PHARM.D • YEAR 1

Pharmaceutical Inorganic Chemistry

CHAPTER 18

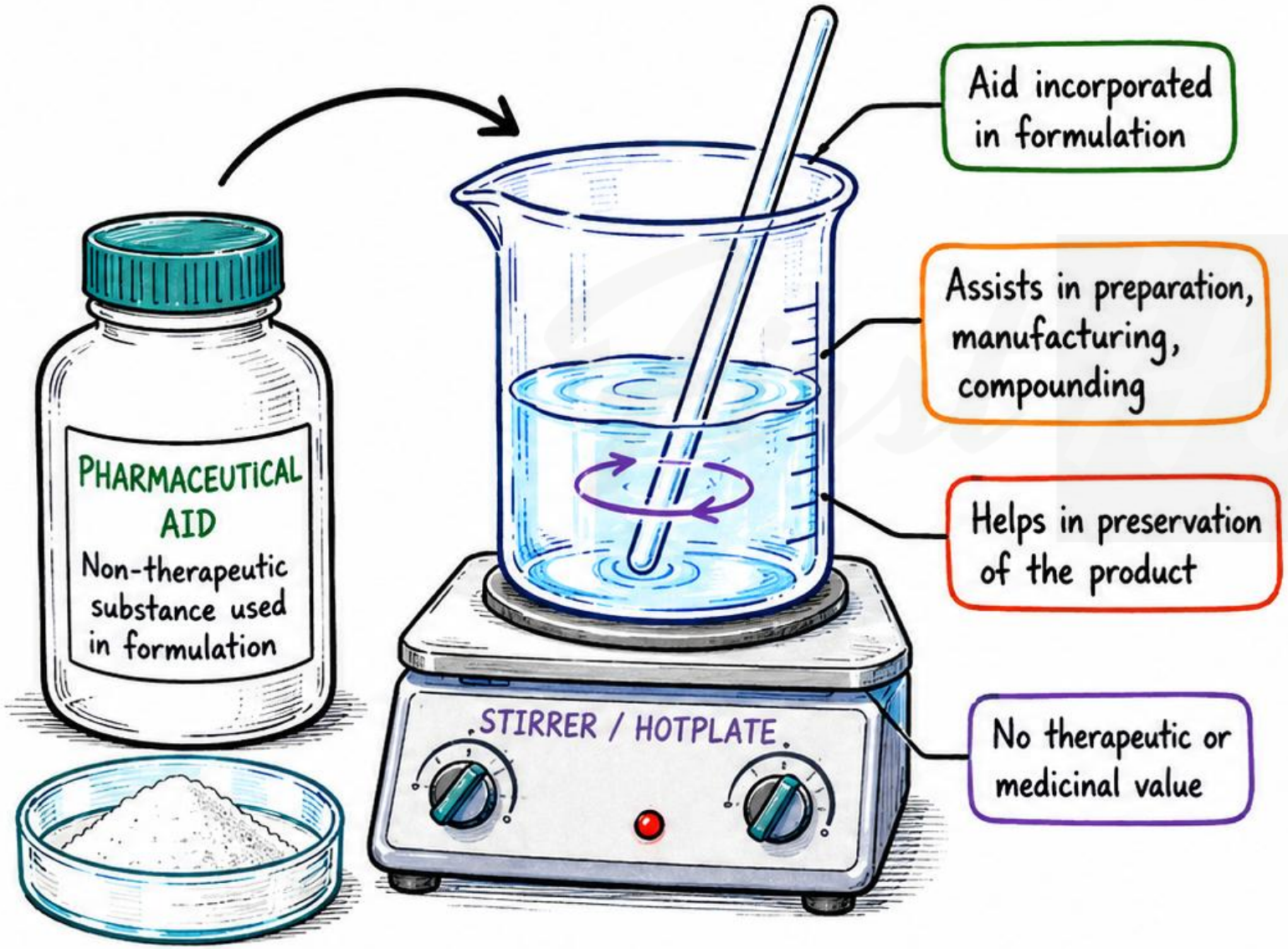
# Pharmaceutical Aids

PPT CHAPTER COVER



DOCTOR OF PHARMACY

# Pharmaceutical Aids: Definition and Ideal Qualities




## 1 Conform to pharmacopeial standards (e.g., IP, BP, USP)

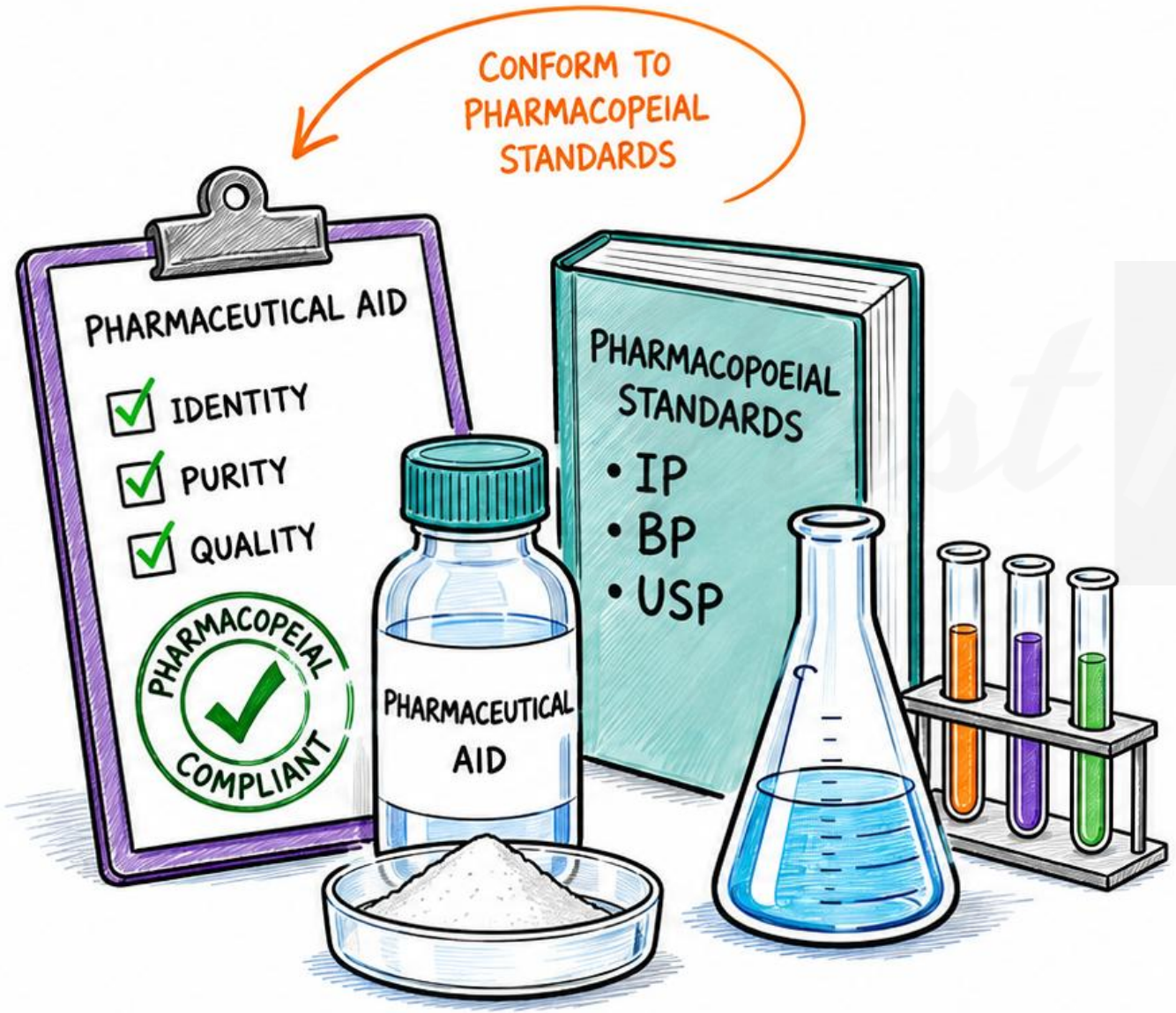
## 2 Regulatory Aspects

- Must meet quality standards of:
