PURIFICATION AND SEPRATION TECHNIQUE

1. In Carius method of estimation of halogen, 0.172g of an organic compound showed presence of 0.08g of bromine. Which of these is the **correct** structure of the compound :

(1)

(2) H_3C-CH_2-Br

(3)

(4) H_3C-Br

SOLUTION

1. **Official Ans. by NTA (1)**

Sol. In Carius method

mass of organic compound = 0.172 gm

mass of Bromine = 0.08 gm

Hence % of Bromine = $\dfrac{0.08}{0.172} \times 100$

$\qquad\qquad = 46.51\%$

(1) C_6H_6NBr $\left[\%Br = \dfrac{80}{172} \times 100 \right] = 46.51\%$

(2) CH_3CH_2Br C_2H_5Br $\%Br = \dfrac{80}{109} \times 100 = 73.33\%$

(3) $C_6H_5NBr_2$

(4) CH_3Br