

# Certificate of Analysis

## Blank Soil Sample

**Catalog Number:** SMI-BLANK  
**Lot Number:** 102119  
**Manufacture Date:** 10/21/19  
**Certified Date:** 10/22/19

**Expiration:** 10/31/2021  
**Matrix:** Solid  
**Hazards:** Irritant, Toxic

<u>Analyte</u>	<u>Analytical *</u> <u>Mean</u> (mg/kg)
Aluminum	330
Antimony	<8.0
Arsenic	<4.0
Barium	<10.0
Beryllium	<4.0
Boron	<48.0
Cadmium	<4.0
Chromium	<4.0
Cobalt	<4.0
Copper	<4.0
Iron	610
Lead	<4.0
Manganese	<10.0
Mercury	<0.10
Molybdenum	<3.0
Nickel	<4.0
Selenium	<4.0
Silver	<2.0
Thallium	<4.0
Tin	<5.0
Vanadium	<4.0
Zinc	<10.0

\* Values with < are below the NELAC PT reporting limit.

This certified reference material (CRM) was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034. The analytical mean is set at the mean recovery of analytical testing performed by NSI Lab Solutions. This CRM is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

### Storage & Instructions For Use

#### **Store this sample at 2-8°C.**

Perform the sample digestion on an appropriate amount of sample according to the selected digestion procedure. The recommended minimum sampling size is 0.5 g.

Mix the sample by shaking gently. Open the sample in the fume hood to prevent exposure to dust.

Determination of the percent moisture content of the material is not required. Assume the sample is 100% solids.



ISO 17034:2016  
 Certificate AR-1571

ISO 9001:2015 UL Registered Firm - Certificate # 10002343 QM15



ISO/IEC 17025:2017  
 Certificate AT-1690



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### Traceability Information

**Analyte Source Materials:** The highest purity analyte source materials are used in the manufacture of this CRM. Analyte source material purity and associated uncertainty has been analytically verified against appropriate NIST SRMs, where available.

**Balance:** All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

**Thermometer:** All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

**Glassware:** All glassware used in the manufacture of our CRMs is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

### Homogeneity/Stability/Expiration

This CRM was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random. The stability of this CRM is based on short-term and long-term monitoring of the certified concentration. The expiration date is guaranteed to be valid from the manufacture date and is based on results of long-term monitoring.

*Ewart Morris*

Ewart Morris, Inorganics Technical Manager

*Mark Hammersla*

Mark Hammersla, President



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