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lec6

Hopkins-Cole (Glyoxylic Acid Reaction)

Aim: Specific for tryptophan (the only amino acid containing indole group)

Principle:

- Reacting with a glyoxylic acid in the presence of a strong acid, the indole ring forms a violet cyclic product.
- The protein solution is hydrolyzed by conc. H_2SO_4 at the solution interface.
- Once the tryptophan is free, it reacts with glyoxylic acid to form violet product.

Procedure

1. In a test tube, add to 2 ml of the solution an equal volume of Hopkins- Cole reagent and mix thoroughly.
2. Incline the tube and let 5 to 6 ml of conc. H_2S0_4 acid flow slowly down the side of the test tube, thus forming a reddish - violet ring at the interface of the two layers. That indicates the presence of tryptophan