

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-06-10 14:15:35
 Date of Next Testing: 2027-06-09 14:15:35
 Product Name: **Hafnium fluoride**
 CAS Number: 13709-52-9
 Specifications & Purity: $\geq 99.9\%$ metals basis, excludes $\sim 1\%$ zirconium
 Lot #: F2302490
 SKU #: **H119202**
 Version: **0**
 Analysis #: **239370**
 Storage Temperature: Room temperature, Desiccated, Cool

Parameter	Limit Values	Result
Trace Metal Analysis(excluding ZrContent)	0-2000 (ppm)	1895.00000 ppm
Purity(Based on Trace Metals Analysis)excludes up to $\sim 1\%$ Zr	99.9-100 (%)	99.95000 %
Hf by Gravimetric Analysis	65-72 (%)	71.64000 %
Appearance (H119202)	white powder	White powder
ICP:Confirms Hafnium Component	Confirmed	Confirmed
X-Ray Diffraction	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager