Thermo Fisher Scientific
Ward Hill, MA-Sites

30 Bond Street	220 Neck Road	38 Shelley Road
Ward Hill	Ward Hill	Ward Hill
MA 01835	MA 01835	MA 01835

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	013197
Lot Number	R04M007
Description	Lanthanum(III) carbonate hydrate, REacton®, 99.99% (REO)
CAS Number	54451-24-0
Quality Test/Release Date	04/May/2026
Suggested retest date	04/May/2031
Country of Origin	United States
Declaration of Origin	Synthetic
BSE/TSE	Not directly derived from or manufactured with any animal byproducts in any way (including but not limited to fermentation or nutrient broth, catalysts, enzymes).

Result Name	Units	Specifications	Test Value
Total Rare Earth Oxide Impurities	%	0.01% max.	0.0020
Aluminium (Al)		3	3
Bismuth (Bi)		<1	<1
Calcium (Ca)		10	10
Cerium (Ce)		10	10
Chromium (Cr)		<1	<1
Copper (Cu)		<1	<1
Dysprosium (Dy)		<1	<1
Erbium (Er)		<1	<1
Europium (Eu)		1	1
Iron (Fe)		5	5
Gadolinium (Gd)		1	1
Holmium (Ho)		<1	<1
Lutetium (Lu)		<1	<1
Magnesium (Mg)		<5	<5
Manganese (Mn)		<1	<1
Neodymium (Nd)		1	1
Nickel (Ni)		1	1
Lead (Pb)		<1	<1
Praseodymium (Pr)		1	1
Scandium (Sc)		<1	<1
Silicon (Si)		10	10
Samarium (Sm)		5	5
Terbium (Tb)		<2	<2
Thorium (Th)		<1	<1
Titanium (Ti)		<1	<1
Thulium (Tm)		<1	<1
Uranium (U)		<1	<1
Vanadium (V)		<1	<1
Yttrium (Y)		1	1
Ytterbium (Yb)		<1	<1

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.

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Zinc (Zn)	<1	<1

Additional Information Values given in ppm unless otherwise stated.

Derek Roy
Quality Manager, LCD

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