

primary isotope effect

A kinetic isotope effect attributable to isotopic substitution of an atom to which a bond is made or broken in the *rate-controlling step* or in a *pre-equilibrium* step of a specified reaction. The corresponding isotope effect on the equilibrium constant of a reaction in which one or more bonds to isotopic atoms are broken, is called a 'primary equilibrium isotope effect'.

See also *secondary isotope effect*.

1994, 66, 1130