

Sulfuric Acid 96%
CMOS



Material No.: 9684-03
Batch No.: 21L1662010
Manufactured Date: 2021-11-05
Retest Date: 2026-11-04
Revision No.: 0

Certificate of Analysis

| Test | Specification | Result |
|--|---------------|-------------|
| Assay (H ₂ SO ₄) | 95.0 - 97.0 % | 96.2 % |
| Color (APHA) | ≤ 10 | 5 |
| Substances Reducing Permanganate (as SO ₂) | ≤ 2 ppm | < 2 ppm |
| Residue after Ignition | ≤ 2 ppm | < 1 ppm |
| Chloride (Cl) | ≤ 0.1 ppm | < 0.1 ppm |
| Nitrate (NO ₃) | ≤ 0.2 ppm | < 0.1 ppm |
| Phosphate (PO ₄) | ≤ 0.3 ppm | < 0.1 ppm |
| Trace Impurities - Aluminum (Al) | ≤ 50.0 ppb | < 5.0 ppb |
| Arsenic and Antimony (as As) | ≤ 5.0 ppb | < 2.0 ppb |
| Trace Impurities - Barium (Ba) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Beryllium (Be) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Bismuth (Bi) | ≤ 20.0 ppb | < 10.0 ppb |
| Trace Impurities - Boron (B) | ≤ 10.0 ppb | < 5.0 ppb |
| Trace Impurities - Cadmium (Cd) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Calcium (Ca) | ≤ 50.0 ppb | 16.0 ppb |
| Trace Impurities - Chromium (Cr) | ≤ 50 ppb | < 1 ppb |
| Trace Impurities - Cobalt (Co) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Copper (Cu) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Gallium (Ga) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Germanium (Ge) | ≤ 10.0 ppb | < 10.0 ppb |
| Trace Impurities - Gold (Au) | ≤ 20 ppb | < 5 ppb |
| Heavy Metals (as Pb) | ≤ 200.0 ppb | < 100.0 ppb |
| Trace Impurities - Iron (Fe) | ≤ 100.0 ppb | 11.8 ppb |
| Trace Impurities - Lead (Pb) | ≤ 20.0 ppb | < 1.0 ppb |
| Trace Impurities - Lithium (Li) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Magnesium (Mg) | ≤ 50.0 ppb | < 1.0 ppb |
| Trace Impurities - Manganese (Mn) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Mercury (Hg) | ≤ 5.0 ppb | < 0.1 ppb |

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For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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| Trace Impurities - Molybdenum (Mo) | ≤ 10.0 ppb | < 5.0 ppb |
| Trace Impurities - Nickel (Ni) | ≤ 10.0 ppb | < 5.0 ppb |
| Trace Impurities - Niobium (Nb) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Potassium (K) | ≤ 50 ppb | < 10 ppb |
| Trace Impurities - Silicon (Si) | ≤ 50 ppb | < 10 ppb |
| Trace Impurities - Silver (Ag) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Sodium (Na) | ≤ 100.0 ppb | 38.0 ppb |
| Trace Impurities - Strontium (Sr) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Tantalum (Ta) | ≤ 10.0 ppb | < 5.0 ppb |
| Trace Impurities - Thallium (Tl) | ≤ 20.0 ppb | < 5.0 ppb |
| Trace Impurities - Tin (Sn) | ≤ 50 ppb | < 10 ppb |
| Trace Impurities - Titanium (Ti) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Vanadium (V) | ≤ 10.0 ppb | < 1.0 ppb |
| Trace Impurities - Zinc (Zn) | ≤ 50 ppb | < 1 ppb |
| Trace Impurities - Zirconium (Zr) | ≤ 10.0 ppb | < 1.0 ppb |
| Particle Count - 0.5 µm and greater | ≤ 60 par/ml | 9 par/ml |
| Particle Count - 1.0 µm and greater | ≤ 10 par/ml | 2 par/ml |

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For Microelectronic Use
Storage Condition: Recommended Storage Conditions: 15° - 100°F
Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

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