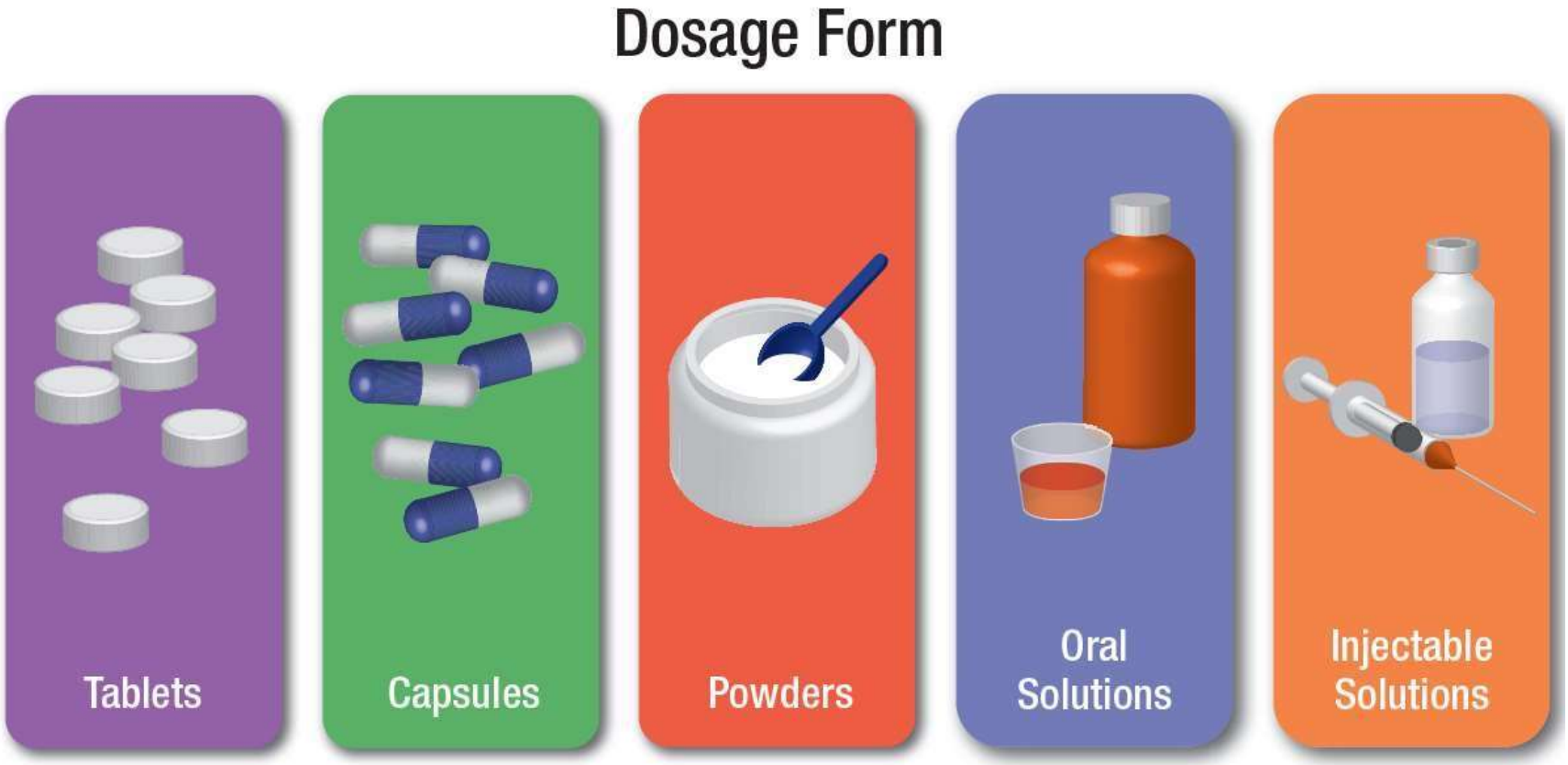
DESIGN THINKING IN QUALITY CONTROL OF PHARMACEUTICAL DOSAGE FORM

- **Empathize** Interview pharmacists and patients to identify dosage form issues
- **Define** Reframe problem: “Need standardized sample preparation and identity tests for diverse dosage forms.”
- **Prototype** Prepare test solutions
- **Test** Validate identity via physical description

MIND MAP


General Test Types
Types of Materials Covered
Pharmaceutical Substances (Examples Provided)
Medicinal Plant Materials (Examples Provided)
Pharmaceutical Dosage Forms (Examples Provided)
Related Analytical Methods
Reagents and Index
Definition of Reagents (R, TS, VS)
Cumulative Index of Basic Tests

BASIC TEST-DOSAGE FORMS



DOSAGE FORM

The form

By which

DRUG DELIVERED

TO THE SITE OF ACTION WITHIN THE BODY.

