

DIAZO ACETIC ESTER

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ALIPHATIC DIAZO COMPOUNDS

They are characterised by the presence of a $>\text{CN}_2$ group.

Highly reactive compounds

Examples:

1. Diazomethane , CH_2N_2
2. Diazoacetic acetic ester $\text{CHN}_2\text{COOC}_2\text{H}_5$

PREPARATION

❖ It is prepared by reacting the cooled solution of hydrochloride of ethyl glycine hydrochloride with a cold solution of sodium nitrate.





PROPERTIES

- ❖ It is a yellow oil.
- ❖ Insoluble in water
- ❖ Insoluble in alcohol and ether
- ❖ Reaction are similar to that of diazomethane.

SYNTHETIC IMPORTANCE

▪ Synthesis of ethylglycolate

when boiled with dilute halogen acid, diazoacetic ester gives glycollic ester



▪ Synthesis of ethylchloroacetate

with concentrated halogen acid, it produces ethyl halogenoacetate



Synthesis of acetyl glycollic ester

With acetic acid and ethanol, it gives substituted glycollic esters.



Synthesis of ethyl bisiodoacetate



Reduction Product

On reduction with zinc and acetic acid, it gives ethyl glycine ester and ammonia.

