

CERTIFIED WEIGHT REPORT:

Part Number: 57028  
 Lot Number: 021407  
 Description: Nickel (Ni)

Lot # P674496 Solvent(s): Nitric Acid

Expiration Date: 021410

2.0% 40.0 Nitric Acid (mL)

Nominal Concentration (µg/mL): 1000

*Lawrence Barry*  
 Formulated By: Lawrence Barry 021407  
*Pedro L. Heredia*  
 Reviewed By: Pedro L. Heredia 021407

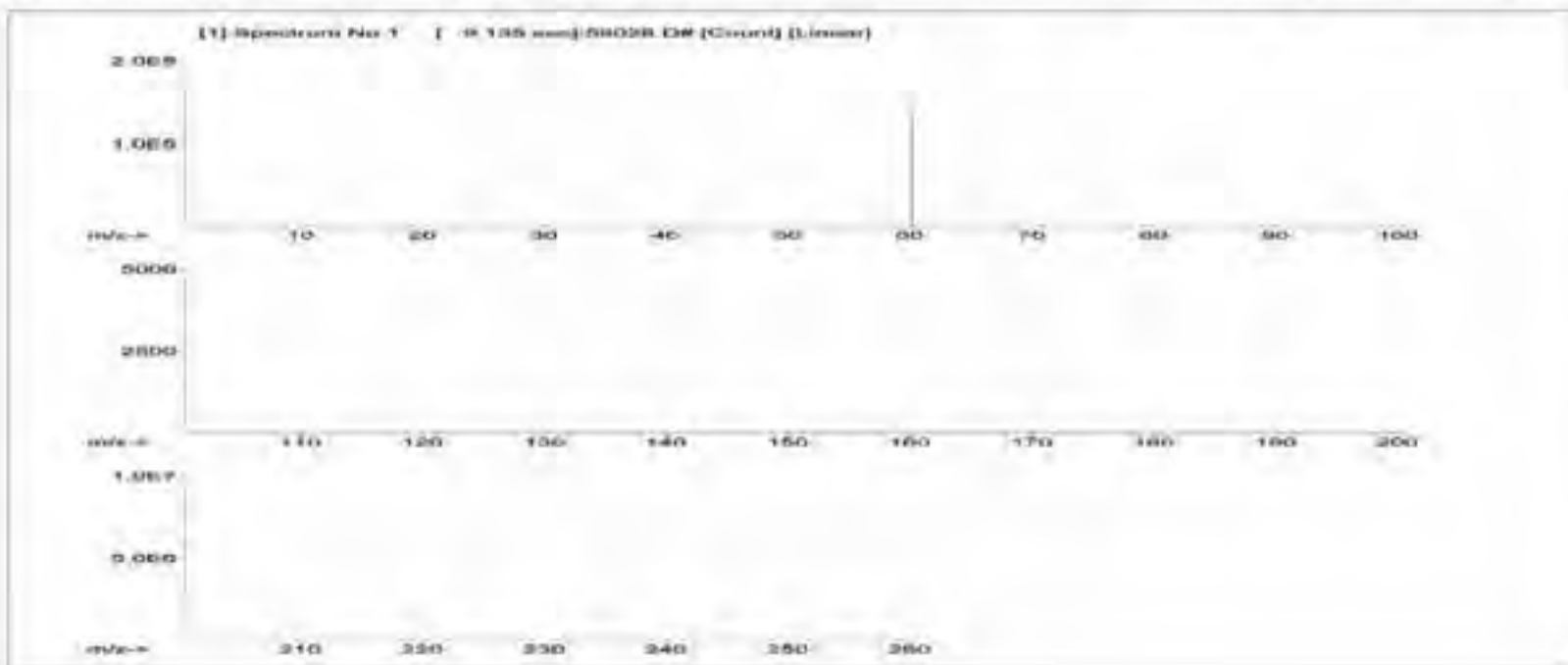
5E-05 Balance Uncertainty

Weight(s) shown below were combined and diluted to (mL): 1000.70

0.067 Flask Uncertainty

MSDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Volume (µL)	Uncertainty (µg/µL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty	Expend. (Solvent Safety Info. On Attached ps.)	CAS#	IRIS# (EPA) (TWA)	LD50	NIST SRM
1. Nickel nitrate (II) Hexahydrate (Ni)	58128	021307	0.1000	200.0	0.013	1000.12	1000.3	0.00201	(*)	13478-00-7	1 mg/m <sup>3</sup>	gr-nd 1620 mg/kg	3136



**AbsoluteGrade™ Solution**

Nickel (Ni)  
 (µg/mL) (+/-)  
 1000.3 2.0

Part# 57028  
 Lot# 021407

**Certified Concentration (µg/mL)**

The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise specified.

**TRACEABILITY DOCUMENTATION:**

**A) Classical Chemical Analysis:**

**Method**

**Traceability**

**Concentration (µg/mL)**

EDTA Titration  
 Gravimetric Analysis

NIST SRM 928 Lead Nitrate  
 NIST Weights

N/A  
 N/A

**B) Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):**

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	-0.02	Co	-0.02	Er	-0.02	Hf	-0.02	Li	-0.02	Nb	-0.02	Pb	-0.02	Sc	-0.02	Tb	-0.02	W	-0.02
Ba	-0.02	Cu	-0.2	Eu	-0.02	Ho	-0.02	La	-0.02	Ni	-0.02	Rc	-0.02	Sr	-0.02	Ti	-0.02	U	-0.02
As	-0.2	Fe	-0.02	Ga	-0.02	In	-0.02	Mg	-0.01	Os	-0.02	Rb	-0.02	Ag	-0.02	Tl	-0.02	V	-0.02
Be	-0.02	K	-0.02	Gd	-0.02	Ir	-0.02	Mn	-0.02	Pd	-0.02	Sb	-0.02	Nd	-0.2	Th	-0.02	Yb	-0.02
Bi	-0.01	Cr	-0.02	Ge	-0.02	Pf	-0.2	Hg	-0.2	P	-0.02	Ka	-0.02	Se	-0.02	Tm	-0.02	Y	-0.02
Bk	-0.02	Ce	-0.02	Gr	-0.02	Lu	-0.02	Mo	-0.02	Rh	-0.02	Ni	-0.02	K	-0.02	Nr	-0.02	Zn	-0.02
B	-0.02	Ca	-0.02	Au	-0.02	Pb	-0.02	Nd	-0.02	K	-0.2	Se	-0.02	Ta	-0.02	Tl	-0.02	Zr	-0.02

(\*) = Target Element

**C) Physical Characterization:**

Certified by:

Analyzed Density of Solution (g/mL): 1.013  
 Temperature (°C): 18.4

Homogeneity: No heterogeneity was observed in the preparation of this standard.



We use purified acids, 18 megohm double deionized water, calibrated Class A glassware and the highest purity raw materials available, (typically 99.999%). We meticulously clean our bottles by acid leaching and then triple rinsing with ASTM Type I water prior to use. Our standards are made gravimetrically using balances that are calibrated with weights traceable to NIST. (NIST Test #: 732/245790). We certify that all our standards are (+/-) 0.5% of the stated value unless otherwise stated, assuming that the bottle is kept tightly capped and stored under normal laboratory conditions.

Reference: Taylor, B.N. and Kuyatt, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results," NIST Technical Note 1297, U.S. Government Printing Office, Washington DC, (1994).