laws of distribution

Also contains definition of: logarithmic distribution coefficient *in precipitation*

in precipitation

During the formation of a mixed crystal from a solution containing two components 'A' and 'B', the latter may be distributed according to the equation

$$K_{A,B} = \frac{b\,(a_0 - a)}{a\,(b_0 - b)}.$$

In this homogeneous distribution, a_0 and b_0 are the respective concentrations in the solution before crystallization and a and b are the respective concentrations in the solution after crystallization. $K_{A,B}$ is usually called the separation factor. The term homogeneous distribution coefficient is not recommended. Alternatively the distribution of the micro-component may follow the equation of Doerner and Hoskins

$$\ln\left(\frac{a_0}{a}\right) = \lambda \ln\left(\frac{b_0}{b}\right)$$

(logarithmic distribution) where λ is usually called the logarithmic distribution coefficient, the meaning of the other symbols remaining the same. Exactly homogeneous or logarithmic distributions are extreme cases and very seldom encountered.

Source:
Orange Book, p. 85