

SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Coimbatore -641035



COURSE NAME : QCSH(BP 806 ET)

YEAR/SEM : VIII SEM

**TOPIC 5 : EVALUTION OF COMMERCIAL CRUDE
DRUGS INTENDED FOR USE**

DESIGN THINKING IN QUALITY CONTROL OF PHARMACEUTICAL SUBSTANCE

Empathize: Understand Stakeholder Quality Needs

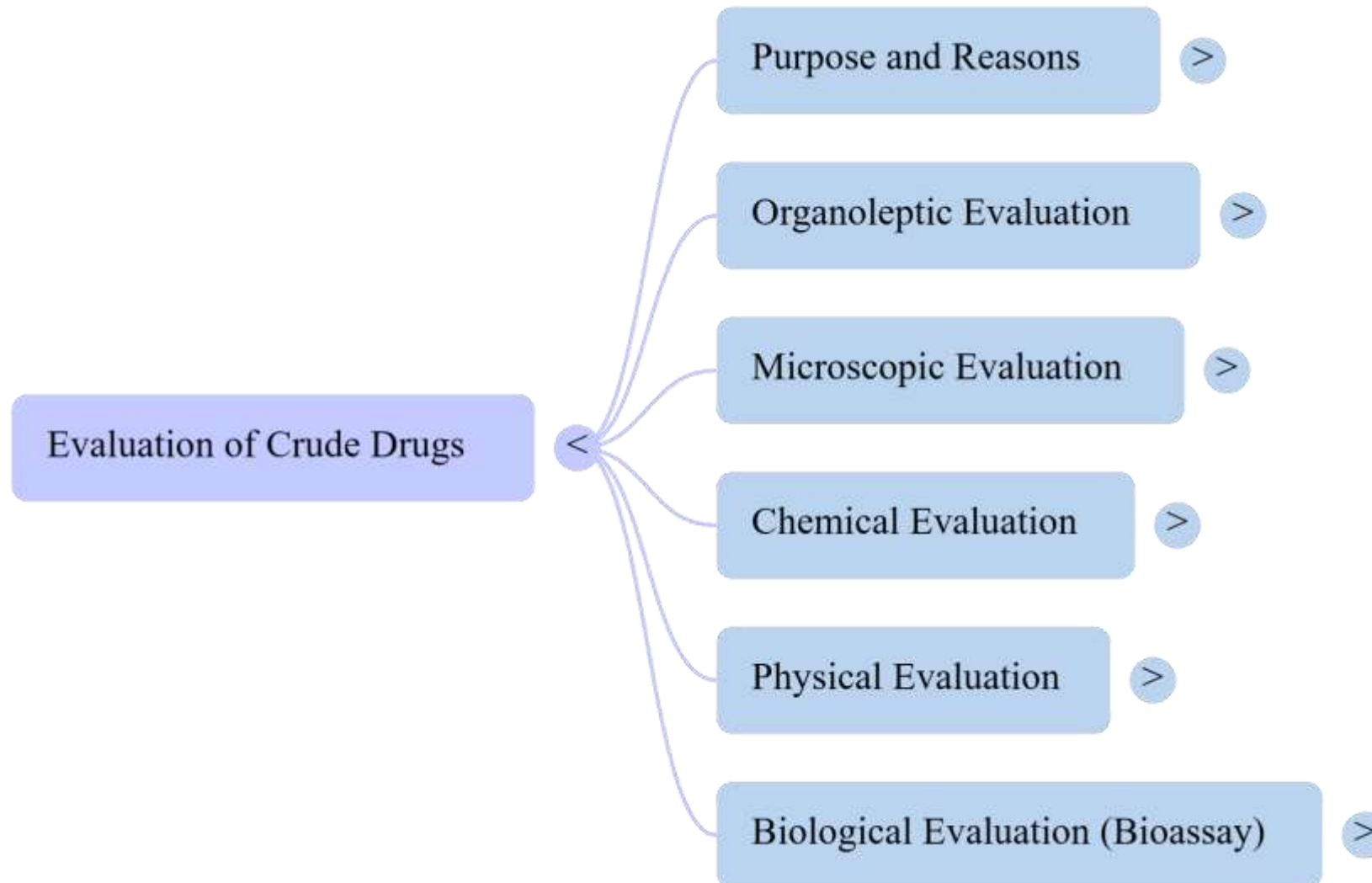
Define: Identify Crude Drug Evaluation Gaps

