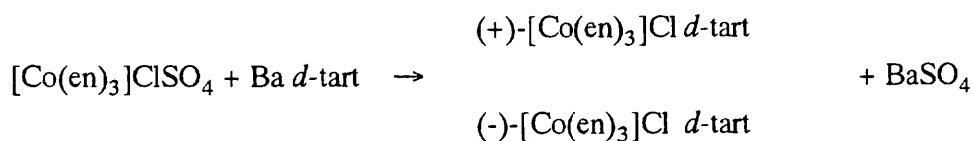
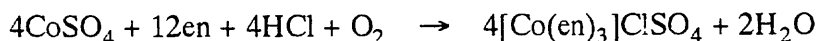


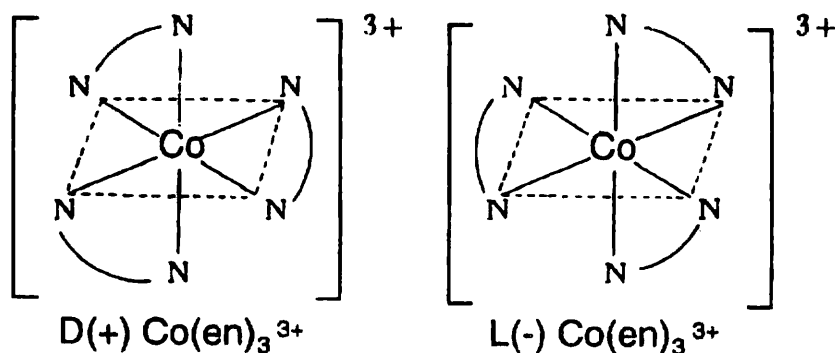
10. Resolution of the Tris(ethylenediamine) Cobalt(III) Ion*



en = ethylenediamine; *d*-tart = dextro-tartrate

Tris(ethylenediamine)cobalt(III) chloride was first prepared by Werner.¹ Resolution was effected through the chloride *d*-tartrate which was obtained by allowing the chloride (1 mol) to react with silver *d*-tartrate (1 mol). The correct ratio of chloride ion to tartrate ion is important and this has meant that it was necessary to isolate the pure solid chloride, the synthesis of which has been described by Work.² In the present method the less soluble diastereoisomer is isolated directly and the expensive and unstable silver *d*-tartrate is replaced by barium *d*-tartrate. The addition of activated carbon ensures rapid oxidation of the initial cobalt (II) complex and eliminates small amounts of by-products of the reaction.

Optical Isomers of $\text{Co}(\text{en})_3^{3+}$



* A modification of the procedure of J.A.Broomhead, F.P.Dwyer, and J.W.Hogarth; *Inorganic Syntheses*, 4, 183 (1960).