

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-04-04 10:05:25

Date of Next Testing: 2025-04-03 10:05:25

Product Name: **Hafnium chloride**

CAS Number: 13499-05-3

Specifications & Purity: $\geq 99.5\%$

Lot #: C2228026

SKU # **H190650**

Version **0**

Analysis #: **082590**

Storage Temperature: Room temperature, Argon charged

Parameter	Limit Values	Result
Zirconium(Zr)	0-0.5 (%)	0.40000 %
Trace Metal Analysis	0-1500 (ppm)	433.00000 ppm
Purity(Based On Trace Rare Earth Analysis)	99.5-100 (%)	99.95670 %
Purity (Chloride Titration by AgNO ₃)	43.4-45.2 (%)	43.44000 %
Appearance (H190650)	White powder	White powder
ICP:Confirms Hafnium Component	Confirmed	Confirmed



John Su
QA & QC Manager