

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-09-21 17:08:03

Date of Next Testing: 2026-09-20 17:08:03

Product Name: **Hafnium chloride**

CAS Number: 13499-05-3

Specifications & Purity: $\geq 99.5\%$

Lot #: I2314286

SKU # **H190650**

Version **0**

Analysis #: **269100**

Storage Temperature: Room temperature, Argon charged

Parameter	Limit Values	Result
Zirconium(Zr)	0-0.5 (%)	0.04200 %
Trace Metal Analysis	0-1500 (ppm)	196.00000 ppm
Purity(Based On Trace Rare Earth Analysis)	99.5-100 (%)	99.98040 %
Purity (Chloride Titration by AgNO ₃)	43.4-45.2 (%)	43.41000 %
Appearance (H190650)	White powder	White powder
ICP:Confirms Hafnium Component	Confirmed	Confirmed



John Su
QA & QC Manager