

Certificate of Analysis



Product Name: HYDROCHLORIC ACID, 32-38%,
 VERITAS REDISTILLED
Item #: 2180
Lot #: 19380148

Certified Values:

Specifications (Max Limits or as Specified)	Pass/Fail	Numerical Results
Assay 32.0 - 38.0 %	Pass	37.6
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	1.4
Cd 1.0 ppb Max	Pass	< 0.1
Ce 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/statics/documents/aboutus/termsandconditions.html

For resale by GFS authorized distributors only.

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	0.6
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
Mg 2.0 ppb Max	Pass	0.2
Mn 1.0 ppb Max	Pass	< 0.1
Mo 1.0 ppb Max	Pass	< 0.1

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Na 5.0 ppb Max	Pass	0.6
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
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

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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

Comments

Certificate Create By: Karen Hirsch
Best by: September 4, 2024
Print Date: December 12, 2019

Signature on File

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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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GFS Chemicals, Inc. P.O. Box 245 Powell, OH 43065 * Signed Orig. Doc. On File
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