

# Specification

Item number: 1N1K

## Nitric acid

### 69 %, VLSI Grade

CAS No.: 7697-37-2

print date: 01.01.2024

formula:  $\text{HNO}_3$

density: 1,41

molecular weight: 63,01 g/mol

### Guarantee analysis

Assay	69-70 %
Bead number ( $\geq 0,5 \mu\text{m}$ )	$\leq 250$ p/ml
Chloride (Cl)	$\leq 0.00001$ %
Colour (APHA)	$\leq 10$
Ash content (as $\text{SO}_4$ )	$\leq 0.0002$ %
Phosphate ( $\text{PO}_4$ )	$\leq 0.00005$ %
Heavy metals (as Pb)	$\leq 0.0001$ %
Sulphate ( $\text{SO}_4$ )	$\leq 0.00005$ %

### Trace impurities:

Silver (Ag)	$\leq 10$ ppb
Aluminium (Al)	$\leq 20$ ppb
Arsenic (As)	$\leq 5$ ppb
Gold (Au)	$\leq 10$ ppb
Boron (B)	$\leq 10$ ppb
Barium (Ba)	$\leq 10$ ppb
Beryllium (Be)	$\leq 10$ ppb
Bismuth (Bi)	$\leq 20$ ppb
Calcium (Ca)	$\leq 50$ ppb
Cadmium (Cd)	$\leq 10$ ppb
Cobalt (Co)	$\leq 10$ ppb
Chromium (Cr)	$\leq 20$ ppb
Copper (Cu)	$\leq 10$ ppb
Iron (Fe)	$\leq 40$ ppb
Gallium (Ga)	$\leq 20$ ppb
Indium (In)	$\leq 20$ ppb
Potassium (K)	$\leq 50$ ppb
Lithium (Li)	$\leq 10$ ppb
Magnesium (Mg)	$\leq 20$ ppb

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## *Guarantee analysis*

<b>Manganese (Mn)</b>	≤10 ppb
<b>Molybdenum (Mo)</b>	≤10 ppb
<b>Sodium (Na)</b>	≤100 ppb
<b>Nickel (Ni)</b>	≤10 ppb
<b>Lead (Pb)</b>	≤10 ppb
<b>Platinum (Pt)</b>	≤50 ppb
<b>Antimony (Sb)</b>	≤5 ppb
<b>Tin (Sn)</b>	≤20 ppb
<b>Strontium (Sr)</b>	≤10 ppb
<b>Titanium (Ti)</b>	≤10 ppb
<b>Thallium (Tl)</b>	≤10 ppb
<b>Vanadium (V)</b>	≤10 ppb
<b>Zinc (Zn)</b>	≤20 ppb
<b>Zirconium (Zr)</b>	≤10 ppb

Our products are tested for laboratory use only.

The stated information refers to the current status of product quality.

We reserve the right to implement necessary changes.

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**Dr. R. Niemand**

*Head of Quality Assurance*

*This document is computer printout and has therefore not been signed by hand.*

**S. Lorsee**

*Head of Quality Management*

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Die Firma ist eine Kommanditgesellschaft mit Sitz in Karlsruhe, Reg. Gericht Mannheim HRA 100055. Persönlich haftende Gesellschafterin ist die Firma Roth Chemie GmbH mit Sitz in Karlsruhe, Reg. Gericht Mannheim HRB 100428. Geschäftsführer: André Houdelet

