

# CLASSIFICATION OF CRUDE DRUGS

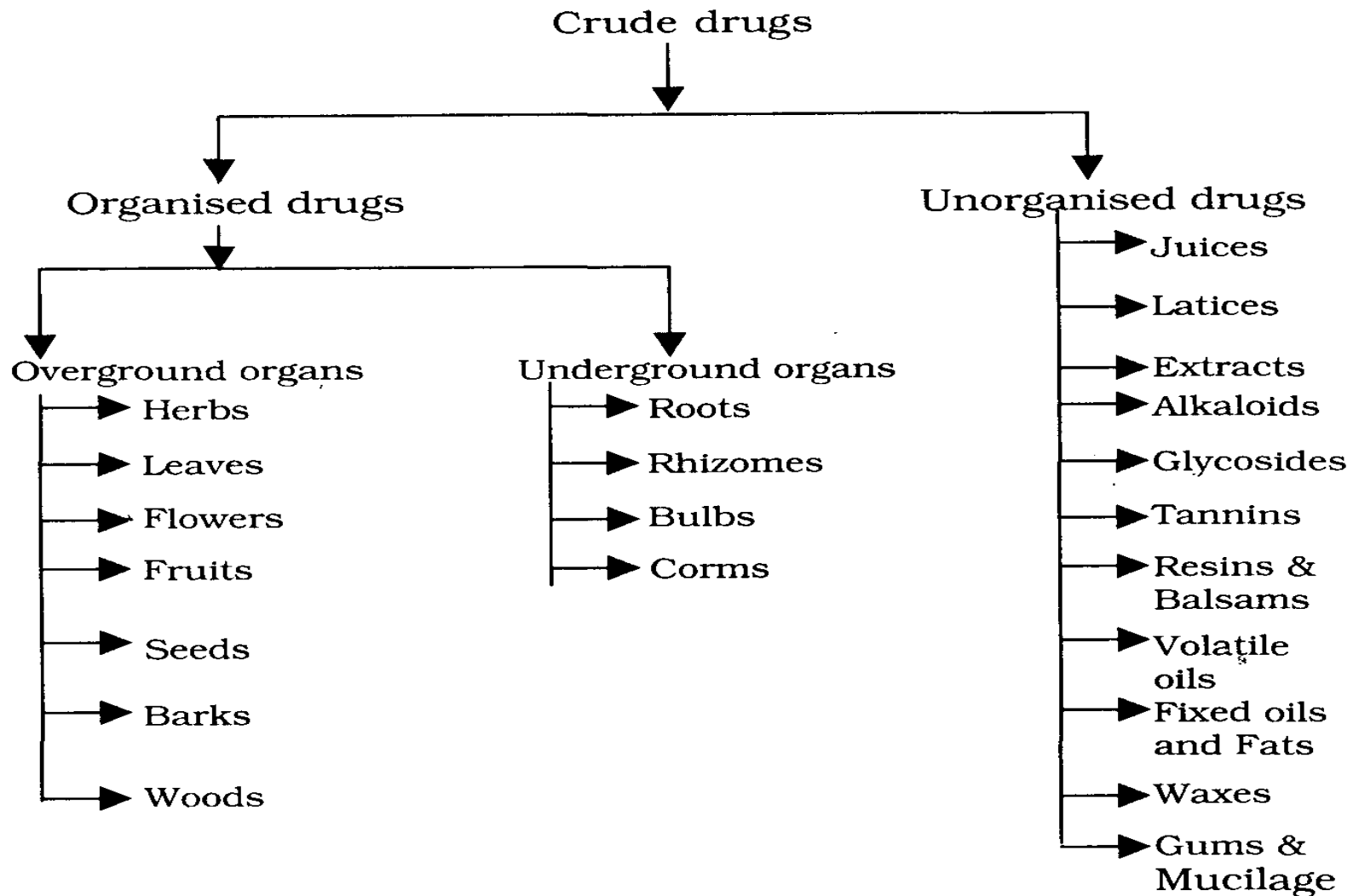
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Crude drugs are broadly divided into the following two main groups on the basis of their apparent morphological forms of cellular and structural organisation -

- **Organised crude drugs** are composed of definite organised histological or cellular structures and tissues.
- **Unorganised crude drugs** are devoid of any definite histological or cellular structures and are derived from plants and animals by different extraction processes or as natural secretions.

The Organised crude plant drugs are again further divided into the following two groups -

- **a) Drugs from Overground organs,** which include all drugs that are derived from the overground or aerial parts or organs of plants.
- **(b) Drugs from Underground organs,** which include all drugs that are derived from underground or subterranean parts or organs of plants.



Classification of Crude drugs on the basis of structural organisation

The systems of classification of crude drugs may be aimed accordingly as follows

- a. Alphabetical system
- b. Taxonomical system
- c. Morphological system
- d. Pharmacological or therapeutic system
- e. Chemical system

# Alphabetical classification:

- In this system crude drugs are arranged in alphabetical order using their English or Latin names.
- The Pharmacopoeias and other official publications use this system is the simplest method of arranging crude drugs and is particularly suitable for classifying drugs having no connecting features of a scientific nature.
- Other than its simplicity and ease of use, system does not give any useful information about the drugs and many unrelated drugs may be grouped together by using this system.

# Taxonomical classification:

- In this system crude drugs are arranged according to the natural groups (e.g. families) of their sources. Thus all the drugs obtained from plants of the family Umbelliferae are grouped together as umbelliferous drugs, those from Solanaceae are grouped together as Solanaceous drugs and so on.
- This system of classification reflects the natural relationship or phylogeny of the sources, which are also in many instances found to contain similar chemical constituents.
- For Example, volatile oils are the main constituents of the Umbelliferous fruit drugs, while tropane alkaloids are characteristics of Solanaceous drugs

# Morphological classification:

- In this system the organised drugs are arranged according to the morphological similarities and dissimilarities of various plant parts which constitute the drugs.
- Thus all drugs, irrespective of their chemical constituents and source are grouped together. Similarly barks of all parts are grouped in one group and so on) Unorganised drugs are grouped in this system as latices, extracts, gums, resins, oils, fats and waxes,



# Pharmacological or therapeutic classification:

- This system is based on the pharmacological actions and therapeutic properties of the crude drugs.
- In this system, all the cathartic drugs are brought together regardless of their morphology, taxonomy or chemical relationship. Thus, Podophyllum (a rhizome), Jalap (a tuberous root), Cascara (a bark) and Castor oil (oil) are considered at the same time when this system is used.

# Chemical classification:

- The crude drugs are divided into groups according to their principal chemical constituents. Thus all alkaloid-containing drugs are put into one group regardless of other consideration.
- Similarly all crude drugs containing glycosides are grouped together and so on. Since the pharmacological actions and therapeutic uses of drugs depend on their chemical constituents, this system of classification appears to be an ideal one.
- Moreover, certain plant families exhibit definite types of chemical principles, e.g., tropane alkaloids characterize the Solanaceae family; volatile oils are common in the Umhelliferae family, while Pinaceae contains mainly oleoresins.