

PHARMACEUTICS-I (BP103T)

UNIT: 4 (Suppositories, Pharmaceutical incompatibilities)

CLASS: 6

TOPIC: Pharmaceutical incompatibility

1. Alkaloidal incompatibility i. Alkaloidal salts with alkaline substances ii. Alkaloidal salts with soluble iodides iii. Alkaloidal salts with tannins iv. Alkaloidal salts with salicylates v. Alkaloidal salts with soluble iodides and bromides

2. Soluble salicylates incompatibilities i. Soluble salicylates with ferric salt ii. Soluble salicylates with alkali bicarbonates iii. Soluble salicylates and benzoates with acids

3. Soluble iodides incompatibility i. Oxidation of iodides with ferric salts ii. Oxidation of iodides with potassium chlorate iii. Oxidation of iodides with quinine sulphate

4. Chemical incompatibilities causing evolution of carbon dioxide gas i. Sodium bicarbonate with soluble calcium or magnesium salts ii. Bismuth subnitrate and sodium bicarbonate iii. Borax with sodium bicarbonate and glycerin

5. Miscellaneous chemical incompatibilities i. Soluble barbiturates with ammonium bromide ii. Potassium chlorate with oxidisable substances iii. Incompatibility of emulsifying agents iv. Colour stability of dyes v. Incompatibilities of liquorice liquid extract.

1. Alkaloidal Incompatibilities Incompatibility

i. Alkaloidal salts with alkaline substances

Rx

Strychnine hydrochloride solution— 6 ml

Aromatic spirit of ammonia-- 4 ml

Water upto --120 ml

Make a mixture

Reaction: Diffusible precipitate forms

Correction: Method A

ii. Alkaloidal salts with soluble iodides

Strychnine with soluble iodides forms very insoluble hydroiodide.

Reaction: Diffusible precipitate

Correction: Method A

iii. Alkaloidal salts with tannins

Alkaloidal salt with tannins, the alkaloids form tannates

Reaction: Diffusible precipitate

Correction: Method A

iv. Alkaloidal salts with salicylates

Quinine hydrochloride combines with sodium salicylate

Reaction: Indiffusible precipitate

Correction: Method B

v. Alkaloidal salts with soluble iodides and bromides

Alkaloid with soluble iodides and bromides forms insoluble hydroiodides & hydrobromides.

Reaction: Insoluble but diffusible precipitate forms

Correction: Method A

2. Soluble salicylates incompatibility

i. Soluble salicylates with ferric salt

Rx

Ferric Chloride solution– 2 ml

Sodium Salicylate – 3 gm

Water up to -- 90 ml

Make a mixture

Reaction: Indiffusible precipitates.

Correction: Method B

ii. Soluble salicylates with alkali bicarbonates

Sodium salicylate and sodium benzoate react with sodium bicarbonate.

Reaction: Dark brown colour is formed

Correction: Add liquid extract of liquorice

iii. Soluble salicylates and benzoates with acids

Sodium salicylate and sodium benzoate react with acid Salicylic acid & benzoic acid precipitate forms.

Reaction: Indiffusible precipitates.

Correction: Method B

5 MARKS QUESTIONS

1. Explain any two chemical reactions causing incompatibility.

10 MARKS QUESTIONS

1. Discuss in detail about Chemical incompatibility.