  - Indian Pharmacopoeia (IP)
  - British Pharmacopoeia (BP)
  - United States Pharmacopeia (USP)
- Each aid is tested for:
  - Purity
  - Identity
  - Impurities
  - Physical characteristics (e.g., pH, melting point, solubility)

## 3 Importance in Formulation

- Pharmaceutical aids play a critical role in ensuring that the drug product is:

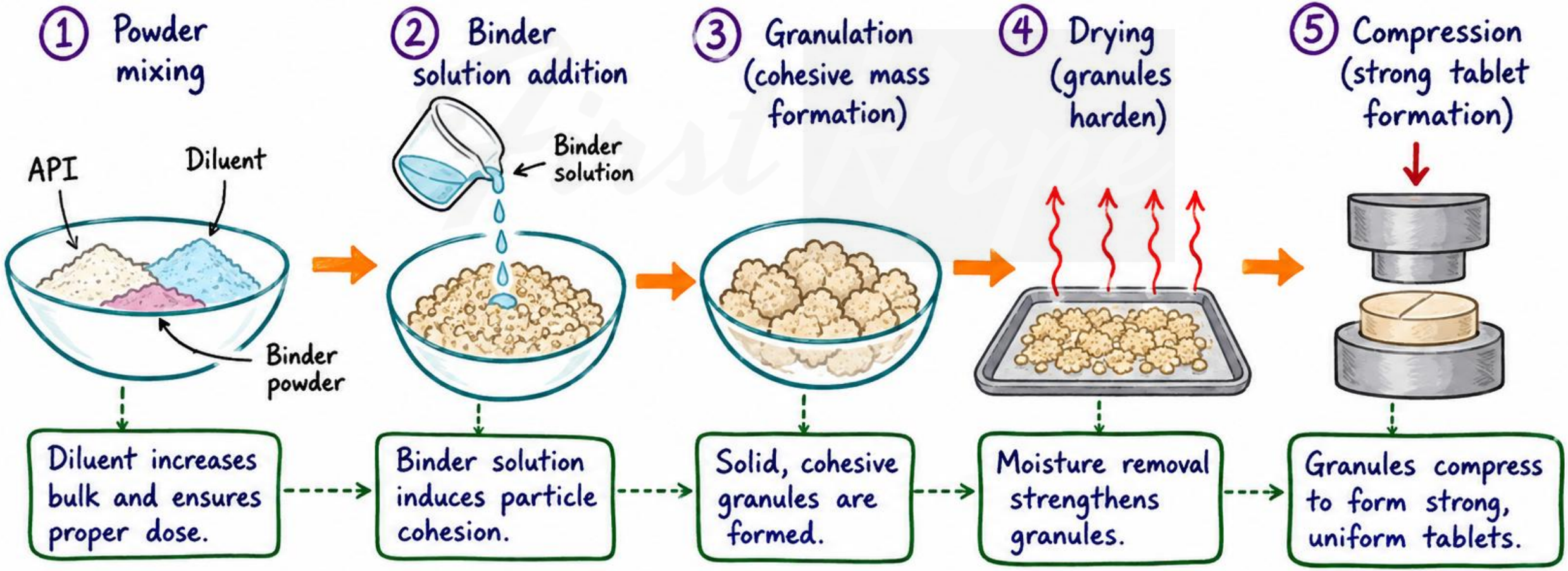
# Quality, Safety and Regulatory Expectations




- Pharmaceutical aids must meet the quality standards laid out in official pharmacopoeias.
  - Indian Pharmacopoeia (IP)
  - British Pharmacopoeia (BP)
  - United States Pharmacopeia (USP)
- These standards ensure consistent identity, purity and overall quality.
- Conformity to pharmacopoeial standards ensures safety, reliability and regulatory acceptance.