CLASSIFICATION OF DOSAGE FORM

- **Based on Route of Administration**

* Oral	* Ophthalmic
* Parenteral	* Otic
* Topical	* Respiratory/inhaled
* Transdermal	* Rectal/Vaginal

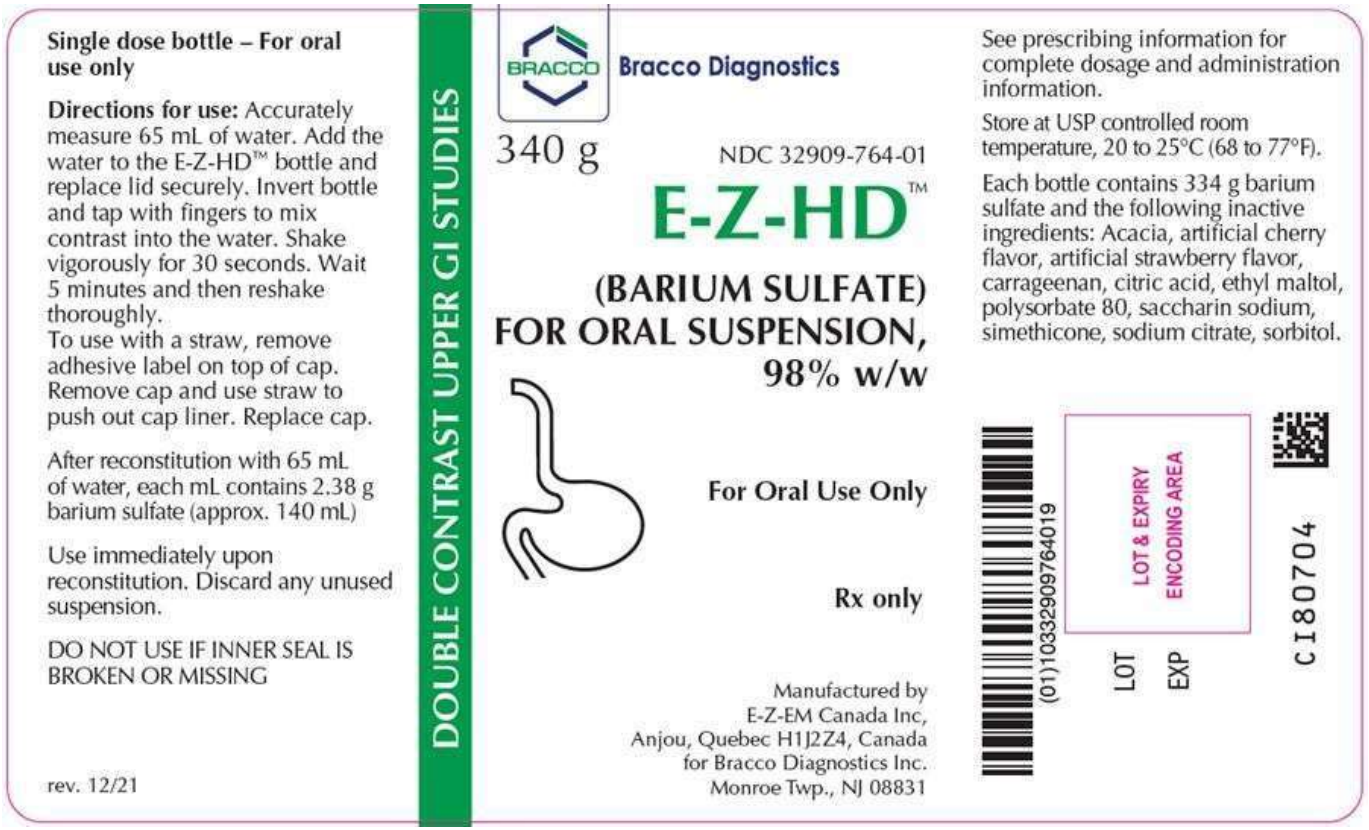
- **Based on Physical Form**

* Solids	* Semi-solids
* Liquids	* Gases

TEST PROCEDURES FOR PHARMACEUTICAL DOSAGE FORMS

AZATHIOPRINE SODIUM POWDER FOR INJECTION

BARIUM SULFATE POWDER FOR SUSPENSION



MAGNESIUM SULFATE POWDER

BENZATHINE BENZYLPENICILLIN POWDER FOR INJECTION

CALCIUM GLUCONATE INJECTION

CETRIMIDE CREAM

CHLORPROMAZINE HYDROCHLORIDE INJECTION

CIMETIDINE INJECTION

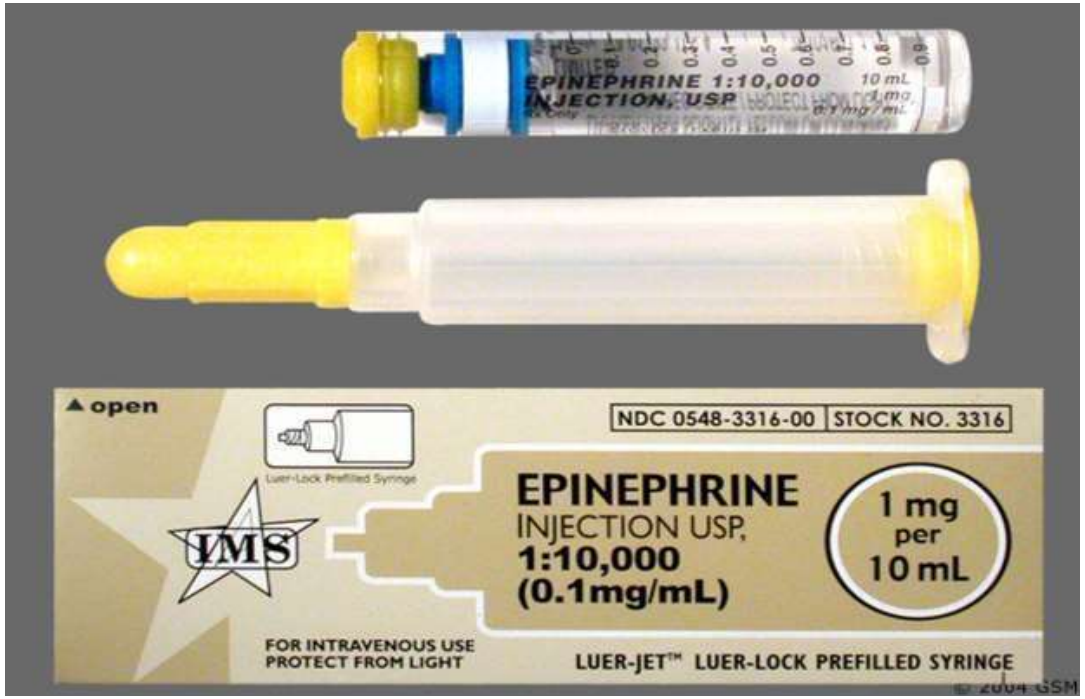
DEXTRAN 70 INJECTION

DIPHENHYDRAMINE HYDROCHLORIDE

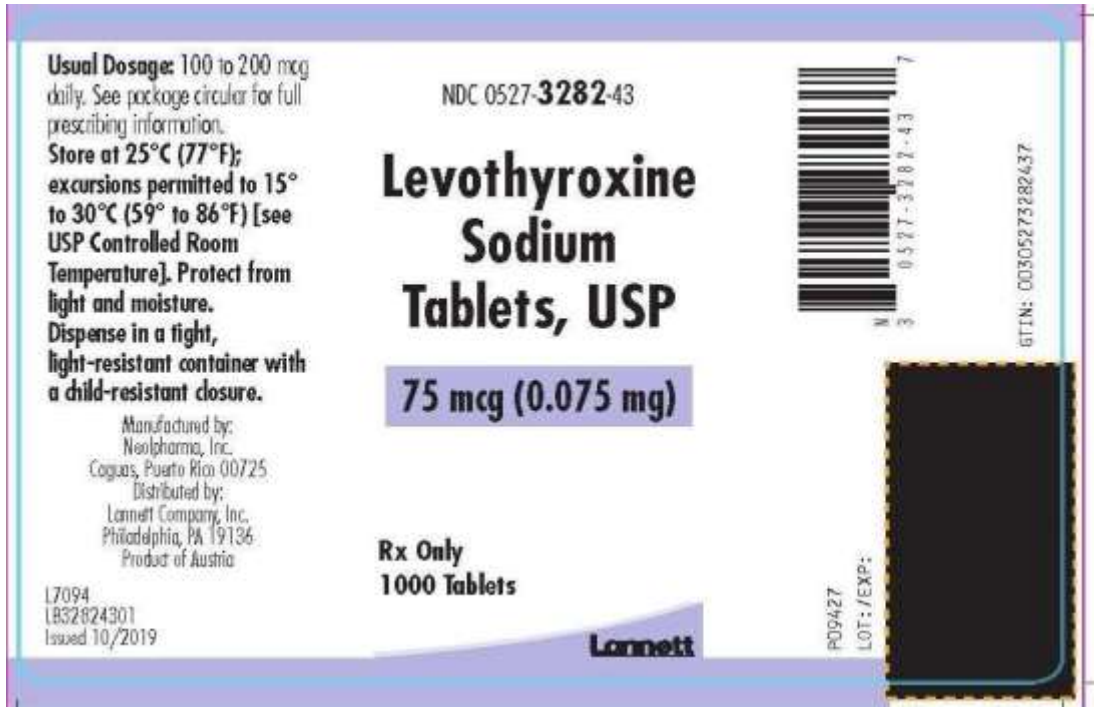
TABLETS

DOXORUBICIN HYDROCHLORIDE POWDER FOR INJECTION

