

Experiment No. 7

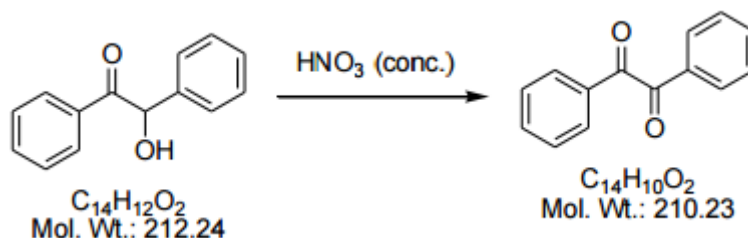
Aim of the experiment: To synthesize benzil from benzoin.

Apparatus required: 250 ml round bottomed flask, beakers, buchner flasks, buchner funnel

Chemicals required: Conc nitric acid, benzoin

Principle: Alcohol group of benzoin is oxidized to ketone group forming benzil in the presence of concentrated nitric acid. Nitration of aromatic ring is not occurring as sulphuric acid is totally absent in the whole process.

Reaction:



Procedure

4 g of benzoin and 14 ml of concentrated nitric acid are taken in a round bottomed flask and heated on a boiling water bath for about 10 min with occasional shaking until the evolution of oxides of nitrogen ceases. The content is poured into 75 ml ice cold water with shaking. Then the product is filtered with suction and washed with cold water. It is recrystallized from ethanol.

Calculation

Percentage yield = (practical yield/theoretical yield) × 100