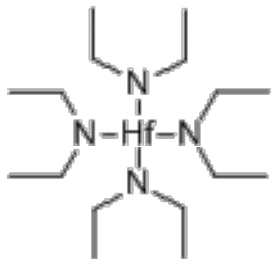




SHANGHAI ORIPHANT CHEMISTRY CO., LTD.

源象化学  
ORIPHANT CHEMISTRY

### Certification of Analysis

<b>Product Name</b>	Tetrakis(diethylamino)hafnium	
<b>CAS No.</b>	19824-55-6	
<b>Batch No.</b>	101013003031522001	
<b>Date of MFG</b>	2022.3.15	
<b>Date of Test</b>	2022.3.16	
<b>Date of Expiry</b>	2022.9.15	

No.	Test Item	Specification	Result
1	Appearance(Color)	light yellow	light yellow
2	Appearance(Form)	liquid	liquid
3	Purity (1H-NMR)	99%min	99%+
4	1H-NMR	confirms to structure	confirms to structure
5	Purity (Based On Trace Metals Analysis)	99.99% min	99.999%

**Conclusion: Conform to the standard of electronic grade chemicals**

Analyzer :Hua Wu

Approved:Yuelai Zhang

Report Date:2022.3.16