

Certificate of Analysis

Product Name: HYDROCHLORIC ACID, 32-38%, VERITAS REDISTILLED
Item #: 2180
Lot #: 22050192



Certified Values:

Specifications (Max Limits or as Specified)	Pass/Fail	Numerical Results
Assay 32 - 38 %	Pass	37
Residue after ignition 0.0001 % Max	Pass	< 0.0001
Sulfate 0.00001 % Max	Pass	< 0.00001
Sulfite 0.00001 % Max	Pass	< 0.00001
Ammonium 0.00002 % Max	Pass	< 0.00002
Arsenic 0.0000001 % Max	Pass	< 0.0000001
Boron 0.0000002 % Max	Pass	< 0.0000002
Silicon 0.000001 % Max	Pass	< 0.000001
Ag 5.0 ppb Max	Pass	< 0.1
Al 1.0 ppb Max	Pass	< 0.1
Au 1.0 ppb Max	Pass	< 0.1
Ba 1.0 ppb Max	Pass	< 0.1
Be 1.0 ppb Max	Pass	< 0.1
Bi 1.0 ppb Max	Pass	< 0.1
Ca 10.0 ppb Max	Pass	1.9
Cd 1.0 ppb Max	Pass	< 0.1

Not for direct use in food, cosmetics, finished pharmaceuticals or drug products. Supplier is not responsible for compliance with FDA Current Good Manufacturing Practice(cGMP) requirements, including without limitation those for finished drug products in 21 C.F.R Parts 210 and 211. Consult warranty limitations at www.gfschemicals.com/Terms-And-Conditions

For resale by GFS authorized distributors only.

GFS Chemicals, Inc. P.O. Box 245 Powell, OH 43065 * Signed Orig. Doc. On File
1-800-858-9682 (U.S. and Canada) 1-740-881-5501 (International) 1-740-881-5989 (Fax)

Ce 1.0 ppb Max	Pass	< 0.1
Co 1.0 ppb Max	Pass	< 0.1
Cr 1.0 ppb Max	Pass	< 0.1
Cs 1.0 ppb Max	Pass	< 0.1
Cu 1.0 ppb Max	Pass	< 0.1
Dy 1.0 ppb Max	Pass	< 0.1
Er 1.0 ppb Max	Pass	< 0.1
Eu 1.0 ppb Max	Pass	< 0.1
Fe 5.0 ppb Max	Pass	2.5
Ga 1.0 ppb Max	Pass	< 0.1
Gd 1.0 ppb Max	Pass	< 0.1
Ge 1.0 ppb Max	Pass	< 1.0
Hf 1.0 ppb Max	Pass	< 0.1
Hg 1.0 ppb Max	Pass	< 0.1
Ho 1.0 ppb Max	Pass	< 0.1
In 1.0 ppb Max	Pass	< 0.1
Ir 1.0 ppb Max	Pass	< 0.1
K 5.0 ppb Max	Pass	0.1
La 1.0 ppb Max	Pass	< 0.1
Li 2.0 ppb Max	Pass	< 0.1
Lu 1.0 ppb Max	Pass	< 0.1

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Mg 2.0 ppb Max	Pass	0.1
Mn 1.0 ppb Max	Pass	< 0.1
Mo 1.0 ppb Max	Pass	< 0.1
Na 5.0 ppb Max	Pass	0.7
Nb 1.0 ppb Max	Pass	< 0.1
Ni 1.0 ppb Max	Pass	< 0.1
Os 1.0 ppb Max	Pass	< 0.1
Pb 3.0 ppb Max	Pass	< 0.1
Pd 1.0 ppb Max	Pass	< 0.1
Pr 1.0 ppb Max	Pass	< 0.1
Pt 1.0 ppb Max	Pass	< 0.1
Rb 1.0 ppb Max	Pass	< 0.1
Rh 1.0 ppb Max	Pass	< 0.1
Ru 1.0 ppb Max	Pass	< 0.1
Sb 1.0 ppb Max	Pass	< 0.1
Sc 1.0 ppb Max	Pass	< 0.1
Se 1.0 ppb Max	Pass	< 0.1
Sm 1.0 ppb Max	Pass	< 0.1
Sn 1.0 ppb Max	Pass	< 0.1
Sr 1.0 ppb Max	Pass	< 0.1
Tb 1.0 ppb Max	Pass	< 0.1
Te 1.0 ppb Max	Pass	< 0.1

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Th 1.0 ppb Max	Pass	< 0.1
Ti 1.0 ppb Max	Pass	< 0.1
U 1.0 ppb Max	Pass	< 0.1
V 1.0 ppb Max	Pass	< 0.1
W 1.0 ppb Max	Pass	< 0.1
Y 1.0 ppb Max	Pass	< 0.1
Yb 1.0 ppb Max	Pass	< 0.1
Zn 2.0 ppb Max	Pass	< 0.1
Zr 1.0 ppb Max	Pass	< 0.1

Status Pass

Comments

Certificate Create By: Catherine Myron
Best by: February 8, 2027
Print Date: May 17, 2022

Signature on File

ISO 17025 Testing

All ISO 17025 testing is performed at GFS Chemicals, Inc. 800 Kaderly Dr, Columbus, OH 43228 USA
UV/Vis Spectrophotometer testing is performed according to ASTM method E169-16.
Turbidity testing is performed according to ASTM methods D6855-17 and ASTM D7315-17.
Conductivity testing is performed according to ASTM method D1125-14.
pH testing is performed according to ASTM method D1293-18.
Karl Fischer titration testing is performed according to ASTM methods E203-16 and E1064-16.

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