nsi lab solutions
protect more. test more.
7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Certificate of Analysis

Cyanide in Soil

Catalog Number: SQCI-017
Lot Number: S0222
Manufactured Date: 01/28/22
Certified Date: 02/01/22

Expiration: 03/31/2024
Spike Matrix: Dilute NaOH
Hazards: Irritant

Analyte	Study Mean (mg/kg)	Certified Concentration (mg/kg)	Acceptance Limits (mg/kg)
Total Cyanide	178	187 ± 1.74	80.9 - 275

This quality control CRM was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 17034. Acceptance limits are set at current NELAC standards. The certified concentration is the gravimetric true value determined during manufacture, masses traceable to NIST. The study mean is set at the robust mean of an interlaboratory proficiency testing study with outlier rejection. This CRM is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

Storage & Instructions For Use

Store the spike concentrate at 2-8°C. The blank soil matrix can be stored at 15-30°C.

The soil is to be extracted/digested and analyzed using an appropriate extraction and analytical method for Total Cyanide, assuming a 25 g sample will contain sufficient Cyanide for determination.
The CRM has been buffered to stabilize the Cyanide.
Some methods may require a pH adjustment to 7 prior to analyze.
Weigh 25 g of the blank soil matrix and place in extraction vessel.
Open the spiking ampule and add 1 mL of solution directly to the blank soil matrix.
The CRM is now ready for immediate analysis.
Report your results as mg/kg based on 25 g of soil. Do not correct the analytical results for matrix spike recovery bias.

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this CRM.

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.

nsi lab solutions
protect more. test more.
7212 ACC Blvd. | Raleigh, NC 27617 | 800.234.7837

Catalog Number: SQCI-017
Lot Number: S0222

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 quality control CRM was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random. The stability of this quality control 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.

Uncertainty

The ± uncertainty associated with the certified concentration is the expanded uncertainty at 95% confidence interval (CI) with K=2. This expanded uncertainty incorporates contributions from manufacturing, homogeneity, and stability.

Ewart Morris

Ewart Morris, Inorganics Technical Manager