Ideate: Innovate Practical Testing Solutions

Prototype: Develop User-Friendly Evaluation Tools

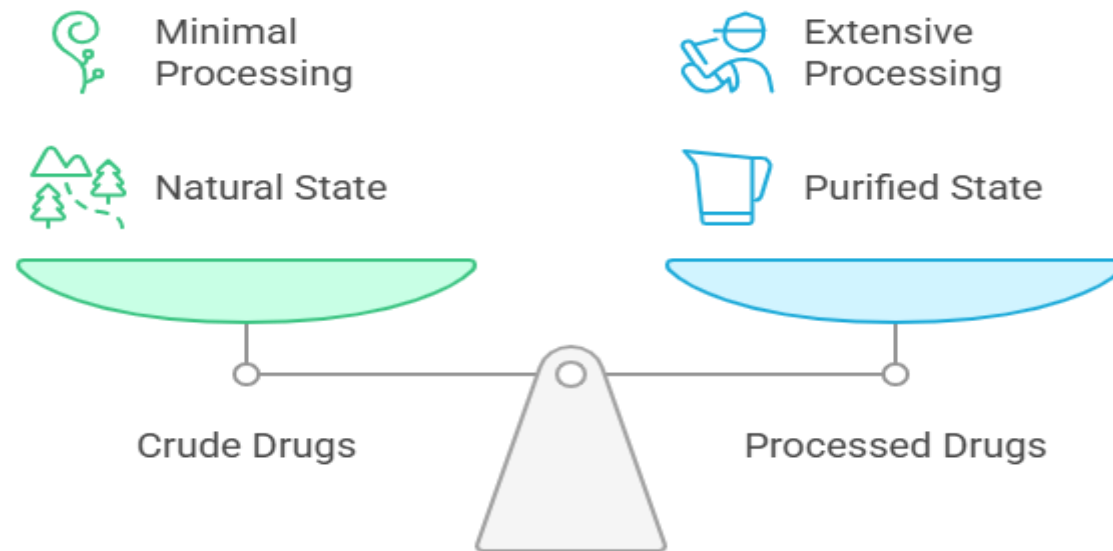
Test: Validate Accuracy in Real Settings

MIND MAP



INTRODUCTION

Balancing Naturalness and Purity in Drug Selection



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Crude drugs are plant, animal or their parts which after collection are subjected only to drying or making them into transverse/ longitudinal slices pieces or peeling them in some cases. They exist in natural form.



Amla (*Emblica officinalis* Gaertn.)



Post-e- Halela Zard (*Terminalia chebula* Retz.)



Post-e- Halela Kabli (*Terminalia chebula* Retz.)



Halela Siyah (*Terminalia chebula* Retz.)



Post- e- Balela (*Terminalia bellerica* Roxb.)



Kishneez khushk (*Coriandrum sativum. L.*)

