

response time, τ_R

Also contains definition of: rise time
of a radiation detector

of a detector

The time required for the detector output to go from the initial value to a percentage (e.g. 99%) of the final value. In the case of an exponential behaviour of the detector τ_R can be related to the time constant τ_c . The rise time τ_r is the time required for the detector output to vary between given percentages (e.g. from 10% to 90%) of the final value. Similarly, the fall time τ_f is the time required for the detector output to vary between given percentages (e.g. from 90% to 10%) of the initial value.

Source:

PAC, 1995, 67, 1745 (*Nomenclature, symbols, units and their usage in spectrochemical analysis-XI. Detection of radiation (IUPAC Recommendations 1995)*) on page 1751