PHARM.D • YEAR 1

Pharmaceutics

CHAPTER 7

Biphasic Dosage Forms

PPT CHAPTER COVER

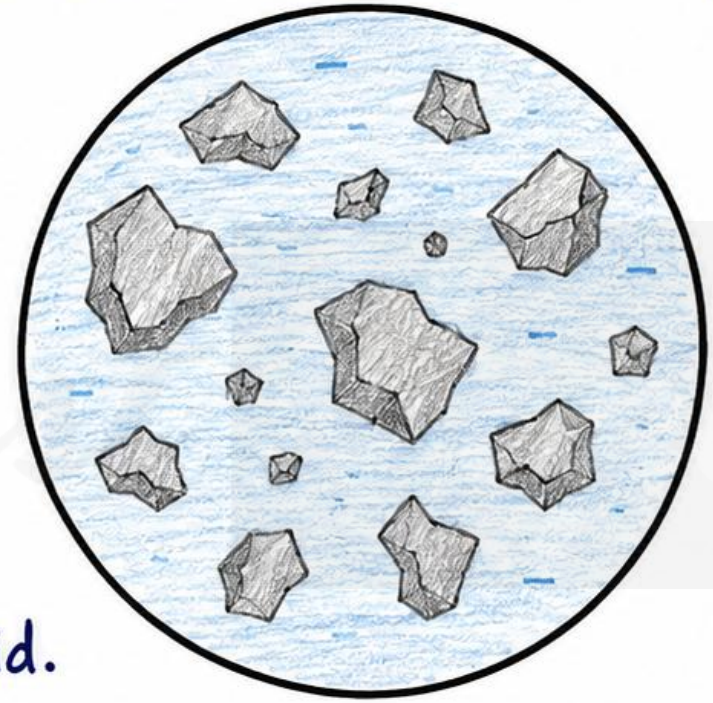


DOCTOR OF PHARMACY

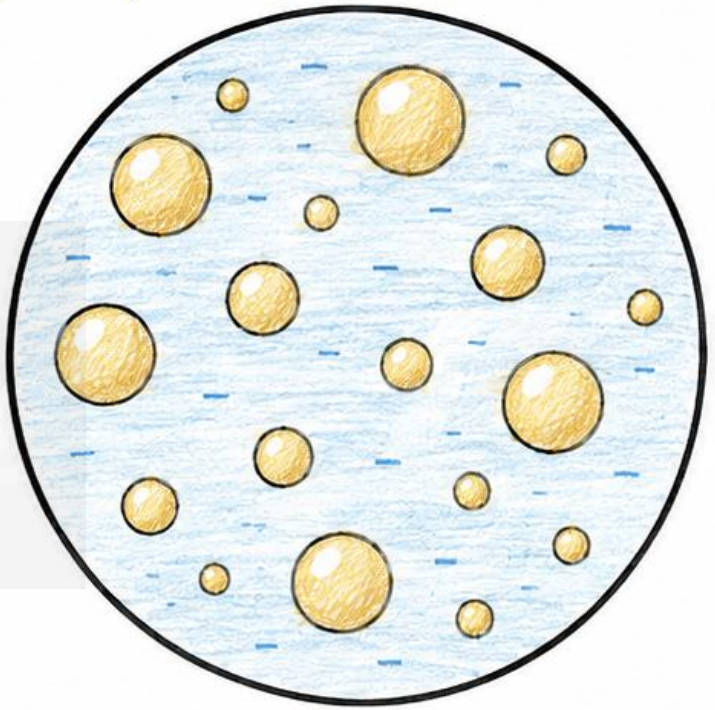
BIPHASIC LIQUID DOSAGE FORMS

A dispersed phase is distributed within a continuous liquid phase.

SUSPENSION:
insoluble solid particles
dispersed in a liquid.



EMULSION:
droplets of one liquid
dispersed in another immiscible liquid.



These are heterogeneous systems, unlike true solutions.

