

microscopic cross-section, σ

A measure of the probability of a specified interaction or reaction between an incident radiation and a target particle or system of particles. It is the reaction rate per target particle for a specified process divided by the flux of the incident radiation. In general, a specification is added of the type of radiation (e.g. neutron, photon), the energy of the incident radiation (e.g. thermal, epithermal, fast) and the type of interaction or reaction (e.g. activation, fission, scattering).

See also: macroscopic cross-section

Source:

PAC, 1994, 66, 2513 (*Nomenclature for radioanalytical chemistry (IUPAC Recommendations 1994)*) on page 2517

Orange Book, p. 217