

Thermo Fisher Scientific Ward Hill, MA-Sites

 30 Bond Street
 220 Neck Road
 38 Shelley Road

 Ward Hill
 Ward Hill
 Ward Hill

 MA 01835
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## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by TUV SUD America Inc.

Certificate Number. 951001163

Catalogue Number 011304 Lot Number T09L038

Description Erbium(III) chloride hydrate, REacton®, 99.9% (REO)

CAS Number 19423-85-9
Quality Test/Release Date 09/Jul/2025
Suggested retest date 09/Jul/2028
Country of Origin Turkey
Declaration of Origin Synthetic

BSE/TSE

Not directly derived from or manufactured with any animal byproducts in any way

(including but not limited to form or but in any unitable to the but not limited to form or but in a position to be the orbit of the form of the but not limited to form or but in a position to be the orbit of the form of the but not limited to form or but in a position to be the orbit of the form of the but not limited to form or but in a position to be the orbit of the form of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the orbit of the but not limited to be the but not lim

(including but not limited to fermentation or nutrient broth, catalysts, enzymes).

 Result Name
 Units
 Specifications
 Test Value

 Total Rare Earth Oxide Impurities
 %
 0.1% max.
 0.0039

 $\begin{array}{l} \textbf{Additional Information} \ \ Al < 1 \ , \ Bi < 0.2 \ , \ Ca \ 2 \ , \ Ce < 0.1 \ , \ Cr < 0.1 \ , \ Cu < 0.1 \ , \ Dy < 5 \ , \ Eu < 0.1 \ , \ Fe \ 0.2 \ , \ Gd \ 1 \ , \ Ho \ 8 \ , \ K \ 3 \ , \ La \ 2 \ , \ Lu \ 20 \ , \ Mg \ 0.5 \ , \ Mm \ 0.2 \ , \ Na \ 0.8 \ , \ Nd < 0.1 \ , \ Ni < 0.1 \ , \ Pb < 0.2 \ , \ Pr \ 0.3 \ , \ Sc < 0.1 \ , \ Si \ 6 \ , \ Sm < 0.1 \ , \ Tb < 1 \ , \ Th < 0.2 \ , \ Ti \ 0.08 \ , \ Tm < 10 \ , \ U < 0.2 \ , \ V \ 0.3 \ , \ Y \ 2 \ , \ Yb \ 6 \ , \ Zn \ 0.1 \ , \ Values given in ppm unless otherwise stated. \end{array}$ 

John Astarita Director, Quality

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above