Thermo Fisher (Kandel) GmbH
Erlenbachweg 2
Kandel,
76870, Germany

CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by ICG. Certificate Number. 110212Q

Catalogue Number	J21060
Lot Number	62680001
Description	D-(+)-Raffinose pentahydrate, Thermo Scientific
CAS Number	17629-30-0
Quality Test/Release Date	15/Nov/2023
Suggested retest date	15/Nov/2026
Country of Origin	CHINA
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
Form		White crystalline powder	White crystalline powder
Identification (FTIR)		Conforms	Conforms
Residue on ignition	%	≤ 0.1%	0.03
Loss on Drying	%	≤ 15.3%	13.7
Optical Rotation	°	+104.9° ± 1.3° (c=4 in H_2O NH_3) (corrected to a theoretical pentahydrate)	105.9
Trace Metal	ppm	Arsenic (As): ≤ 0.5 ppm	< 0.5
Trace Metal	ppm	Heavy Metals (Cu): ≤ 10 ppm	< 10
Trace Metal	ppm	Iron (Fe): ≤ 5 ppm	5



Ronald Becht
Technical Support Manager

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.