

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Hydrochloric Acid, ChemTrace

GRADE: ChemTrace

CHEMICAL FORMULA: HCl

F.W.: 36.46

CAS No: 7647-01-0

Density: 1.15 g/mL

Certified Values:

Specifications	Status	Results
Assay 30 - 32 %	Pass	31
Density	Report	1.150
Color (APHA) 10 Max	Pass	<10
Bromide (Br) 10 ppm Max	Pass	<10
Free Chlorine (Cl ₂) 0.1 ppm Max	Pass	<0.1
Nitrate (NO ₃) ppm	Pass	<1.000
Phosphate (PO ₄) 10.00 ppb Max	Pass	<10.00
sulfite (SO ₃) ppm	Pass	<1
Sulfate (SO ₄) 100.0 ppb Max	Pass	<100.0
Aluminum (Al) 5 ppb Max	Pass	<5
Antimony (Sb) 0.5 ppb Max	Pass	<0.5
Arsenic (As) 1.0 ppb Max	Pass	<1.0
Barium (Ba) 0.5 ppb Max	Pass	<0.5
Beryllium (Be) 0.5 ppb Max	Pass	<0.5
Bismuth (Bi) 0.5 ppb Max	Pass	<0.5
Cadmium (Cd) 0.5 ppb Max	Pass	<0.5
Calcium (Ca) 10 ppb Max	Pass	<10
Cesium (Cs) 0.5 ppb Max	Pass	<0.5
Chromium (Cr) 1.0 ppb Max	Pass	<1.0
Cobalt (Co) 0.5 ppb Max	Pass	<0.5
Copper (Cu) 1.0 ppb Max	Pass	<1.0
Gallium (Ga) 0.5 ppb Max	Pass	<0.5
Gold (Au) 1.0 ppb Max	Pass	<1.0
Indium (In) 0.5 ppb Max	Pass	<0.5
Iron (Fe) 5 ppb Max	Pass	<5
Lead (Pb) 0.5 ppb Max	Pass	<0.5
Lithium (Li) 0.5 ppb Max	Pass	<0.5
Magnesium (Mg) 1.0 ppb Max	Pass	<1.0
Manganese (Mn) 0.5 ppb Max	Pass	<0.5
Mercury (Hg) 0.5 ppb Max	Pass	<0.5
Molybdenum (Mo) 0.5 ppb Max	Pass	<0.5
Nickel (Ni) 1.0 ppb Max	Pass	<1.0
Palladium (Pd) 1.0 ppb Max	Report	<1.0
Platinum (Pt) 0.5 ppb Max	Report	<0.5
Potassium (K) 10 ppb Max	Pass	<10
Rhodium (Rh) 0.5 ppb Max	Pass	<0.5
Rubidium (Rb) 0.5 ppb Max	Pass	<0.5
Ruthenium (Ru) 0.5 ppb Max	Pass	<0.5
Selenium (Se) 1 ppb Max	Pass	<1
Silver (Ag) 1 ppb Max	Pass	<1
Sodium (Na) 10 ppb Max	Pass	<10
Strontium (Sr) 0.5 ppb Max	Pass	<0.5

Thallium (Tl) 0.5 ppb Max	Pass	<0.5
Tin (Sn) 1.0 ppb Max	Pass	<1.0
Titanium (Ti) 1.0 ppb Max	Pass	<1.0
Uranium (U) 0.5 ppb Max	Pass	<0.5
Vanadium (V) 1.0 ppb Max	Pass	<1.0
Zinc (Zn) 1 ppb Max	Pass	<1
Zirconium (Zr) 0.5 ppb Max	Pass	<0.5

Comments

Certificate Created By:	Michael J. Firis	Best by:	May 14, 2028
CoA Creation Date:	May 16, 2025	Print Date:	May 27, 2025
Certified by:	Aron Becza - Quality Assurance Manager		

Aron Becza

Traceability:

This material was processed under a quality management system that is registered to ISO 9001:2015. The equipment used in the testing of material is NIST traceable. In cases where NIST traceability is not possible, equipment manufacturer recommendations and/or industry best practices are followed.

Not for direct use in food, cosmetics, finished pharmaceuticals or drug products. Supplier is not responsible for compliance with FDA Current Good Manufacturing Practices (cGMP), including without limitation for those finished drug products in 21 CFR Parts 210 and 211.

24021368