

## Certificate of Analysis

Item Code:	OX70-4N
Product Name:	Ytterbium Oxide (Yb <sub>2</sub> O <sub>3</sub> ) Powder
Purity:	99.99% (REO)
Lot Number:	OX70-SAM-HW-5
Date:	11/05/2023

TREO (%)	> 99
Yb <sub>2</sub> O <sub>3</sub> /TREO (%)	> 99.99

Rare Earth Impurities:

La <sub>2</sub> O <sub>3</sub> (ppm)	2
CeO <sub>2</sub> (ppm)	2
Pr <sub>6</sub> O <sub>11</sub> (ppm)	2
Nd <sub>2</sub> O <sub>3</sub> (ppm)	2
Sm <sub>2</sub> O <sub>3</sub> (ppm)	2
Eu <sub>2</sub> O <sub>3</sub> (ppm)	2
Gd <sub>2</sub> O <sub>3</sub> (ppm)	2
Tb <sub>4</sub> O <sub>7</sub> (ppm)	2
Dy <sub>2</sub> O <sub>3</sub> (ppm)	2
Ho <sub>2</sub> O <sub>3</sub> (ppm)	2
Er <sub>2</sub> O <sub>3</sub> (ppm)	2
Tm <sub>2</sub> O <sub>3</sub> (ppm)	2
Lu <sub>2</sub> O <sub>3</sub> (ppm)	<16
Y <sub>2</sub> O <sub>3</sub> (ppm)	2

Non-Rare Earth Impurities:

Fe <sub>2</sub> O <sub>3</sub> (ppm)	<1
CaO (ppm)	<12
SiO <sub>2</sub> (ppm)	<10
L.O.I. (%) (1000°C, 1 hour)	<1.0

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