

AP CHEM

THERMODYNAMIC FAVOURABILITY

REVIEW



GIBBS FREE ENERGY

written as

$$\Delta G^\circ$$

- measure of energy available to do work in a system
- determines spontaneity of a rxn

SPONTANEITY

→ based on ΔG° :

$\Delta G^\circ > 0$ Reaction is non spontaneous

$\Delta G^\circ < 0$ Reaction is spontaneous

$\Delta G^\circ = 0$ Reaction is at equilibrium

★ SPONTANEOUS REACTIONS MUST HAVE
POSITIVE ΔS° , OR HAVE NEGATIVE ΔH°

EQUATIONS TO REMEMBER

$$\Delta G^{\circ} = \Delta H^{\circ} - T \Delta S^{\circ}$$

temperature
enthalpy change
entropy change

$$\Delta G^{\circ} = -RT \ln K_{eq}$$

temperature
gas constant
equilibrium constant
(can also be replaced w/
reaction quotient Q)

$$\Delta G^{\circ}_{rxn} = \sum \Delta G^{\circ}_{products} - \sum \Delta G^{\circ}_{reactants}$$

**follow for
more!**



@mightochondria



@mightochondria.stem

