Appendix

- Uncertainty of declared quantity is processed in accordance with recommendation JCGM 100:2008 "Evaluation of measurement data – Guide to the expression of uncertainty in measurement".

Uncertainty of the result, described by a combined standard uncertainty on confidence level P = 68,27 %, is expressed as a square root of the sum of the second power of type A and type B standard uncertainties.

Type A standard uncertainty is experimental standard deviation of the mean $s_{\bar{x}}$ of a set of values of measured quantity influencing immediately to the activity (number of counts, ionizing current etc.).

$$s_{\bar{x}} = \sqrt{\frac{1}{n(n-1)}\sum_1^n (x_i - \bar{x})^2} \qquad \bar{x} = \frac{1}{n}\sum_1^n x_i$$

n – number of repeated measurements
x_i – measured values
$\bar{x}$ – average of measured values

Type B standard uncertainty is usually determined by methods another than statistical ones. It is evaluated as a square root of sum of second power of standard uncertainties of quantity values which influence results of measurements, e.g. uncertainties of half-life, weight, dead time of the device, geometrical factor, higher standard etc. Standard uncertainties are in the most cases determined by a qualified estimation (for instance on a basis of a long time observation, from a description of used measuring devices etc.).

- The value and their uncertainties are reported as:
  Activity = 256,3 (26) Bq where the number in parentheses, which is the numerical value of the combined standard uncertainty u_c (k = 1), referes to the corresponding last digits of the quoted result. (256,3 (26) Bq = 256,3 ± 2,6 Bq = combined standard uncertainty of activity 256,3 Bq is 1,0 %)

- In this certificate, the comma is used as the symbol for the decimal marker.

- The date is expressed in the format day.month.year, such that 1.9.2017 represents 1st September 2017.

- The recommended half-lives are derived from the evaluations of the *Decay Data Evaluation Project*, see http://www.nucleide.org/DDEP_WG/DDEPdata.htm.