In sulphur estimation, 0.157 g of an organic compound gave 0.4813 g of barium sulphate. What is the percentage of sulphur in the compound?

Solution

Molecular mass of $BaSO_4$ = 137+32+64
$$= 233 \text{ g}$$

233 g $BaSO_4$ contains 32 g sulphur

0.4813 g $BaSO_4$ contains $\dfrac{32 \times 0.4813}{233}$ g sulphur

Percentage of sulphur = $\dfrac{32 \times 0.4813 \times 100}{233 \times 0.157}$

$$= 42.10\%$$