



New Brunswick Laboratory
U.S. Department of Energy

Certificate of Analysis
CRM 1-A
Phosphate Rock
Uranium (Normal) Standard

Uranium: 0.0153 ± 0.0002 Wt.%
($\alpha = 0.05$, $df = 5$)

as U_3O_8 (calculated): 0.0180 ± 0.0002 Wt.%

This Certified Reference Material (CRM) was prepared from pebble phosphate rock donated by the International Minerals and Chemical Corporation (IMC), Phosphoria Mines, Bone Valley Phosphate District, located in Central Florida. The NBL pulverized, milled, blended, and packaged the raw rock, then selected six (6) units of the final product for characterization and analysis of uranium content.

The certified value listed above is expressed in terms of 95% confidence limits, defined as $\bar{x} \pm \sigma \cdot t$, where \bar{x} is the unweighted mean of the measurement data, σ is the standard deviation of the mean, and t is the Student's t value for the indicated degrees of freedom (df) and at the 5% significance level (α).

REFERENCE METHOD OF ANALYSIS: Spectrophotometry verified with NBL CRM 114 Uranium Oxide (U_3O_8) and NBL CRM 1 Phosphate Rock.

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www.nbl.doe.gov
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