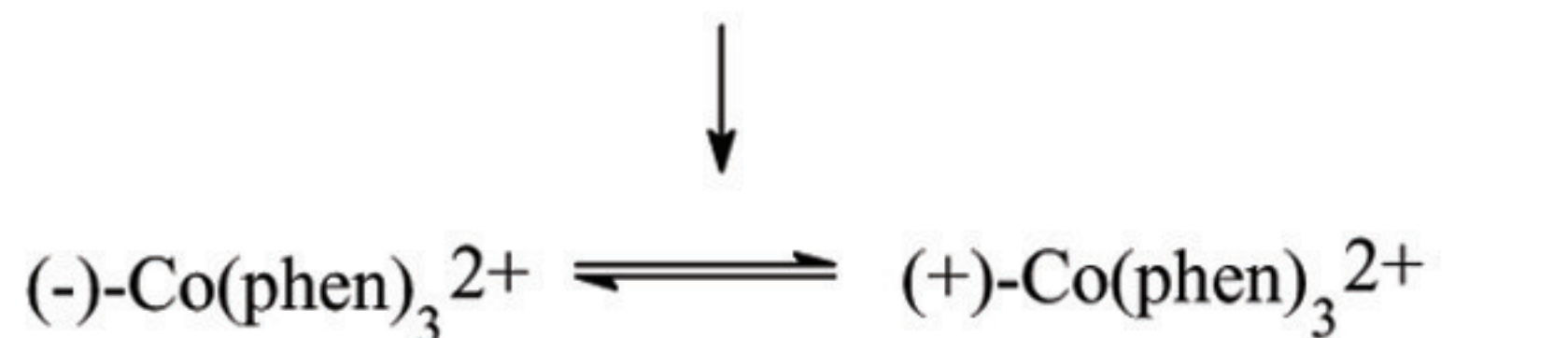


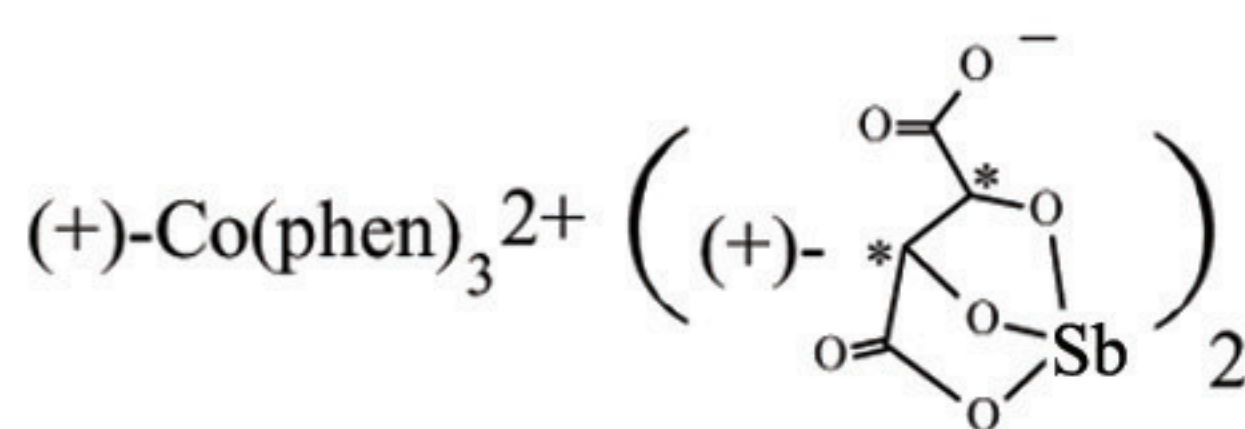
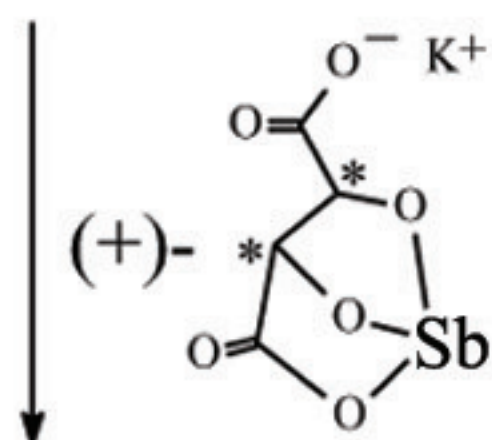
FLOW CHART FOR PREPARATION OF (+)-Co(phen)₃³⁺

cobalt(II) chloride hexahydrate + 1,10-phenanthroline

STARTING MATERIALS

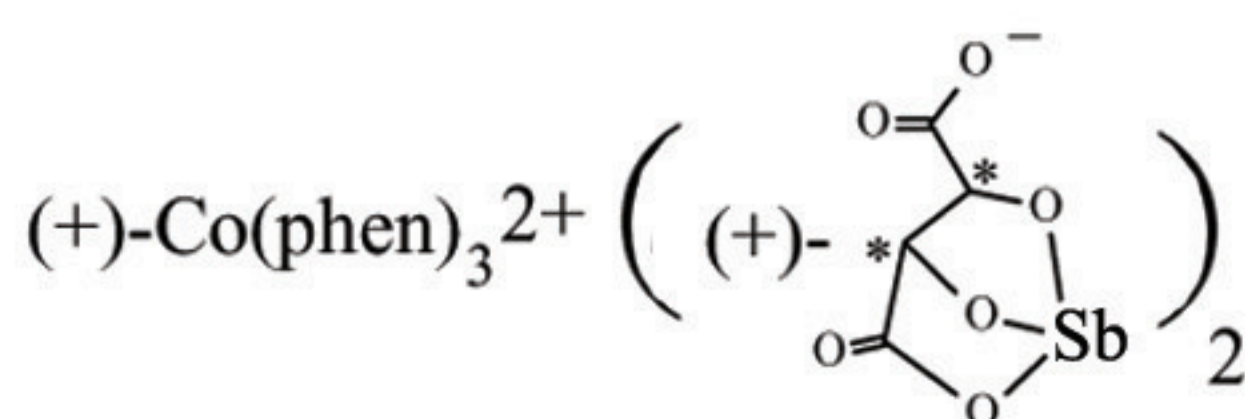


SOLUTION OF RACEMIC Co(phen)₃²⁺
IN WHICH THE (-) AND (+)
ENANTIOMERS ARE
RAPIDLY INTERCONVERTING



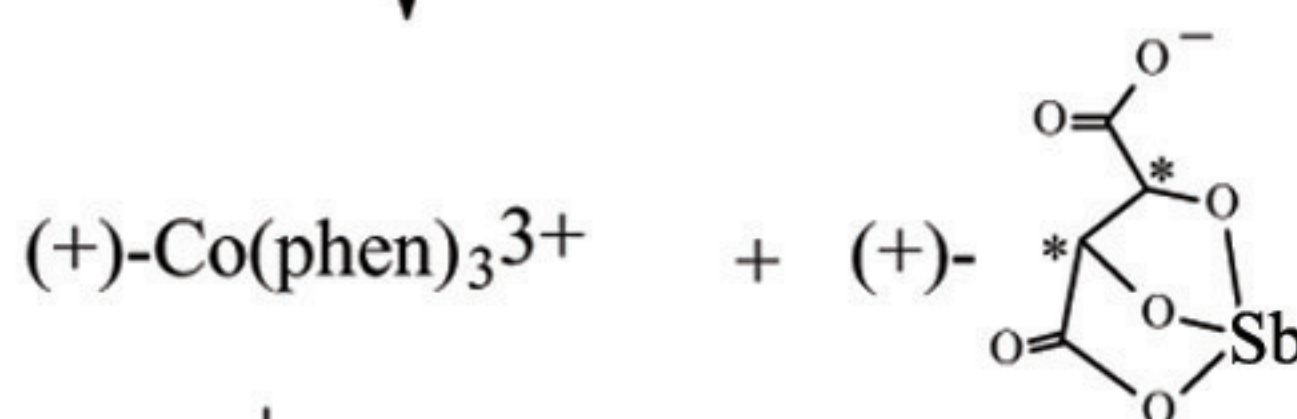
PRECIPITATED CHIRAL (+)-Co(II) COMPLEX
+ SUPERNATANT

remove
supernatant



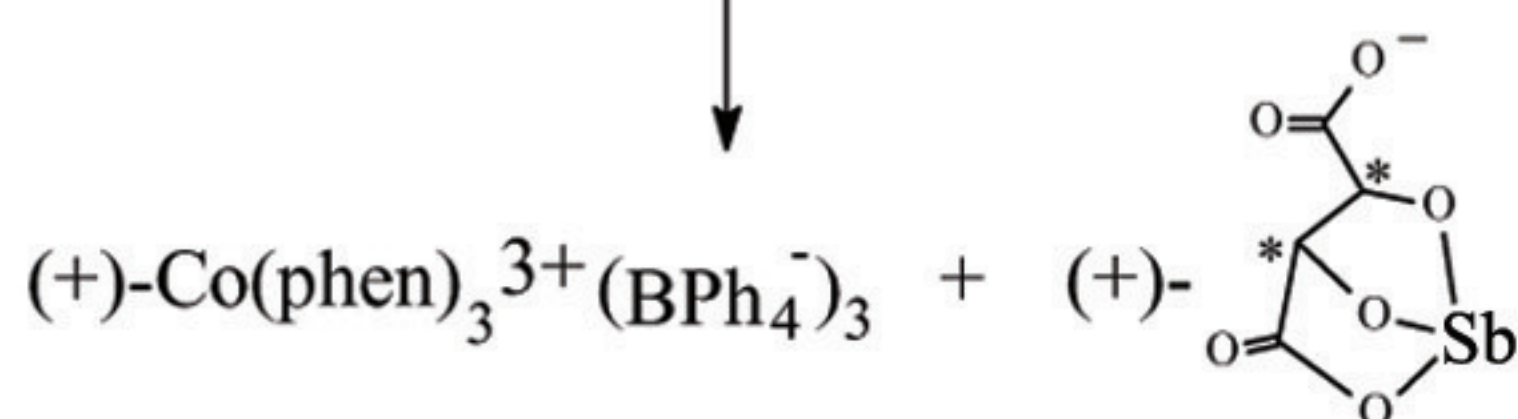
SOLID CHIRAL Co(II) COMPLEX WITH
(+)-ANTIMONY TARTRATE AS THE
COUNTERION

1. add deionized water
2. oxidize Co(II) to Co(III) with Cl₂
3. remove excess Cl₂



SOLUTION OF CHIRAL Co(III) COMPLEX
and (+)-ANTIMONY TARTRATE

MEASURE THE OPTICAL ACTIVITY
OF THE SOLUTION

NaBPh₄

SOLID Co(III) TETRAPHENYLBORATE
and SUPERNATANT CONTAINING
(+)-ANTIMONY TARTRATE

WEIGH THE DRY (+)-Co(phen)₃³⁺(BPh₄)₃

MEASURE THE RESIDUAL OPTICAL ACTIVITY OF THE SUPERNATANT