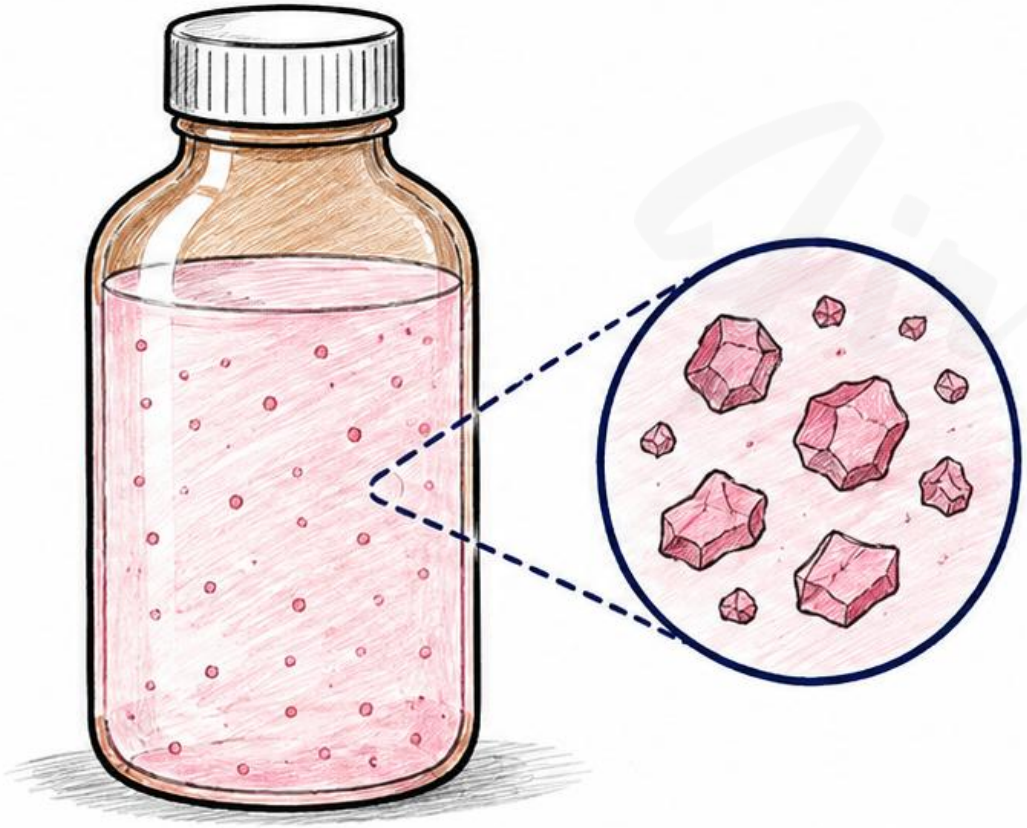
Physical stability and uniform dosing require suitable formulation and handling.

"Biphasic" does not mean that both phases must be liquids.

SUSPENSIONS: PURPOSE AND EXAMPLES

A suspension contains finely divided, undissolved drug particles in a liquid vehicle.

Examples: antacid suspension, calamine lotion and some reconstituted antibiotics.



WHY USE ONE?

- Gives a liquid form to a poorly soluble drug.
- May improve stability compared with a solution.
- May mask taste when little drug is dissolved.
- Some specially designed products provide prolonged release.

These advantages depend on the drug and formulation; they are not universal.

SUSPENSIONS: LIMITATIONS

SEDIMENTATION: particles may settle during storage.

DOSE VARIATION: inadequate redispersion produces unequal drug concentration.

CAKING: a compact sediment may resist shaking.

PRACTICAL LIMITS: liquids can be bulky, messy and harder to transport.



UNIFORM SUSPENSION | SETTLED LOOSE SEDIMENT | HARD CAKE

DESIRED PRODUCT

Particles redisperse readily, the liquid pours well and each measured dose is uniform.

