

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-03-30 14:15:59
 Date of Next Testing: 2026-03-29 14:15:59
 Product Name: **Hafnium oxide**
 CAS Number: 12055-23-1
 Specifications & Purity: $\geq 99.9\%$ metals basis, excluding Zr, Zr < 0.5%
 Lot #: E1803008
 SKU #: **H123380**
 Version: **0**
 Analysis #: **085812**
 Storage Temperature: Room temperature

Parameter	Limit Values	Result
Trace Metal Analysis(excluding ZrContent)	0-2000 (ppm)	1200.00000 ppm
Purity Based On Trace Metals Analysis(excluding Zr)	99.9-100 (%)	99.91000 %
Zirconium(Zr)	0-0.5 (%)	0.20000 %
Appearance (H123380)	white powder	White powder
ICP:Confirms Hafnium Component	Confirmed	Confirmed
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager