

# Certificate of Analysis

Product Name:

Magnesium oxide - ACS reagent, 97%

# MgO

**Product Number:** 243388  
**Batch Number:** MKCX4521  
**Brand:** SIGALD  
**CAS Number:** 1309-48-4  
**MDL Number:** MFCD00011109  
**Formula:** MgO  
**Formula Weight:** 40.30 g/mol  
**Quality Release Date:** 12 MAR 2025

| Test                                    | Specification             | Result    |
|---|---------------------------|-----------|
| Appearance (Color)                      | White                     | White     |
| Appearance (Form)                       | Powder                    | Powder    |
| X-Ray Diffraction                       | Conforms to Structure     | Conforms  |
| Titration by EDTA (Back)<br>Dried Basis | ≥ 96.5 %                  | 99.8 %    |
| Loss on Ignition                        | ≤ 2.0 %                   | 0.3 %     |
| Insoluble Matter<br>c = 4%; Dilute HCL  | ≤ 0.02 %                  | 0.02 %    |
| Water Soluble Substance                 | ≤ 0.4 %                   | < 0.1 %   |
| Barium                                  | ≤ 0.005 %                 | < 0.001 % |
| Calcium (Ca)                            | ≤ 0.05 %                  | < 0.05 %  |
| Chloride Content                        | ≤ 0.01 %                  | < 0.01 %  |
| Iron (Fe)                               | ≤ 0.01 %                  | < 0.01 %  |
| Heavy Metals<br>(by ICP)                | ≤ 0.003 %                 | < 0.001 % |
| Potassium (K)                           | ≤ 0.005 %                 | < 0.005 % |
| Manganese (Mn)                          | ≤ 5 ppm                   | 1 ppm     |
| Sodium (Na)                             | ≤ 0.5 %                   | < 0.5 %   |
| Nitrate (NO <sub>3</sub> )              | ≤ 0.005 %                 | < 0.001 % |
| Sulfate & Sulfite (as SO <sub>4</sub> ) | ≤ 0.02 %                  | < 0.02 %  |
| Strontium (Sr)                          | ≤ 0.005 %                 | < 0.001 % |
| Meets ACS Requirements                  | Current ACS Specification | Conforms  |

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



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Larry Coers, Director  
Quality Control  
Milwaukee, WI US

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