EPINEPHRINE HYDROGEN TARTRATE INJECTION



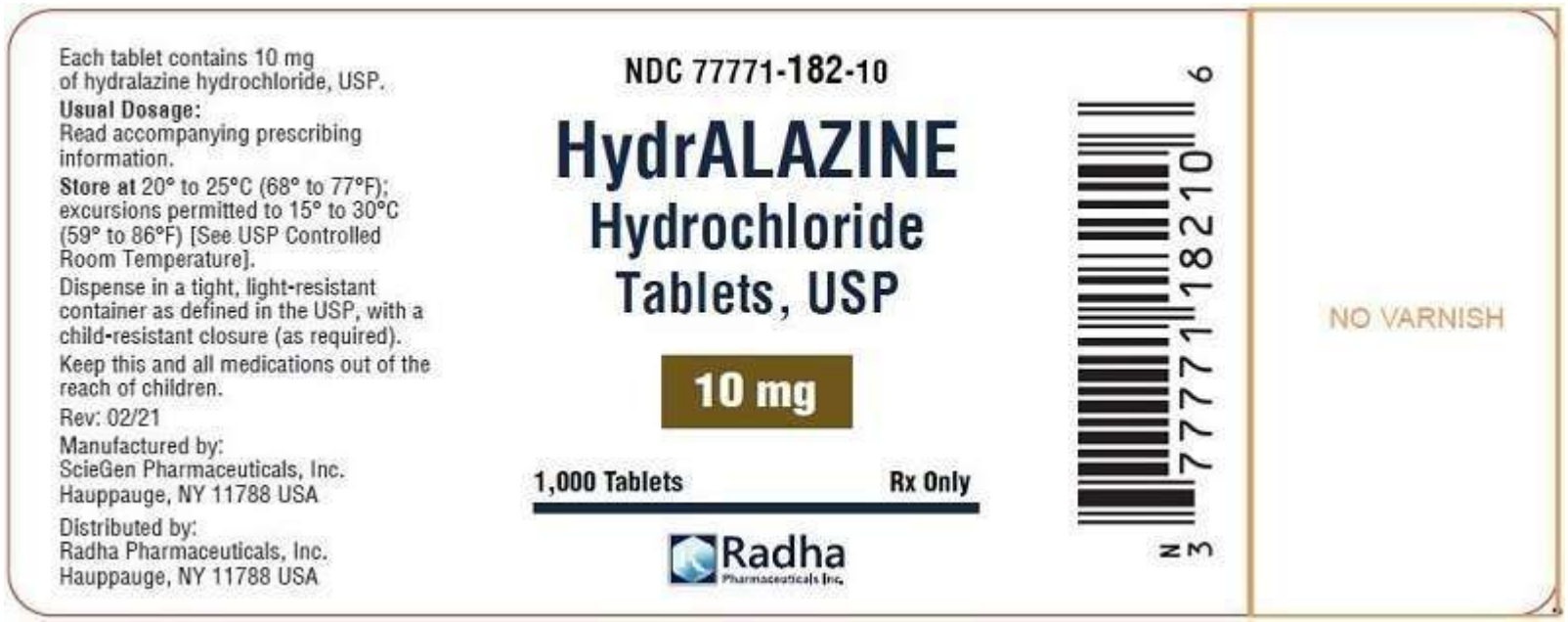
LEVOTHYROXINE SODIUM TABLETS



FLUCYTOSINE TABLETS

GENTAMICIN SULFATE INJECTION

HYDRALAZINE HYDROCHLORIDE TABLETS



HYDROCORTISONE OINTMENT

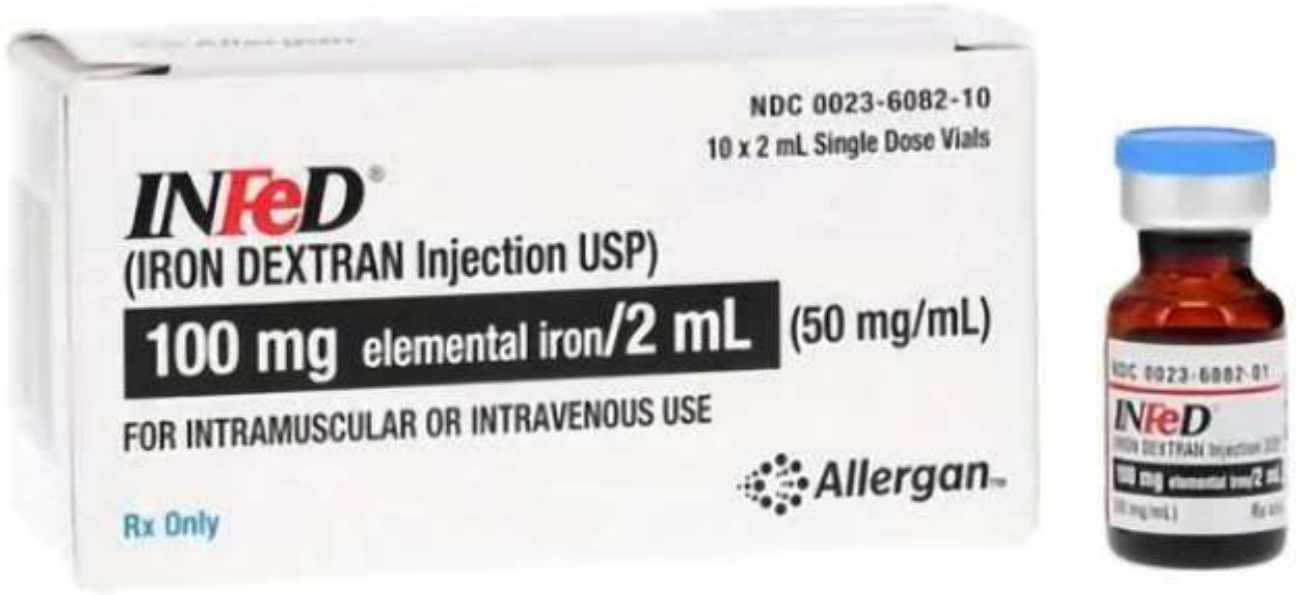
HYDROCORTISONE ACETATE CREAM

HYDROCORTISONE SODIUM SUCCINATE POWDER FOR INJECTION

Hydrocort Inj 100mg

Hydrocortisone (100mg) 500 vials + WFI per case

IRON DEXTRAN INJECTION



CLASS ASSESSMENTS

Descriptive-Based Assessment

Question 1 : A sample of **Chlorpromazine Hydrochloride Injection** (25 mg/ml) is received for quality control testing. Describe in detail the **complete sample preparation procedure** as per the basic protocol

CLASS ASSESSMENTS

Descriptive-Based Assessment

