

## Certificate of Analysis

1 Reagent Lane Fair Lawn, NJ 07410 201.796.7100 tel 201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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	J15397	Quality Test / Release Date	08/15/2019	
Lot Number	196020			
Description	DITHIOTHREITOL (DTT), MOLECULAR BIOLOGY GRADE, ULTRAPURE			
Country of Origin	Canada	Suggested Retest Date	Aug/2024	
Chemical Origin				
BSE/TSE Comment				
Chemical Comment				

N/A					
Result Name	Units	Specifications	Test Value		
APPEARANCE		REPORT	White crystalline powder		
ABSORBANCE 0.1M SOL AT 260NM	ABS. UNITS	<= 0.40	0.3		
ABSORBANCE 0.1M SOL AT 280NM	ABS. UNITS	<= 0.08	<0.04		
ASSAY (S-H)	%	>= 99.5	99.5		
RNASE	PASS/FAIL	= NOT DETECTED	not detected		
MELTING POINT	DEGREES CELSIUS	Inclusive Between 40 - 43	41		
OXIDIZED DTT	%	<= 0.3	0.2		
PROTEASE	PASS/FAIL	= NOT DETECTED	NOT DETECTED		
DNASE	PASS/FAIL	= NOT DETECTED	not detected		

Derisa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn