D.PHARM • FIRST YEAR

Pharmacognosy

CHAPTER 10

# Herbal Formulations



ENGLISH CHAPTER NOTES

DIPLOMA IN PHARMACY

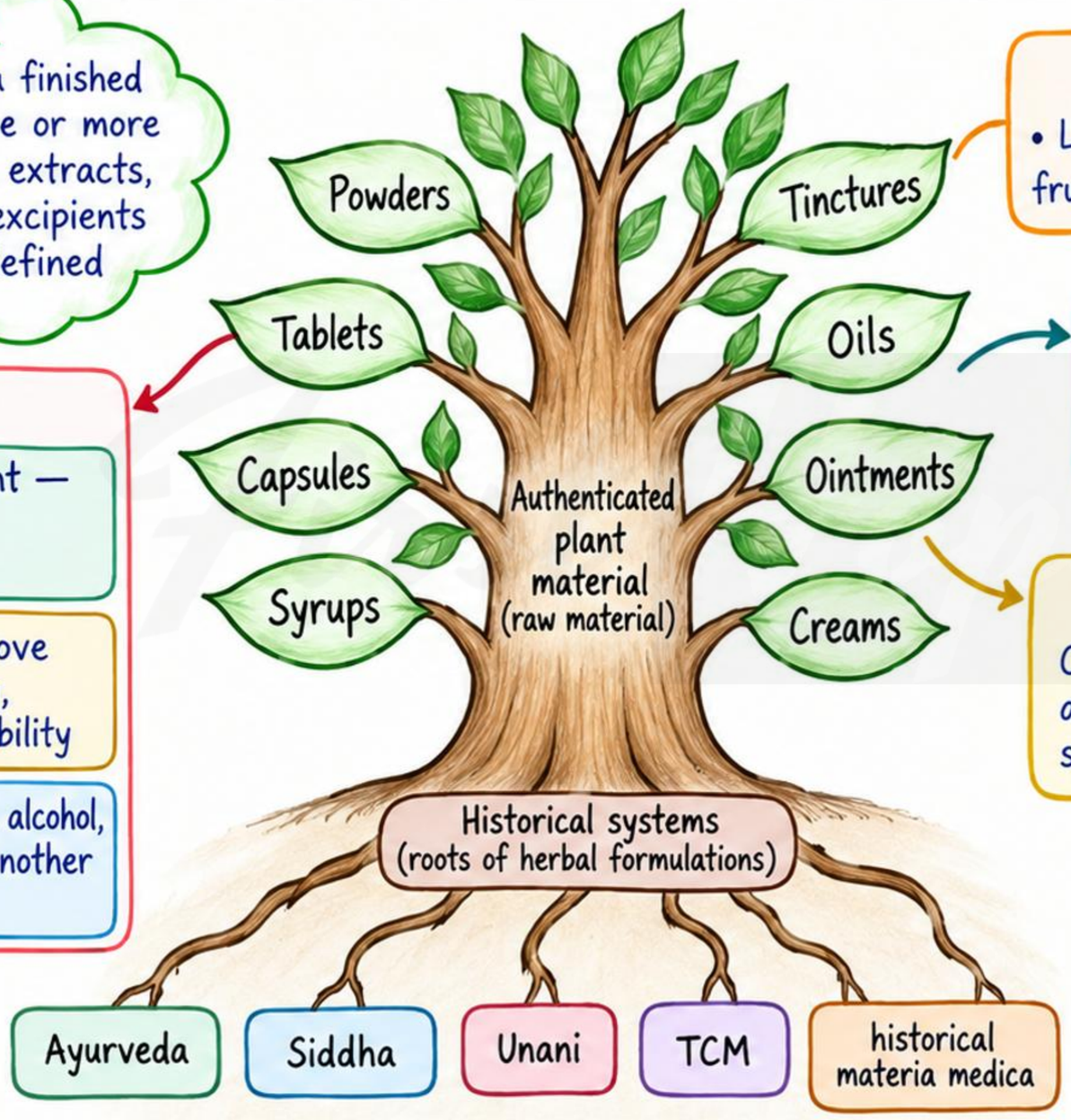
# HERBAL FORMULATIONS: OVERVIEW

## DEFINITION

A herbal formulation is a finished preparation containing one or more plant materials or plant extracts, combined with suitable excipients and presented in a defined dosage form.

