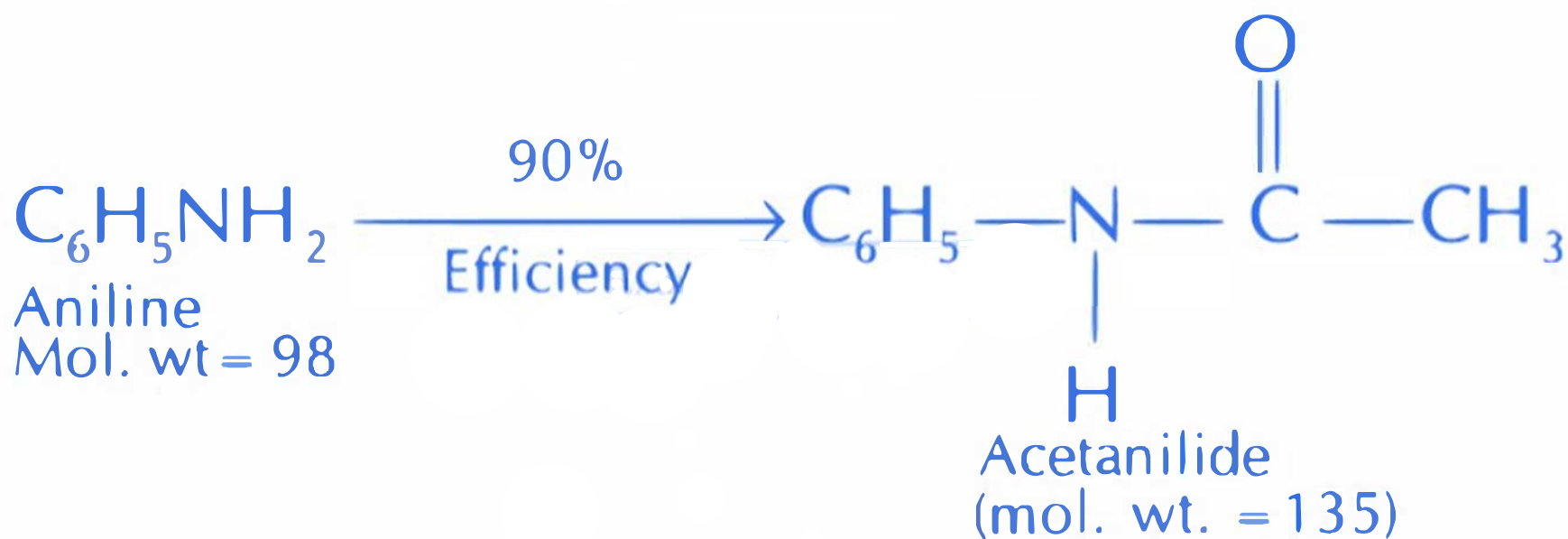


1.86 g of aniline completely reacts to form acetanilide. 10% of the product is lost during purification. Amount of acetanilide obtained after purification (in g) is \_\_\_\_\_  $\times 10^{-2}$ .

## Answer

Correct Answer is 243

## Explanation



Given, weight = 18.6 g

Here, 1 mole of aniline gives 1 mole of acetanilide

$\therefore$  mole of aniline = mole of acetanilide

$$\Rightarrow \frac{1.86}{93} = \frac{W_{\text{Acetanilide}}}{135}$$

$$W_{\text{Acetanilide}} = \frac{1.86 \times 135}{93} g = 2.70g$$

But efficiency of reaction is 90% only.

$$\text{Hence, mass of acetanilide produced} = 2.70 \times \frac{90}{100} g = 2.43g = 243 \times 10^2 g$$

x = 243