

SUBJECT - CHEMISTRY

CLASS - B.Sc (Hons) PART - I

PAPER - IV GROUP - B

TOPIC - preparation of Oxalic acid

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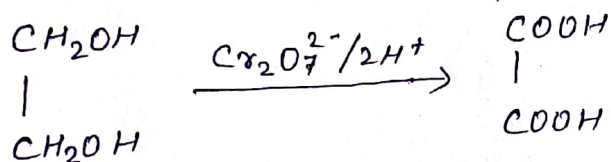
Dr. L.K.V.D College Tajpur Samastipur

Q Give important methods of preparation of Oxalic acid

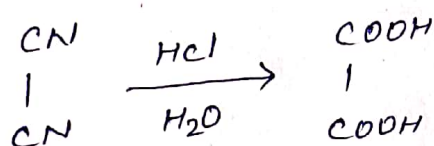
Ans Oxalic acid [ethanedioic acid,  $(\text{COOH})_2$ ]

preparation

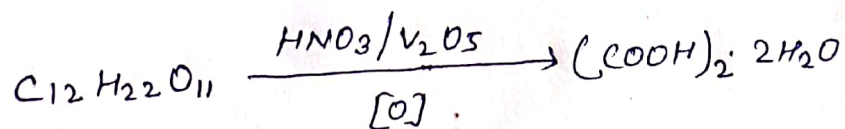
1 By the oxid. of glycol:



2 By the hydrolysis of cyanogen:

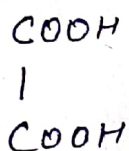
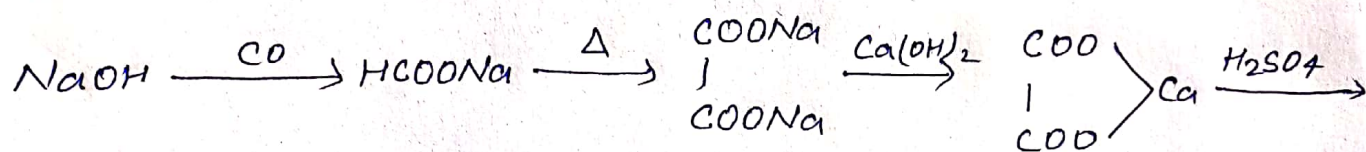


3. Lab, method: It is prepared by the oxidation of Cane sugar with Cone.  $\text{HNO}_3$  in presence of  $\text{V}_2\text{O}_5$  Catalyst. The product on crystallisation gives oxalic acid crystals:



4 Commercial method: The carbon monoxide gas is first passed through  $\text{NaOH}$  solution under pressure to get Sodium methanoate solution, which on heating forms Sodium oxalate. This solution is then treated with hot lime to precipitate out  $\text{Ca}$ -oxalate. The precipitate is treated with requisite quantity of  $\text{H}_2\text{SO}_4$  to precipitate out  $\text{CaSO}_4$ .

The filtrate so obtained, gives oxalic acid crystals on crystallisation.



5 oxalic acid is also synthesized by heating Na or K in a current of  $\text{CO}_2$  at 633K

