Measuring ΔH Reaction

Theoritical — Using Bond Energy

Experimental — combustion, displacement, neutralization

* ΔH reaction using bond energy:-

→ Bond Energy:- amount of energy needed to break 1 mol of energy in gaseous state.
" " " released to build " " " " " "

Bond	Energy bond kj/mol
H-H	436

$H-H_{(g)} + 436\ kj/mol \rightarrow H_{(g)} + H_{(g)}$

$H_{(g)} + H_{(g)} \rightarrow H-H_{(g)} + 436\ kj/mol$

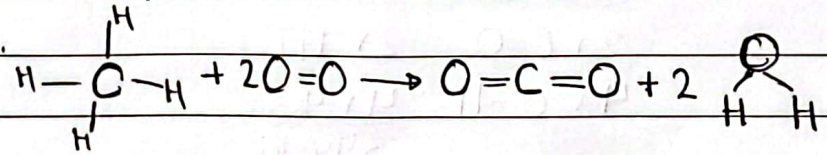
→ ΔH reaction = $\sum$ input − $\sum$ output
(to break down bonds in react. / to build bonds in products)

+ endo
input > output

− exo
input < output

- to use this equation.
① Balanced equation.
② covalent structure.
③ Bond Energy.

$CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$



Bond	Bond energy
C-H	413
O=O	495
C=O	799
O-H	463
C-O	358

Five Apple

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