## COMPONENTS

1. Active herbal ingredient — contains the intended phytochemical profile
2. Excipients — may improve stability, flow, binding, preservation or palatability
3. Vehicle or base — water, alcohol, oil, glycerol, honey or another suitable medium




## SOURCES

• Leaves • roots • bark • seeds • flowers • fruits • whole herb • standardized extracts

## DOSAGE FORMS

Powders • tablets • capsules • syrups • tinctures • oils • ointments • creams

## WHY FORMULATE?

Convenient dose • improved stability • acceptable taste • reproducible quality • suitable route of administration

## KEY PRINCIPLE

A finished formulation is only as reliable as its authenticated raw material, controlled process and evidence-based specifications.

# PREPARATION OF HERBAL FORMULATIONS

## 1 SELECT




Choose herbs from traditional references, scientific literature and intended use.

## 2 AUTHENTICATE AND TEST



Confirm species and plant part; check adulterants, contaminants and quality constants.

## 3 CLEAN, DRY AND STORE



Use conditions that limit enzyme action, microbes and constituent loss.

## 4 POWDER OR EXTRACT



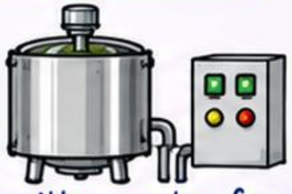
Choose particle size, solvent and method according to the target constituents.

## 5 DESIGN



Select dose, dosage form, excipients and compatible packaging.

## 6 MANUFACTURE



Use a written master formula and controlled process.

## 7 STANDARDIZE AND STUDY STABILITY




Test identity, marker or assay, uniformity, microbes, contaminants and shelf life.

## 8 PACK AND LABEL




State ingredients, directions, warnings, batch number, manufacture/expiry dates and storage.




Go back to investigation

If any test fails

**RULE**

A failed specification requires investigation; the batch must not be released automatically.

# HERBAL FORMULATIONS: BENEFITS AND CHALLENGES

## POTENTIAL BENEFITS

- Rich source of chemically diverse bioactive compounds
- Cultural acceptance and long history of use for many products
- Can be prepared in many oral and topical dosage forms
- Cultivation can support renewable raw-material supply
- Some standardized products have useful clinical evidence




## MAJOR CHALLENGES

- Species, soil, climate, harvest and processing change composition
- Many traditional claims lack robust clinical validation
- Light, heat, oxygen and moisture may reduce stability
- Risk of substitution, adulteration, microbes, pesticides or heavy metals
- Herb–drug interactions and adverse effects can occur
- Regulatory requirements differ between countries

## QUALITY BRIDGE

GACP → authentication → controlled extraction/manufacture → specifications → stability study → correct labelling → pharmacovigilance

**REMEMBER** Natural does not mean harmless, and lower adverse-effect risk cannot be assumed for every herbal product.

First Hope

FREE PREVIEW

Click here to visit our website

PHARMACY PREMIUM NOTES

# Complete subject and semesters are available on FirstHope app only.

Scan or click here

Click here to get the app >

Available on Google Play

JOIN THE FIRSTHOPE COMMUNITY

## Join our Telegram channel

Click here to join Telegram >

Scan or click here

@FirstHopeNotes

### Instagram

@firsthope.official

Click here to follow >

### YouTube channel

FirstHope-Pharmacy / Live streams

Click here to watch >

### WhatsApp channel

Follow FirstHope on WhatsApp

Click here to join >

### FirstHope website

firsthope.co.in

Click here to visit >

**B.Pharm / D.Pharm / M.Pharm / Pharm.D**

Preview notes. Complete subjects and semesters in the FirstHope app.