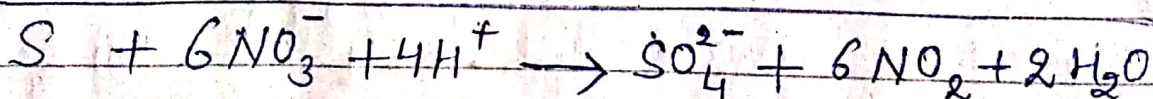
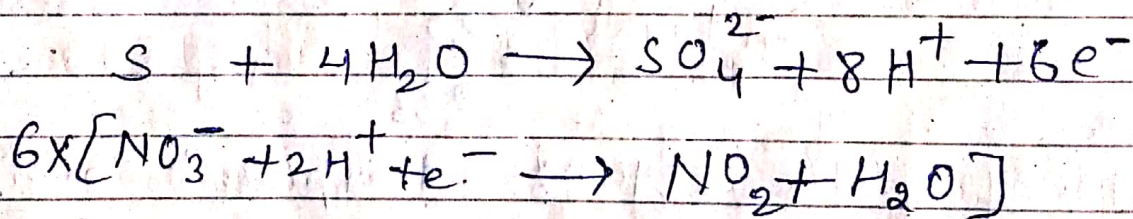
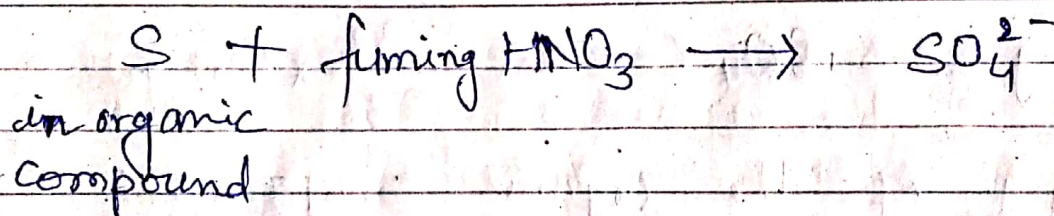
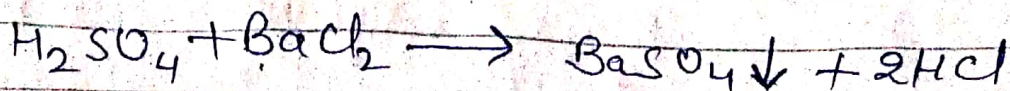


Topic: → Estimation of Sulphur in organic compound by Carius method.

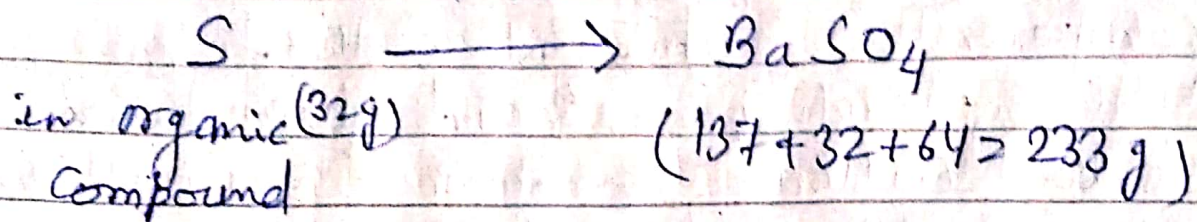
Carious method: → In this method a known weight ^(w) of the organic compound is heated with fuming HNO_3 acid in a hard glass sealed tube called Bomb or Carious tube where sulphur present in the organic compound is oxidised to sulphate.



The tube is cooled and the sealed end is cut off and contents are transferred into a beaker. The solution in the beaker is heated with 1-2 ml of dil. HCl and then BaCl_2 solution is added to it.



The precipitate is filtered, washed, dried and then weighed (W_2 g). From the weight of $BaSO_4$ ppt. (W_2) and weight of organic compound (W_1 g), the percentage of sulphur is calculated as:



\therefore 233 g. of $BaSO_4$ contains 32 g of S.

\therefore W_2 g of $BaSO_4$ contains $\frac{32}{233} \times W_2$ g of S.

\therefore W_1 g of the organic compound contains $\frac{32 W_2}{233}$ g of S.

\therefore 100 g of the organic compound contains

$$\frac{32 W_2}{233} \times \frac{100}{W_1} \text{ g of S.}$$

\therefore % of sulphur in organic compound

$$= \frac{100 \times 32 W_2}{233 W_1} \%$$