



Certificate

Standard Reference Material 4203-B Gamma-Ray Point-Source Standard

Cobalt-60

This standard consists of cobalt-60, deposited as the chloride, on polyester tape approximately 0.006-centimeter thick and covered by another layer of the same tape.

The activity of the cobalt-60, in disintegrations per second, at 1200 EST August 23, 1966, was

* $\pm 1.3\%$ *

The disintegration rate of this standard was determined by comparing it, by gamma-ray emission-rate measurements, with reference sources of cobalt-60 which previously had been calibrated by $\gamma\text{-}\gamma$ coincidence counting.

The gamma-ray spectrum was examined using a lithium-drifted germanium detector and no radioactive impurities were found.

The value reported above is based on 9 determinations, and the uncertainty, 1.3 percent, is the sum of 0.9 percent, which is three times the computed standard error, and 0.4 percent, which is the linear sum of the estimated systematic errors considered to be possible.

This standard was prepared and calibrated in the Institute for Basic Standards, Radiation Physics Division, by members of the Radioactivity Section, W. B. Mann, Chief.

WASHINGTON, D.C. 20234
January 31, 1967

W. Wayne Meinke, Chief
Office of Standard Reference Materials