# Diluents and Binders

- Diluents add bulk to a dose for convenient tablet size and improve flow.
- Binders impart cohesiveness, promoting granule formation and tablet strength.



# Lubricants, Glidants and Disintegrants

→ **Lubricants:** reduce die-wall friction during tablet compression and ejection.

Example: Magnesium stearate

→ **Glidants:** improve powder flow by reducing interparticle friction.

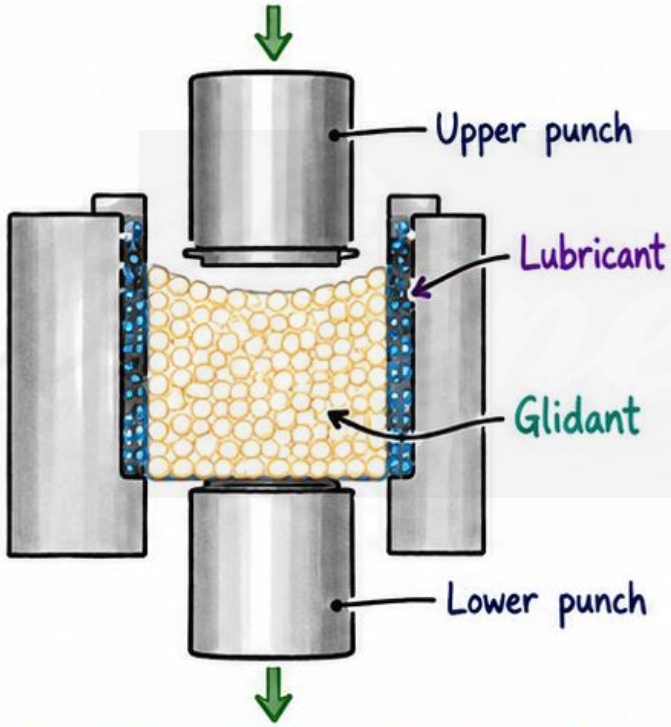
Example: Colloidal silica

→ **Disintegrants:** help a tablet break apart after contact with fluid.

Example: Croscarmellose sodium

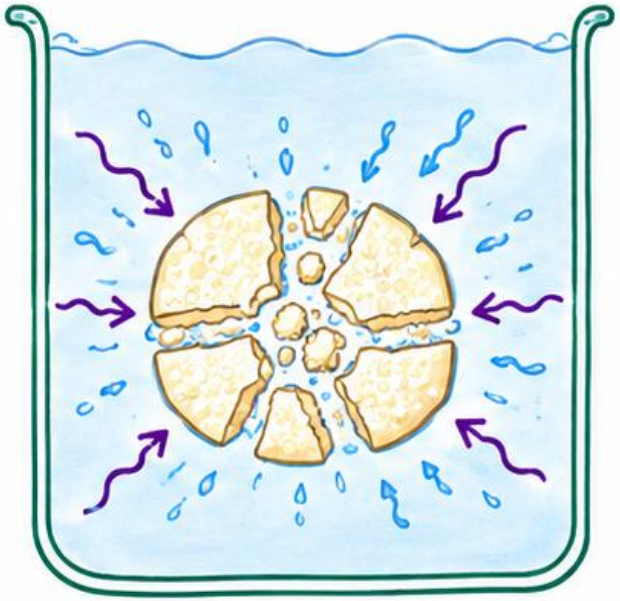
★ Concentration and compatibility must be optimized.

## During Compression and Ejection




Lubricant reduces die-wall friction; glidant improves powder flow.

## After Contact with Fluid



Disintegrant absorbs fluid, swells and breaks the tablet into particles.

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