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ABSTRACT (PART I)

Sodium glycidates are important synthetic intermediates of α -substituted ketones. The Oxidative decarboxylation of sodium glycidates by lead tetraacetate in benzene and pyridine gave α -substituted ketones with one-carbon homologation from the starting carbonyl compounds.

Decarboxylation of 3-chloro-2-hydroxy acids with lead tetraacetate in benzene and pyridine gave the corresponding α -aryl- α -chloroketones or α -acetoxy- α -aryl ketones in good yields.

Decarboxylation of sodium 2-chloro-aryl glycidates with lead tetraacetate in pyridine and benzene gave the corresponding α -keto acid chlorides. Methanolyse of these compounds gave α -ketoesters.

ABSTRACT (PART II)

The α -aminonitriles are good "masked nucleophilic acylating agents".

The reaction of lithio α -(dimethylamino)aryl acetonitriles with ethyl chloroformate and acid chlorides in tetrahydrofuran at -78°C gave the corresponding α -aminonitrile adducts. Hydrolyses of these adducts with cupric sulphate in aqueous ethanol gave α -ketoesters and α -diketones respectively.

The 1,2-addition of lithio α -(diethylamino)acetonitrile with cyclohexanone in tetrahydrofuran at -78°C was unsuccessful.

The reaction of lithio α -(morpholino) acetonitrile with electrophiles in tetrahydrofuran at -78°C gave self condensation product and only a little of alkylated products.