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# Standard Gibbs Free Energy Change

National Cancer Institute

## Source

National Cancer Institute. *Standard Gibbs Free Energy Change*. NCI Thesaurus. Code C52567.

A measure of the spontaneity of a chemical reaction. It is the change in the free energy of a system during a chemical reaction at a pH of 7.0. It is equal to the change in the enthalpy of the system minus the change in the product of the temperature times the entropy of the system. The resulting sign of Delta G determines if a reaction is spontaneous or not:  $\Delta G < 0$  indicates that the reaction is spontaneous;  $\Delta G > 0$  indicates that the reaction is not spontaneous; and  $\Delta G = 0$  indicates that the reaction is at equilibrium.