

CLAIMS

1. Method for determining invariant time-intervals of a required length by
 - counting the number of decay events occurring in a time-interval of the required length in a radioactive material which contains a population of an accurately known number of a species of radioactive nuclei
 - calculating from these numbers the dimensionless parameter of decay and the counts of decay events in the consequent population at which consecutive time-intervals of the required length start and end
 - registering the consecutive time-interval number at which counts at start and end occur.
2. Method for determining invariant time-intervals as in Claim 1, in which the radioactive species is cobalt-60, strontium-90, americium-241 or carbon-14.
3. Method for determining invariant time-intervals of a required length as defined by claims 1 or 2 by
 - counting a further number of decay events in a second population comprising the same species of radioactive nuclei during the measured time-interval of the required length
 - calculating from the further number of decay events the counts of decay events in the second population at which subsequent consecutive time-intervals of the required length start and end
 - registering the consecutive time-interval number at which counts at start and end occur in the second population.
4. Method for determining invariant time-intervals of a required length as defined by claims 1 or 2 by
 - counting three further numbers of decay events in a second population comprising a different species of radioactive nuclei during three consecutive measured time-intervals of the required length
 - calculating from the further numbers of decay events the initial number of radioactive nuclei in this second population, a dimensionless parameter of decay for this different species and the counts of the decay events in this second population at which subsequent consecutive time-intervals of the required length start and end
 - registering the consecutive time-interval number at which counts of start and end occur in this second population.