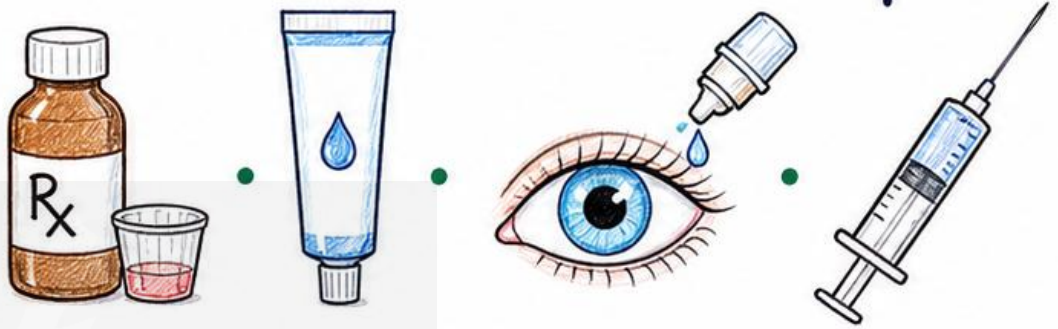
Follow the product's shaking, measuring and storage instructions.

CLASSIFYING SUSPENSIONS

① BY ROUTE

Oral • topical • ophthalmic • selected parenteral routes.

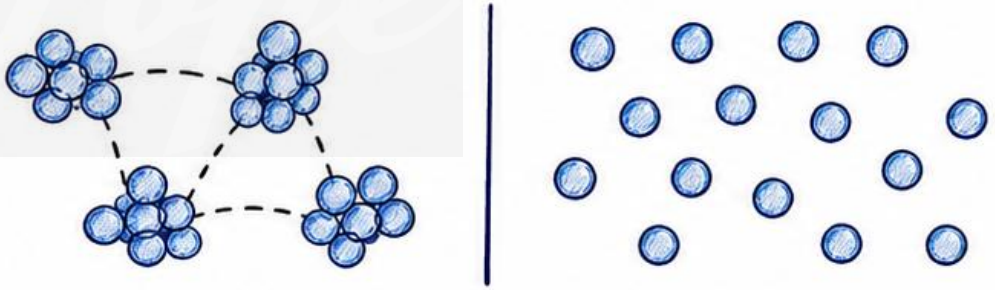
Route-specific requirements differ: eye and injectable products need appropriate sterile manufacture.



② BY PARTICLE ASSOCIATION

Flocculated: particles form loose clusters.

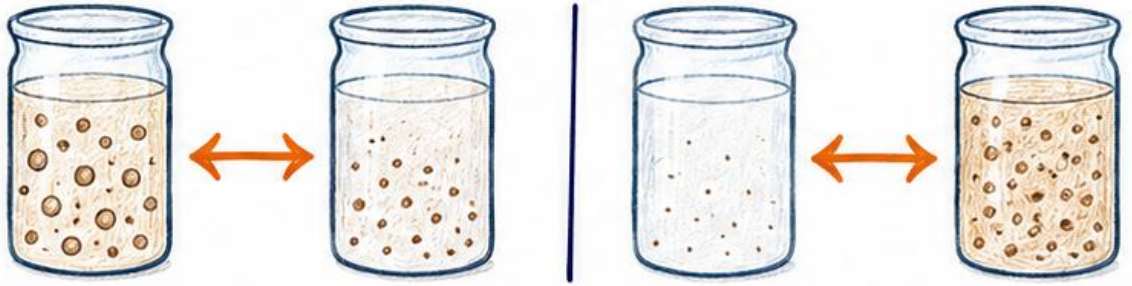
Deflocculated: particles remain mainly separate.



③ BY PARTICLE SIZE OR SOLID CONTENT

Coarse/fine and dilute/concentrated descriptions may be used.

Numerical category boundaries depend on the reference; they are not universal specifications.



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.