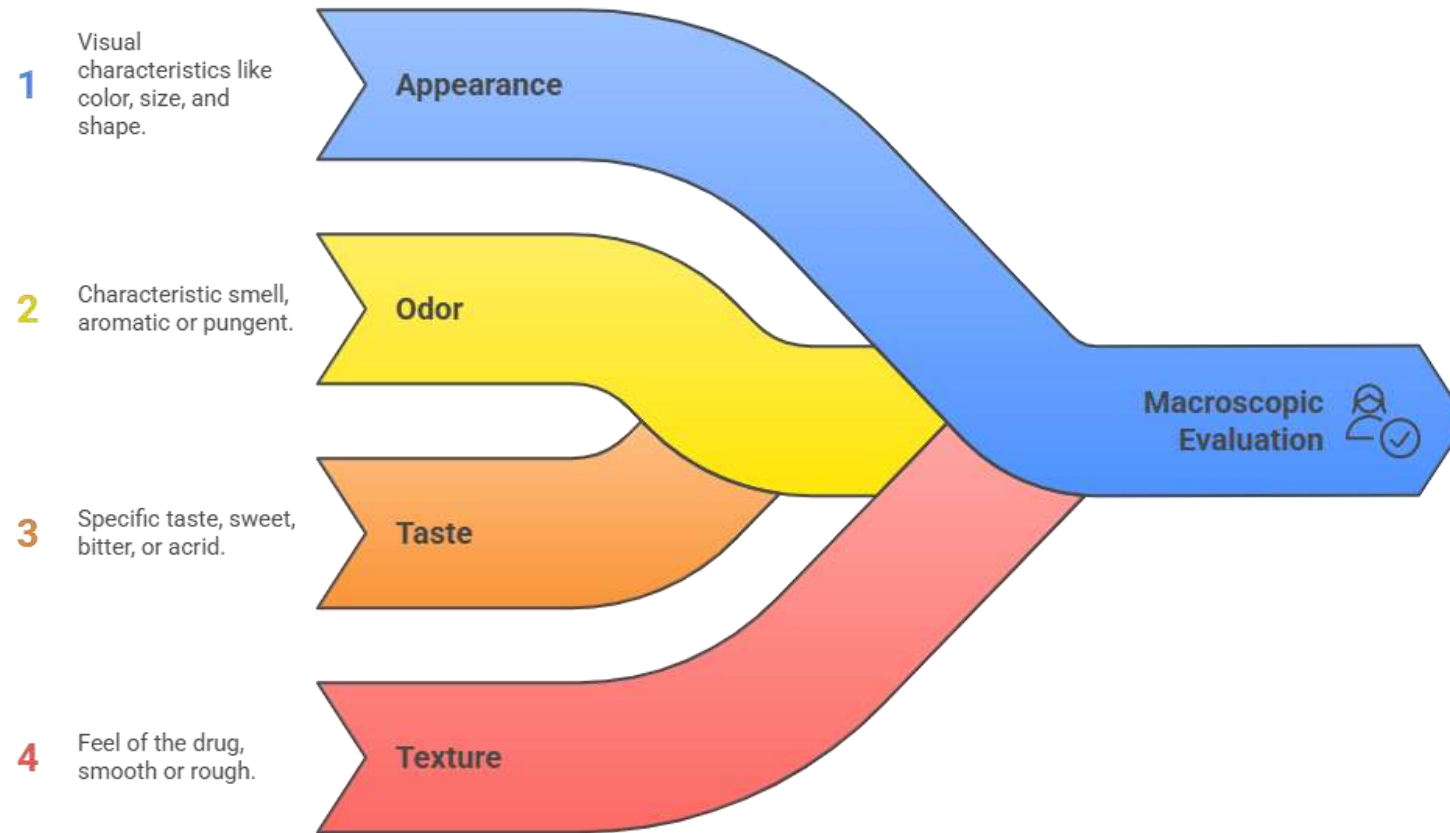
Types of Evaluation of Crude drug

- Morphological or organoleptic evaluation
- Chemical evaluation
- Microscopical evaluation
- Microscopic evaluation
- Chromatographic techniques
- Spectrophotometric methods
- Biological evaluation
- Biotechnological method

