

## 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	D139	Quality Test / Release Date	10/06/2023
Lot Number	233721	Expiration Date	Mar/2025
Description	DMSO, DIMETHYL SULFOXIDE, GC HEADSPACE		
Country of Origin	United States		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
ASSAY	%	>= 99.9	>99.99
COLOR	A.P.H.A.	<= 10	<10
GC-HS CLASS 1 SOLVENT	PARTS PER MILLION	< 1.0	<1
GC-HS CLASS 2 SOLVENT	PARTS PER MILLION	< 10	<10
GC-HS CLASS 3 SOLVENT	PARTS PER MILLION	< 50	<50
GC-HS SUITABILITY TEST (PASS/FAIL)	PASS/FAIL	= PASS TEST	PASS TEST
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 270 NM	AU	< 0.40	0.339
OPTICAL ABS AT 290 NM	AU	< 0.18	0.095
OPTICAL ABS AT 310 NM	AU	< 0.06	0.036
OPTICAL ABS AT 330 NM	AU	< 0.02	0.011
OPTICAL ABS AT 350 NM	AU	<= 0.01	0.004
OPTICAL ABS AT 400 NM	AU	<= 0.01	0.000
RESIDUE	%	< 0.010	<0.001
TITRATABLE ACID	mEq /g	< 0.001	<0.001
WATER (H2O)	%	< 0.05	0.004



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.