PRACOVNÝ LIST – TERMOCHÉMIA

1. **Doplňte reakčné teplo:**

a) $2\ Fe\ (s) + \frac{3}{2}\ O_2\ (g) \rightarrow Fe_2O_3\ (s)$ $Q_m = -822,7$ kJ/mol

$Fe_2O_3\ (s) \rightarrow 2\ Fe\ (s) + \frac{3}{2}\ O_2\ (g)$ $Q_m =$ _____

b) $2H_2\ (g) + O_2\ (g) \rightarrow 2H_2O\ (g)$ $Q_m = -483,9$ kJ/mol

$2H_2O\ (g) \rightarrow 2H_2\ (g) + O_2\ (g)$ $Q_m =$ _____

c) $I_2\ (s) + Cl_2\ (g) \rightarrow 2\ ICl\ (g)$ $Q_m = 36$ kJ/mol

$2\ ICl\ (g) \rightarrow I_2\ (s) + Cl_2\ (g)$ $Q_m =$ _____

2. **Doplňte reakčné teplo:**

a) $C\ (s) + \frac{1}{2}\ O_2\ (g) \rightarrow CO\ (g)$ $Q_m = -110,1$ kJ/mol

$CO\ (g) + \frac{1}{2}\ O_2\ (g) \rightarrow CO_2\ (g)$ $Q_m = -283,4$ kJ/mol

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$C\ (s) + O_2\ (g) \rightarrow CO_2\ (g)$ $Q_m =$ _____

b) $Sn\ (s) + Cl_2\ (g)\ SnCl_2\ (s)$ $Q_m = -349,4$ kJ/mol

$SnCl_2\ (s) + Cl_2\ (g)\ SnCl_4\ (l)$ $Q_m = -195,2$ kJ/mol

$Sn\ (s) + 2\ Cl_2\ (g) \rightarrow SnCl_4\ (l)$ $Q_m =$ _____

c) $Zn\ (s) + S\ (s) \rightarrow ZnS\ (s)$ $Q_m = -206$ kJ/mol

$ZnS\ (s) + 2\ O_2\ (g) \rightarrow ZnSO_4\ (s)$ $Q_m = -776,8$ kJ/mol

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$Zn\ (s) + S\ (s) + 2\ O_2\ (g) \rightarrow ZnSO_4\ (s)$ $Q_m =$ _____

3. **Určite, či ide o exotermickú alebo endotermickú reakciu:**

a) $CaCO_3\ (s) \rightarrow CaO\ (s) + CO_2\ (g)$ $Q_m = 178$ kJ/mol

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b) $4\ NH_3\ (g) + 5\ O_2\ (g) \rightarrow 4\ NO\ (g) + 6\ H_2O\ (g) + 906$ kJ/mol

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c) $C\ (s) + O_2\ (g) \rightarrow CO_2\ (g)$ $Q_m = -393,5$ kJ/mol

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d) $HCl\ (aq) + NaOH\ (aq) \rightarrow NaCl\ (aq) + H_2O\ (l)$ $Q_m = -57,4$ kJ/mol

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