3

MACROSCOPIC (ORGANOLEPTIC) EVALUATION

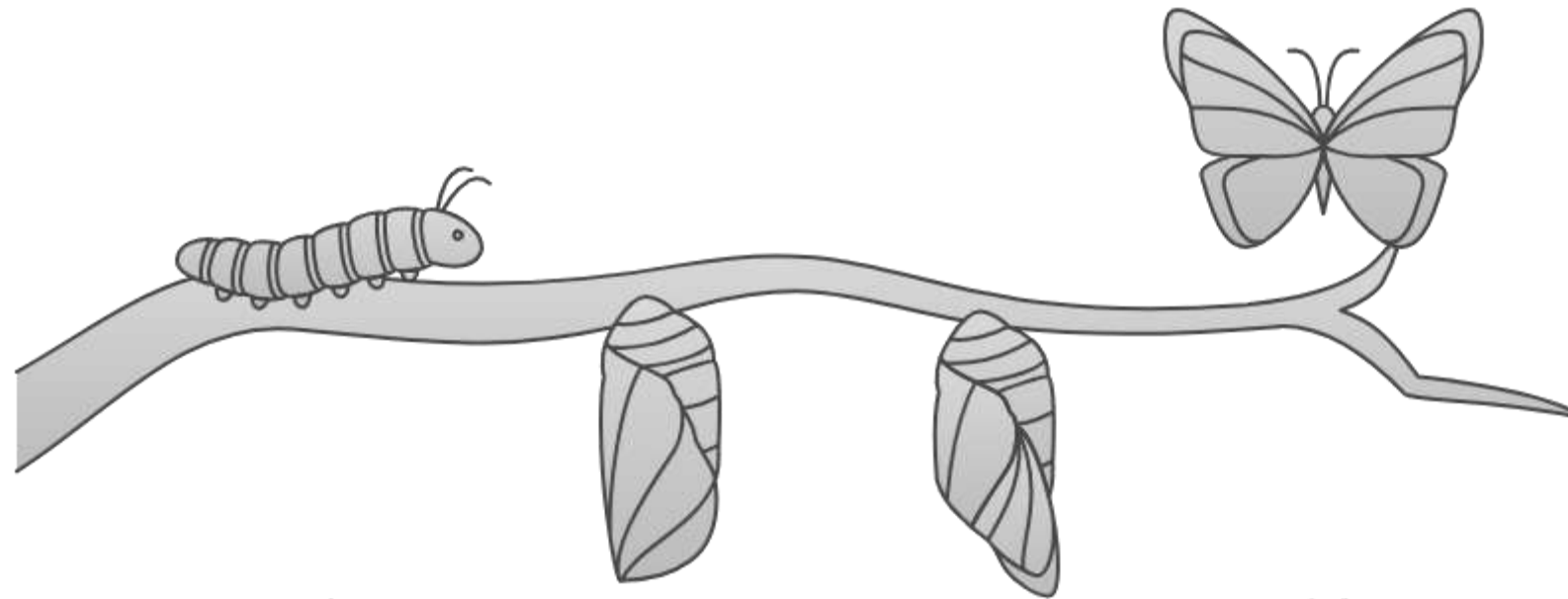
Sensory Analysis of Crude Drugs



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MICROSCOPIC EVALUATION

Microscopic Evaluation



Specimen

Biological sample
ready for analysis

Microscopy

Using microscopes
to observe details

Analysis

Identifying features
and abnormalities

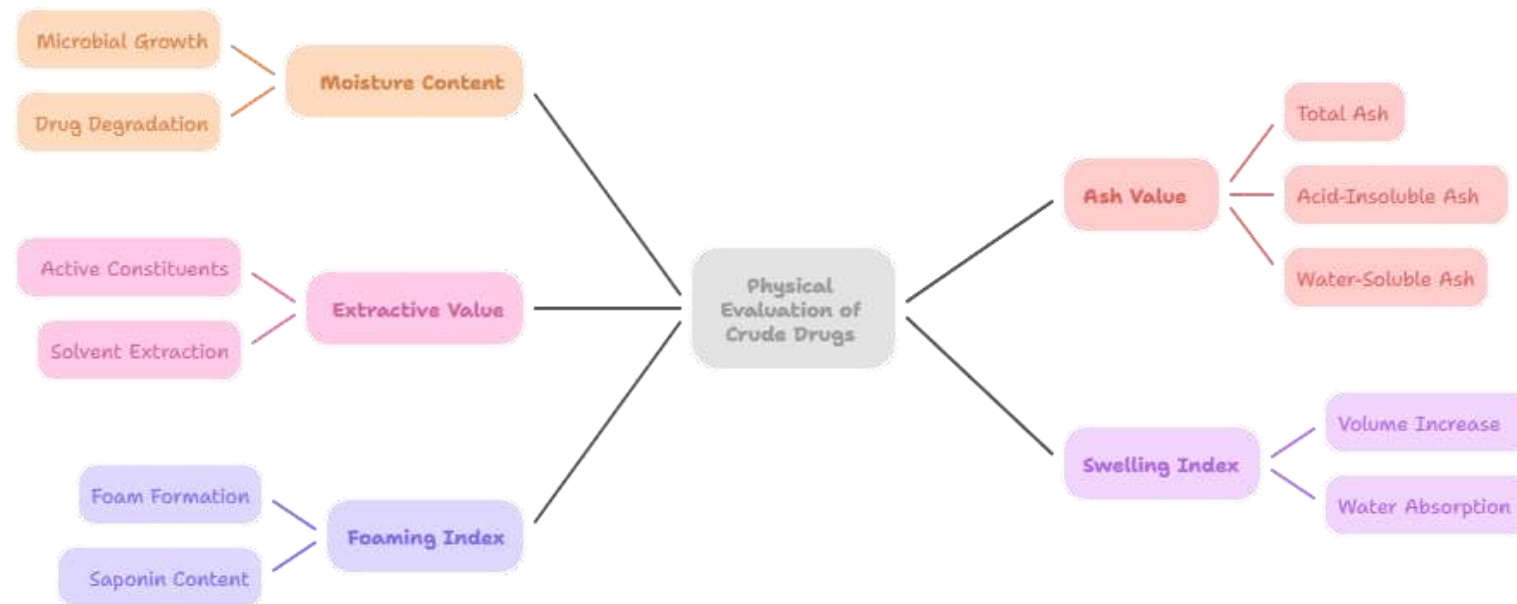
Insights

Understanding
structure and
function

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PHYSICAL EVALUATION

Physical Evaluation of Crude Drugs



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CHEMICAL EVALUATION

Chemical tests for drugs



Qualitative tests

Identification of chemical constituents using reagents.



Quantitative tests

Determination of the amount of chemical constituents.



