

VER|NOB

High-Purity Chemicals For Trace Elemental Analysis

HNO₃

HCl

HF

H₂O

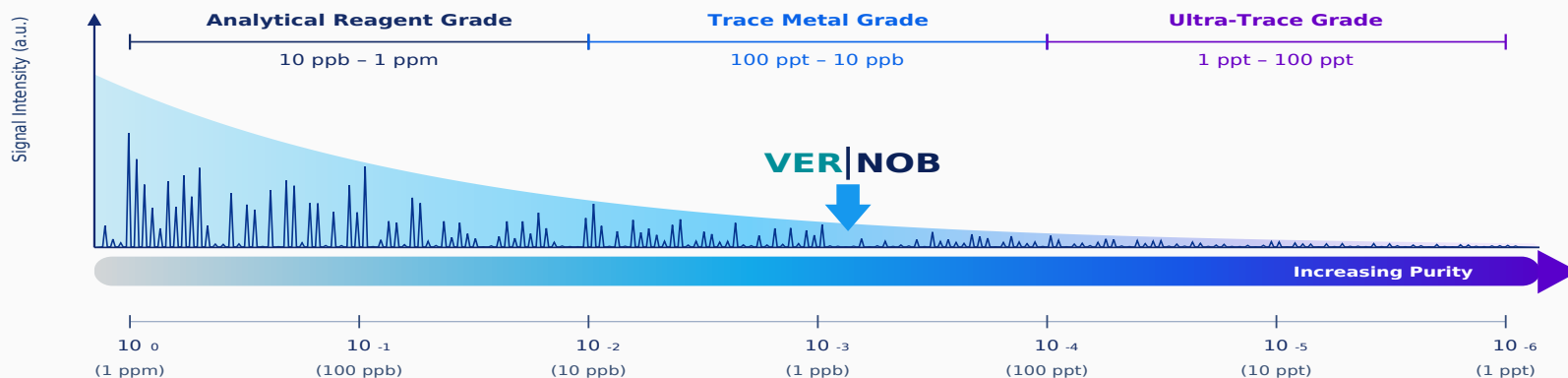


Improve your detection limits with our high-purity acids

In trace elemental analysis, even small amounts of impurities in laboratory reagents can contribute to analytical blanks and interfere with accurate measurements. VERNOB high-purity acids help minimize reagent-derived contamination, supporting reliable results and lower detection limits in sensitive analytical applications.

Understanding Purity Levels

From ppm to ppt – Lower background for higher confidence



Purity Beyond Production

Noble in Quality. Verified by Science.

High purity requires purification, contamination control, purity preservation, and analytical verification across the entire workflow.

THE VERNOB APPROACH TO PURITY ASSURANCE

01 Purification



Sub-Boiling Distillation

Reducing trace impurities through controlled purification.

02 Protection



Contamination Control

Preventing contamination during handling and packaging.

03 Verification



ICP-MS Analysis

Measuring and documenting trace elemental impurities.

From purification to application. every step matters.

Verified Purity

Verified Purity

Measured. Documented.

Product characteristics and elemental impurity data provide measurable evidence of acid quality. Specification limits and lot-specific results are shown separately.



High-sensitivity analysis

ICP-MS for trace elemental impurities



Specification & results

Proposed limits and measured lot values



Quality assurance

From purification to final product

Parameter	HNO ₃		HCl		HF	
	LIMIT	RESULT	LIMIT	RESULT	LIMIT	RESULT
PRODUCT CHARACTERISTICS						
Acid Assay (% w/w)	—	—	—	—	—	—
ELEMENTAL IMPURITIES (µg/kg)						
Li	1	—	1	—	1	—
Na	5	—	5	—	10	—
Mg	2	—	2	—	5	—
Al	5	—	5	—	5	—
Ca	5	—	5	—	10	—
Fe	5	—	5	—	5	—
Cu	1	—	1	—	1	—
Zn	5	—	5	—	5	—
Pb	1	—	1	—	1	—
Cd	1	—	1	—	1	—
Cr	1	—	1	—	1	—
Ni	1	—	1	—	1	—

LIMIT = proposed grade specification | RESULT = measured lot value (pending verification)

Specifications

Trace Metal Grade

Proposed maximum elemental impurity limits

Acids · µg/kg (ppb) · specification limits, not measured batch results.

Element	HNO ₃	HCl	HF
Ag	1	1	1
Al	5	5	5
As	1	1	1
B	5	5	—
Ba	1	1	1
Be	1	1	1
Bi	1	1	1
Ca	5	5	10
Cd	1	1	1
Co	1	1	1

Element	HNO ₃	HCl	HF
Cr	1	1	1
Cu	1	1	1
Fe	5	5	5
Hg	1	1	—
K	5	5	5
Li	1	1	1
Mg	2	2	5
Mn	1	1	1
Mo	1	1	1
Na	5	5	10

Element	HNO ₃	HCl	HF
Ni	1	1	1
Pb	1	1	1
Sb	1	1	1
Sn	1	1	1
Sr	1	1	1
Ti	1	1	1
Tl	1	1	1
V	1	1	1
Zn	5	5	5
Zr	1	1	1



NOTE

Values shown are proposed specification limits.

A lot-specific Certificate of Analysis and reporting limits should accompany any measured claims.

High-Purity Chemicals

for Sensitive Analytical Applications

VERNOB offers a focused portfolio of high-purity acids and ultrapure water for laboratory applications where reagent quality and contamination control are essential.



HNO₃ Nitric Acid

For trace elemental analysis and sample preparation.

VB-N-250



HCl Hydrochloric Acid

For trace elemental analysis and selected sample preparation.

VB-C-250



HF Hydrofluoric Acid

For specialized, HF-compatible analytical preparation methods.

VB-F-250



H₂O Ultrapure Water

For sensitive laboratory applications and workflows.

VB-W-1000

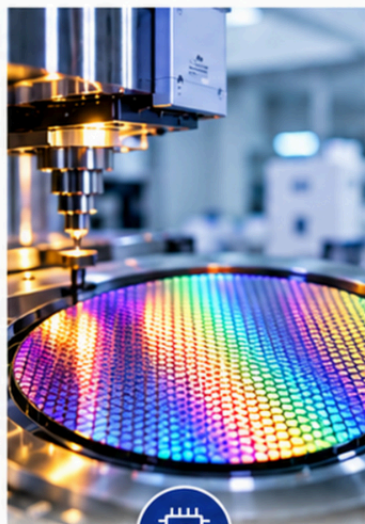
Supporting Critical Applications

Where contamination control makes a difference

High-purity acids and ultrapure water support sensitive analytical workflows.



Elemental Analysis
ICP-MS / ICP-OES



Semiconductor Industry



Pharmaceutical Analysis



Environmental Testing



Research Laboratories



APPLICATION NOTE

Select reagents and compatible containers according to validated laboratory methods.



High-Purity Chemicals

For Trace Elemental Analysis



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