Question 2: You are provided with **Hydrocortisone Acetate Cream** (10 mg/g). Outline the **step-by-step sample preparation method** for identity testing, and describe **three critical physical characteristics**

SUMMARY

- Basic procedure for pharmaceutical dosage forms begins with sample preparation like dilution, pooling, or direct use as per form (tablet, injection, cream).
- Identity tests rely on physical description (color, form, powder/liquid), odour, and specific content (e.g., 100 mg allopurinol/tablet).
- Injections require sterile solutions with defined concentrations (e.g., 250 mg amikacin sulfate/ml); powders are used directly or reconstituted.
- Creams and ointments specify active content per gram base (e.g., 10 mg hydrocortisone acetate/g); tablets list mg per unit.
- Design Thinking ensures standardized testing protocols to confirm identity, purity, and safety across diverse dosage forms

REFERENCE

1. Pharmacognosy by Trease and Evans

2. Pharmacognosy by Kokate, Purohit and Gokhale

3. Rangari, V.D., Text book of Pharmacognosy and Phytochemistry Vol. I, Carrier Pub., 2006.

4. Aggrawal, S.S., Herbal Drug Technology. Universities Press, 2002.

5. EMEA. Guidelines on Quality of Herbal Medicinal Products/Traditional Medicinal Products,

6. Mukherjee, P.W. Quality Control of Herbal Drugs: An Approach to Evaluation of Botanicals. Business Horizons Publishers, New Delhi, India, 2002.

7. Shinde M.V., Dhalwal K., Potdar K., Mahadik K. Application of quality control principles to herbal drugs. International Journal of Phytomedicine 1(2009); p. 4-8.

THANK YOU