

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-09-01 17:09:52

Date of Next Testing: 2027-08-31 17:09:52

Product Name: **Hafnium oxide**

CAS Number: 12055-23-1

Specifications & Purity: $\geq 99.95\%$ metals basis, excluding Zr, Zr < 1%

Lot #: H2330564

SKU #: **H299352**

Version: **1**

Analysis #: **264994**

Storage Temperature: Room temperature

Parameter	Limit Values	Result
Zirconium(Zr)	0-1 (%)	0.00020 %
Total metallic impurities(excluding Zr)	0-500 (ppm)	52.00000 ppm
Purity Based on Trace Metals Impurities(excluding Zr)	99.95-100 (%)	99.99480 %
Appearance (H299352)	White powder	White powder
ICP:Confirms Hafnium Component	Confirmed	Confirmed
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager