

## Certificate of Analysis

Date of Testing: 2022-03-25 10:56:25  
Date of Next Testing: 2026-03-24 10:56:25  
Product Name: **Manganese dioxide**  
CAS Number: 1313-13-9  
Specifications & Purity: 98% metals basis  
Lot #: C2215307  
SKU #: **M118109**  
**Analysis: 072032**

Parameter	Limit Values	Result
Purity(Based On Trace Metals Analysis)	98-100 (%)	99.92 %
Titration by KMNO4 (% Mn)	62-100 (%)	62.61 %
Total Metallic Impuritie	0-20000 (ppb)	808.00 ppb
Appearance (M118109)	Grey to Black Powder and/or Chunks	Grey to Black Powder and/or Chunks
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager