

BRENNTAG MID SOUTH, INC.
 1405 Highway 136 West
 Henderson, Kentucky 42420-0020
 Tel. (270) 830-1200 • Fax (270) 826-1486

CERTIFICATE OF ANALYSIS

**GLYCERINE 99.7%
 USP KOSHER**

CUSTOMER:	LOT NUMBER: 164093677362151
	DATE ANALYZED: 12/29/2017
*DATE MANUFACTURED: 12/28/2017	*EXPIRATION DATE: 12/28/2019

PARAMETERS	ANALYSIS	SPECIFICATIONS
Identification by IR	PASS	Pass/Fail
Color	PASS	Clear, colorless with no suspended matter
Specific gravity @ 25°C (77°F)	1.2614	1.2612 min

INCOMING PRODUCT INFORMATION (VENDOR AND CARRIER)	
VENDOR: ADM	CARRIER: ADM
VENDOR LOT NUMBER: 171228011	VEHICLE NUMBER: ADMO1608519

Analyst: BEN PERRY **Approved:** GENE RIXFORD

cc: With Shipment
 Lab File
 Attachment: Vendor COA

Direct questions concerning certification of this product to personnel at the location marked below.		
<input type="checkbox"/> Kennesaw, GA 770-429-1405	<input type="checkbox"/> Orlando, FL 407-857-9310	<input type="checkbox"/> St. Louis, MO Soper 314-832-5010
<input checked="" type="checkbox"/> Durham, NC 919-596-0681		

"All information provided is believed to be accurate and complete. The data provided is representative of the product quality on the date of analysis for the lot number indicated. This certificate of analysis may not include all of the constituents of the product. Persons using this information should make their own determination regarding its suitability for their particular application. This certificate of analysis shall not in any way limit or preclude the operation and effect of the applicable terms and conditions of sale."

Form Approval: James Clements
 Form Approval Date: August 15, 2016

KEYWORD: COA GLYCERINE 99.7% KOSHER

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ARCHER DANIELS MIDLAND
 4666 Faries Pkwy., Decatur, IL 62526
 ADM Technical Services P: 800.238.9026

CERTIFICATE OF ANALYSIS

USP-NF Glycerin -- Excipient/Food Use Only ADM PRODUCT CODE: 051000

This Certificate of Analysis is valid only for the shipment as described in the shipment information shown below.

SHIPPED TO: 612695
 BRENNTAG MID-SOUTH
 139 E SOPER ST
 SAINT LOUIS, MO 63111-2931
 UNITED STATES

LOT NUMBER:
 164093677362151

Shipment Information

ADM ORDER #: 592958

VESSEL NUMBER: ADMO16085

LOAD/MFG DATE: 12/28/2017

CORDNO: 758828

LOT CODE: 171228011

SHIP DATE: 12/28/17

WGT/QUANTITY: 47654.83

Product Analysis

Test, Units	Limit	Result
Glycerin %	99.7 min	100.0
Specific Gravity @ 25/25C	1.259 min.	1.262
Water, wt%	0.3 max.	0.1
Color, Pt-Co.	10 max.	Pass
Odor	Pass	Pass
Appearance	Pass	Pass
Identification A (IR)	Pass	Pass
Identification B (limit of DEG & EG), wt%	Pass	Pass
Identification C (GC)	Pass	Pass
Readily Carbonizable Substances	Pass	Pass
Related Compounds,		
Individual Impurities, wt%	0.1 max.	Pass
Total Impurities, wt%	1.0 max.	Pass
Chloride, wt%	0.001 max.	Pass
Sulfate, wt%	0.002 max.	Pass
Chlorinated Compounds, wt%	0.003 max.	Pass
Fatty Acids & Esters (ml 0.5N NaOH)	1 max.	Pass
Lead, ppm	1 max.	Pass
Residue on Ignition, wt% *	0.01 max.	Pass
Heavy Metals as Lead *	5 ppm	Pass

Analyses in bold are performed on loaded vessel after release. Results from the vessel are used for verification of the source tank data.

**Results Guarantee; tested periodically in accordance with current USP*

CERTIFIED BY: Suzanne Grayson-Moss, Quality Control Superintendent

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