



Certificate of Analysis

PRODUCT NAME: Hydrofluoric Acid, 49%
SEMI-TRACE

CHEMICAL FORMULA: HF

Product Code: CP-A0804, M0804S
Lot #: 2012112699
F.W.: 20.0100
CAS No: 7664-39-3
Density: 1.1700

ANALYTICAL RESULTS		
ITEM	SPECIFICATIONS	ANALYSIS
Manufacturer's Lot Number		2316
Assay (HF)	48.8 - 49.2%	48.98%
Chloride (Cl)	5 ppm max. (5,000 ppb)	<1 ppm
Color (APHA)	10 max.	<5
Fluosilicic Acid	0.01% max.	<0.001%
Nitrate (NO3)	3 ppm max. (3,000 ppb)	<1 ppm
Phosphate (PO4)	1 ppm max. (1,000 ppb)	<0.4 ppm
Sulfate and sulfite (as SO4)	5 ppm max. (5,000 ppb)	<0.5 ppm
Aluminum (Al)	0.05 ppm max. (50 ppb)	<0.00002 ppm
Arsenic (As) & Antimony (Sb)	0.03 ppm max. (30 ppb)	<0.00004 ppm
Boron (B)	0.05 ppm max. (50 ppb)	<0.00002 ppm
Calcium (Ca)	0.3 ppm max. (300 ppb)	0.00004 ppm
Chromium (Cr)	0.01 ppm max. (10 ppb)	<0.00002 ppm
Copper (Cu)	0.05 ppm max. (50 ppb)	<0.00002 ppm
Gold (Au)	0.3 ppm max. (300 ppb)	<0.00002 ppm
Iron (Fe)	0.2 ppm max. (200 ppb)	0.00003 ppm
Lead (Pb)	0.1 ppm max. (100 ppb)	<0.00002 ppm
Magnesium (Mg)	0.2 ppm max. (200 ppb)	<0.00002 ppm
Manganese (Mn)	0.2 ppm max. (200 ppb)	0.00013 ppm
Nickel (Ni)	0.1 ppm max. (100 ppb)	<0.00002 ppm
Potassium (K)	0.3 ppm max. (300 ppb)	0.00007 ppm
Sodium (Na)	0.3 ppm max. (300 ppb)	0.00002 ppm
Tin (Sn)	0.3 ppm max. (300 ppb)	<0.00002 ppm
Titanium (Ti)	0.3 ppm max. (300 ppb)	<0.00002 ppm
Zinc (Zn)	0.3 ppm max. (300 ppb)	<0.00002 ppm
Particles (>1.0 microns for bottled material)	25 particles/mL max.	<25
REMARKS		
*Particle count certified for material in Teflon bottles only.		



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ITEM	SPECIFICATIONS	ANALYSIS
It is certified that the above is a true copy of the actual lot analysis. CERTIFIED CORRECT BY:  Shawn Chadwick Technical Manager CHEMICAL PROCESSORS AND PACKAGERS OF ELECTRONIC GRADE HIGH PURITY ACIDS / BLENDS / REAGENTS / SOLUTIONS 39193 Warren Road, Westland, MI PH: (734) 729-1805 * FAX: (734) 405-6223 info@chempurebrand.com Page 2 of 2		
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