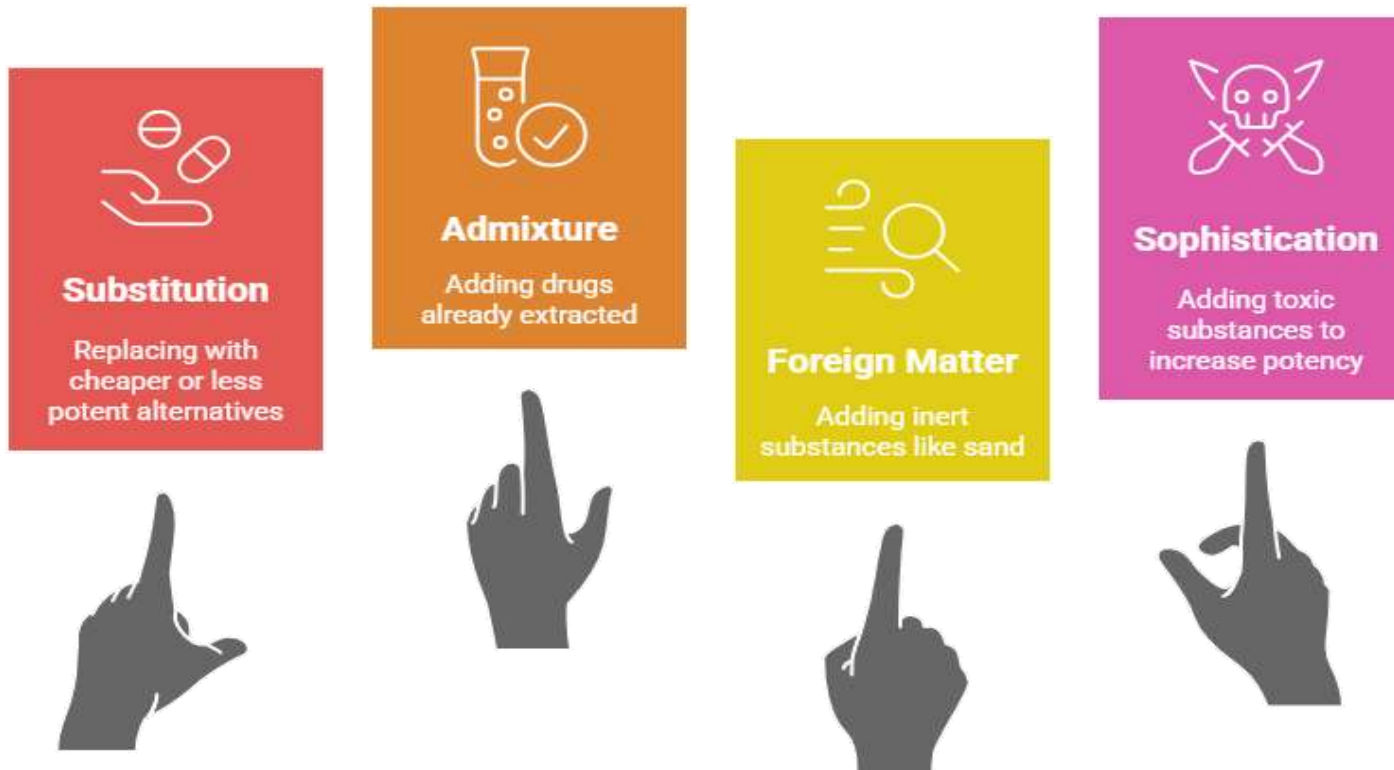
Chromatographic analysis

Separation and identification of chemical constituents.

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ADULTERATION

What type of adulteration is present in the crude drug?



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OTHER EVALUATION PARAMETERS

Comprehensive Evaluation Parameters



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OTHER EVALUATION PARAMETERS

Comprehensive Evaluation Parameters



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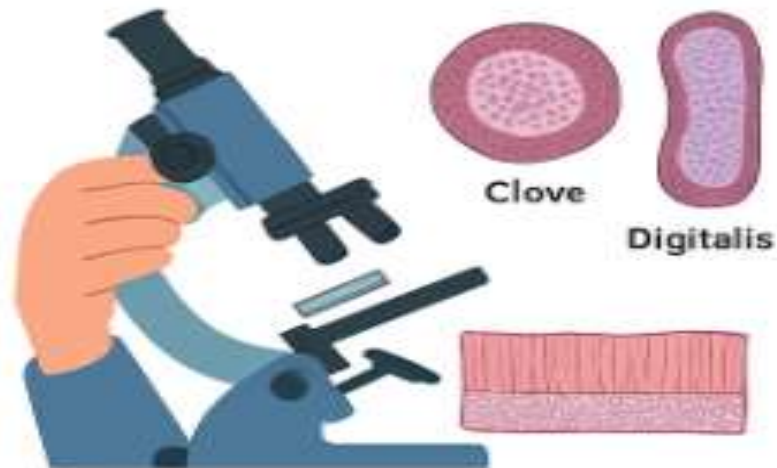
CLASS ASSESSMENTS

Discuss the chemical and biological evaluation techniques used for the standardization of commercial crude drugs. Highlight the importance of adulteration tests, quantitative estimation of active constituents, and pharmacological assays in verifying their safety and efficacy for intended therapeutic applications.



CLASS ASSESSMENTS

Describe in detail the organoleptic, microscopic, and physical evaluation methods for commercial crude drugs intended for medicinal use. Illustrate your answer CLOVE AND DIGITALIS



SUMMARY

- Evaluation of commercial crude drugs ensures authenticity, purity, and efficacy through multiple methods.
- Organoleptic evaluation assesses color, odor, taste, and texture (e.g., clove, senna). Microscopic examination confirms identity via cellular structures (e.g., nux vomica, ginger).
- Physical and chemical tests determine ash, extractives, and active constituents (e.g., opium, rauwolfia).
- Biological assays verify potency and safety (e.g., digitalis), adhering to pharmacopoeial standards.

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.

The background of the slide is split. The left half is a solid dark green color with the text 'THANK YOU' in white, uppercase, sans-serif font. The right half is a photograph of a wooden surface with two small bowls of green liquid, two spoons of green powder, and some green leaves. There are also some small white and yellow dots scattered on the green background.

THANK YOU