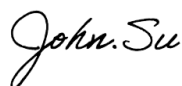


Shanghai Aladdin Biochemical Technology Co., LTD
809 Chuhua Branch Road, Fengxian District, Shanghai 201400, China

Certificate of Analysis

Date of Testing: 2023-02-17 08:38:51
Date of Next Testing: 2027-02-16 08:38:51
Product Name: **Tungsten carbide**
CAS Number: 12070-12-1
Specifications & Purity: nanopowder, 99.9% metals basis, 400nm
Lot #: B2311392
SKU #: **T111338**
Analysis: **189109**

Parameter	Limit Values	Result
Purity(Based On Trace Metals Analysis)	99.9-100 (%)	99.98240 %
Particle size	350-450 (nm)	369.89150 nm
W by Gravimetric Analysis(After Ignition to Oxide)	92.5-95.3 (%)	92.55000 %
Total Metallic Impurities	0-1000 (ppm)	176.00000 ppm
Appearance (T111338)	Grey to Dark Grey Powder	Grey to Dark Grey Powder
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager