

Certificate of Analysis

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Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
 Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A454	Quality Test / Release Date	09/04/2024
Lot Number	242613		
Description	METHANOL, OPTIMA, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Sep/2029
Chemical Origin	Organic - synthetic		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY	%	>= 99.9	100.0
CARBONYL COMPOUNDS	%	<= 0.001	<0.001
COLOR	APHA	<= 5	<5
EVAPORATION RESIDUE	ppm	<= 1	0
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
LC GRADIENT SUITABILITY	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 205 NM	ABSORBANCE UNITS	<= 1.00	0.82
OPTICAL ABS AT 220 NM	ABSORBANCE UNITS	<= 0.23	0.21
OPTICAL ABS AT 230 NM	ABSORBANCE UNITS	<= 0.11	0.09
OPTICAL ABS AT 254 NM	ABSORBANCE UNITS	<= 0.01	0.01
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.3260 - 1.3300	1.3265
SOLUBILITY IN WATER	PASS/FAIL	= PASS TEST	PASS TEST
SUBSTANCES DARKENED BY H2SO4	PASS/FAIL	= PASS TEST	PASS TEST
SUBSTANCES REDUCING KMNO4	PASS/FAIL	= PASS TEST	PASS TEST
TITRATABLE ACID	MEQ/G	<= 0.0003	0.0003
TITRATABLE BASE	MEQ/G	<= 0.0002	0.0000
WATER (H2O)	%	<= 0.07	0.01



Kalyan Paruchuri - Quality Control Supervisor - Bridgewater

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

If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.