

① octane:  $C_8H_{18}$

Hexadecane:  $C_{16}H_{34}$

② 1 mole de  $C_8H_{18}$  reprezintă  $(12 \times 8) + (18 \times 1) = 114 \text{ g}$

$$E_{\text{combustie molară}} (C_8H_{18}) = \frac{5 \text{ MJ}}{\text{mol}} = \frac{5 \text{ MJ}}{114 \text{ g}} = \frac{5 \times 10^3 \text{ kJ}}{114 \text{ g}}$$

$$PC (C_8H_{18}) = \frac{5 \times 10^6 \text{ kJ}}{114 \times \text{kg}} = \underline{\underline{4,39 \times 10^4 \text{ kJ/kg}}}$$

$$E_{\text{combustie molară}} (C_{16}H_{34}) = \frac{9,8 \text{ MJ}}{(16 \times 12 + 34 \times 1) \text{ g}} = \frac{9,8 \times 10^6 \text{ kJ}}{226 \text{ g}}$$

$$= 4,34 \times 10^4 \text{ kJ/kg}$$

$$\textcircled{3} \text{ Energie mecanică } (C_8H_{18}) = 0,35 \times 4,39 \times 10^4 \text{ kJ} \\ = \underline{\underline{1,5365 \times 10^4 \text{ kJ}}}$$

$$\text{Energie mecanică } (C_{16}H_{34}) = 0,45 \times 4,34 \times 10^4 = \underline{\underline{1,95 \times 10^4 \text{ kJ}}}$$