**Answer on Question #66024 - Chemistry – Organic Chemistry**

## Task:

How many grams of H2O are produced from 9.40 g of ethanol?

## Solution:

Water = $H_2O$;

Ethanol = $C_2H_5OH$;

Ethylene = $C_2H_4$.

Reaction Scheme:

$$C_2H_5OH \xrightarrow{H^+} C_2H_4 + H_2O$$

By the equation:

$$n(C_2H_5OH) = n(H_2O);$$

$$\frac{m(C_2H_5OH)}{M(C_2H_5OH)} = \frac{m(H_2O)}{M(H_2O)};$$

$$m(H_2O) = \frac{M(H_2O) \times m(C_2H_5OH)}{M(C_2H_5OH)};$$

$$m(H_2O) = \frac{18 \times 9.40}{46} \approx 3.68(g)$$

**Answer:** 3.68 g $H_2O$.