



# National Bureau of Standards

## Certificate

### Standard Reference Material 4229

#### Radioactivity Standard

#### Aluminum-26

This standard consists of aluminum-26 in  $\pm$  grams of solution in a flame-sealed glass ampoule. The chemical form of the material is  $\text{AlCl}_3$  in approximately 1 N HCl.

The activity in nuclear transformations per second per gram of solution as of November, 1971, was

$$* 38.79 \pm 1.1\% *$$

The solution was standardized by sum-coincidence counting with the National Bureau of Standards 8"  $\times$  4" -  $4\pi\gamma$ -NaI(Tl) crystals.

The uncertainty in the activity, 1.1%, is the linear sum of 0.3 percent, which is the limit of the random error at the 99-percent confidence level (i.e.,  $2.98 S_m$ , where  $S_m$  is the standard error computed from 15 determinations), and 0.8 percent, which is the linear sum of the upper limits of conceivable systematic errors in the measurements.

The material from which this standard was prepared was examined for impurities with a Ge(Li) gamma-ray spectrometer, and no impurities were observed.

This standard was prepared and calibrated in the NBS Center for Radiation Research, Nuclear Radiation Division, Radioactivity Section, W. B. Mann, Chief.

Washington, D.C. 20234  
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J. Paul Cali, Chief  
Office of Standard Reference Materials