



National Institute of Standards and Technology

# Certificate of Analysis

Standard Reference Material<sup>®</sup> 1646a

## Estuarine Sediment

This Standard Reference Material (SRM) is intended primarily for calibrating instrumentation, assessing the reliability of analytical methods for the determination of major, minor, and trace elements in estuarine and similar matrices. One unit of SRM 1646a contains 70 g of material.

**Certified Values and Uncertainties:** The certified values for the constituent elements are shown in Table 1. They are based on results obtained either by definitive methods or by two or more independent, non-definitive methods. The results of two or more independent analytical methods were weighted according to Paule and Mandel [1]. The expanded uncertainties, whose level of confidence is approximately 95%, include random and systematic sources of uncertainty from within each analytical method, material variability, and detected for lead, and a systematic component of uncertainty between analytical methods [2]. *A* is based on a minimum sample size of 500 mg of the material dried as indicated under "Instructions for Use."

**Noncertified Values:** Noncertified values are given in Table 2. Noncertified values are provided because only one independent method was used, or there was insufficient agreement between methods.

### NOTICE AND WARNING TO USERS

**Expiration of Certification:** The certification is valid for five years from the date of shipment. Should any of the certified values change before the expiration of the certification, purchasers should be notified by NIST. Return of the attached registration card will facilitate notification.

**Stability:** This material is considered to be stable; however, its stability has not been rigorously tested. NIST will monitor this material and will report any substantive changes in certification to the purchaser.

**Use:** The material should be kept in its original bottle and mixed well before each use. A minimum of 100 mg of the dried material (see Instructions for Drying) is required for any analytical determination.

