

Hydrogen Peroxide, 30%  
Electronic Grade  
(Stabilized)



Material No.: 2204-01  
Batch No.: 0000141082  
Manufactured Date: 2016/04/15  
Expiration Date: 2017/10/14

## Certificate of Analysis

| Test                                   | Specification | Result |
|--|---------------|--------|
| Assay (H <sub>2</sub> O <sub>2</sub> ) | 30.0 – 32.0 % | 31.6   |
| Color (APHA)                           | <= 10         | 5      |
| Free Acid (µeq/g)                      | <= 0.2        | < 0.2  |
| Residue after Evaporation              | <= 15 ppm     | 2      |
| Ammonium (NH <sub>4</sub> )            | <= 3 ppm      | < 3    |
| Chloride (Cl)                          | <= 2 ppm      | < 2    |
| Nitrate (NO <sub>3</sub> )             | <= 2 ppm      | < 2    |
| Phosphate (PO <sub>4</sub> )           | <= 2 ppm      | < 2    |
| ACS – Sulfate (SO <sub>4</sub> )       | <= 5 ppm      | < 5    |
| Trace Impurities – Aluminum (Al)       | <= 200.0 ppb  | 11.6   |
| Trace Impurities – Antimony (Sb)       | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Arsenic (As)        | <= 10.0 ppb   | < 2.0  |
| Arsenic and Antimony (as As)           | <= 10 ppb     | < 10   |
| Trace Impurities – Barium (Ba)         | <= 20.0 ppb   | 2.0    |
| Trace Impurities – Beryllium (Be)      | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Bismuth (Bi)        | <= 20.0 ppb   | < 10.0 |
| Trace Impurities – Boron (B)           | <= 10.0 ppb   | < 5.0  |
| Trace Impurities – Cadmium (Cd)        | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Calcium (Ca)        | <= 50.0 ppb   | < 1.0  |
| Trace Impurities – Chromium (Cr)       | <= 20.0 ppb   | < 1.0  |
| Trace Impurities – Cobalt (Co)         | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Copper (Cu)         | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Gallium (Ga)        | <= 20.0 ppb   | < 1.0  |
| Trace Impurities – Germanium (Ge)      | <= 10.0 ppb   | < 10.0 |

| Test                               | Specification | Result |
|------------------------------------|---------------|--------|
| Trace Impurities – Gold (Au)       | <= 10.0 ppb   | < 5.0  |
| Heavy Metals (as Pb)               | <= 500 ppb    | < 250  |
| Trace Impurities – Iron (Fe)       | <= 50.0 ppb   | 3.7    |
| Trace Impurities – Lead (Pb)       | <= 10.0 ppb   | < 10.0 |
| Trace Impurities – Lithium (Li)    | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Magnesium (Mg)  | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Manganese (Mn)  | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Molybdenum (Mo) | <= 10.0 ppb   | < 5.0  |
| Trace Impurities – Nickel (Ni)     | <= 10.0 ppb   | < 5.0  |
| Trace Impurities – Niobium (Nb)    | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Potassium (K)   | <= 600.0 ppb  | 177.7  |
| Trace Impurities – Silicon (Si)    | <= 100.0 ppb  | < 10.0 |
| Trace Impurities – Silver (Ag)     | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Sodium (Na)     | <= 500.0 ppb  | 15.2   |
| Trace Impurities – Strontium (Sr)  | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Tantalum (Ta)   | <= 10.0 ppb   | < 5.0  |
| Trace Impurities – Thallium (Tl)   | <= 50.0 ppb   | < 5.0  |
| Trace Impurities – Tin (Sn)        | <= 1000.0 ppb | 310.9  |
| Trace Impurities – Titanium (Ti)   | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Vanadium (V)    | <= 10.0 ppb   | < 1.0  |
| Trace Impurities – Zinc (Zn)       | <= 50.0 ppb   | < 1.0  |
| Trace Impurities – Zirconium (Zr)  | <= 10.0 ppb   | < 1.0  |

For Microelectronic Use

Country of Origin: US  
Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000  
 Paris, KY 9001:2008  
 Mexico City, Mexico 9001:2008  
 Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003  
 Gliwice, Poland 9001:2008  
 Selangor, Malaysia 9001:2008  
 Dehradun, India, 9001:2008, 14001:2004, 13485:2003  
 Mumbai, India, 9001:2008, 17025:2005  
 Panoli, India 9001:2008



Jamie Ethier  
 Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600  
 Avantor™ Performance Materials Inc.  
 3477 Corporate Parkway, Suite #200, Center Valley, PA 18034, U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610