

## Certificate of Analysis

Product Name: Cerium Oxalate Hydrate (Ce<sub>2</sub>(C<sub>2</sub>O<sub>4</sub>)<sub>3</sub>·xH<sub>2</sub>O) Powder  
Purity: 99.99% REO  
Lot Number: OH58-230817  
Date: 08/17/2023

### Test Result

TREO (%)  $\geq 44.20\%$       CeO<sub>2</sub>/TREO (%)  $\geq 99.99\%$

Rare Earth Impurities ( <b>Max%</b> )		Non-Rare Earth Impurities ( <b>Max%</b> )	
La <sub>2</sub> O <sub>3</sub>	0.003	Fe <sub>2</sub> O <sub>3</sub>	0.001
Pr <sub>6</sub> O <sub>11</sub>	0.002	SiO <sub>2</sub>	0.002
Nd <sub>2</sub> O <sub>3</sub>	0.001	CaO	0.001
Sm <sub>2</sub> O <sub>3</sub>	0.001	Cl-	0.005
Eu <sub>2</sub> O <sub>3</sub>	0.0001		
Gd <sub>2</sub> O <sub>3</sub>	0.0001		
Tb <sub>4</sub> O <sub>7</sub>	0.0001		
Dy <sub>2</sub> O <sub>3</sub>	0.0001		
Ho <sub>2</sub> O <sub>3</sub>	0.0001		
Er <sub>2</sub> O <sub>3</sub>	0.0001		
Tm <sub>2</sub> O <sub>3</sub>	0.0001		
Yb <sub>2</sub> O <sub>3</sub>	0.0001		
Lu <sub>2</sub> O <sub>3</sub>	0.0001		
Y <sub>2</sub> O <sub>3</sub>	0.001		

Stanford Advanced Materials

By Andrew