

Report Date 4/8/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

PJIA
Testing
ISO/IEC 17025:2017

Client: DEF Products, LLC
Contact Sharon Stegmuller
Address 422 East Barioni Blvd
Imperial, CA 02251
Email defproducts@gmail.com
Phone 760 355 7997

Enalytic ID E2504009-001 TRAIN# GATX222494 TRC# 304012025T T# 1&2 Sample ID DEF 32.4% Date Sampled 4/1/2025 Date Received 4/4/2025 Certificate Number: L24-103 ISO 17025

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.4% DEF TRAIN # GATX222494 T # 1&2 TRC # 304012025T

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/		
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail		
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.1	SPT	4/8/2025	Pass		
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3822	CTM	4/4/2025	Pass		
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.02	MFB	4/4/2025	Pass		
Biuret	%	22241-2 Annex E	<0.3	0.15	SPT	4/7/2025	Pass		
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/8/2025	Pass		
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	SPT	4/7/2025	Pass		
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/7/2025	Pass		
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/7/2025	Pass		
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/7/2025	Pass		
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.12	BDK	4/7/2025	Pass		
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/7/2025	Pass		
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/7/2025	Pass		
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.12	BDK	4/7/2025	Pass		
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/7/2025	Pass		
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.30	BDK	4/7/2025	Pass		
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.18	BDK	4/7/2025	Pass		
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/7/2025	Pass		
Miscellaneous Secondary Unregulated Quality Standards									
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match						
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0883	CTM	4/4/2025			

Note 1: All ISO standards are up to date with the latest revisions.

Note 2: The acceptable values are based on the standard 32.5% unless otherwise stated, and are less than or equal to the values shown.

Note 3: ISO 17025 accreditation not applied for.

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Certification Approval

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096

Date: 4/8/2025



Report Date 4/17/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

PJLA Testing

ISO/IEC 17025:2017

Client: DEF Products, LLC
Contact Sharon Stegmuller
Address 422 East Barioni Blvd
Imperial, CA 02251
Email defproducts@gmail.com
Phone 760 355 7997

Enalytic ID	E2504039-001
TRAIN#	GATX238949
TRC#	304102025T
T#	<i>3&amp;4</i>
Sample ID	DEF 32.6%
Date Sampled	4/10/2025
Date Received	4/15/2025
ISO 17025	Certificate Number: L24-103

4/17/2025

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.6% DEF TRAIN # GATX238949 T # 3&4 TRC # 304102025T

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/		
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail		
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.8	SPT	4/16/2025	Pass		
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3834	MFB	4/15/2025	Pass		
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.02	SPT	4/17/2025	Pass		
Biuret	%	22241-2 Annex E	<0.3	0.15	CTM	4/16/2025	Pass		
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/15/2025	Pass		
Insolubles	mg/kg	22241-2 Annex G	<20	3.3	MFB	4/16/2025	Pass		
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/16/2025	Pass		
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/16/2025	Pass		
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/16/2025	Pass		
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/16/2025	Pass		
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/16/2025	Pass		
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/16/2025	Pass		
Miscellaneous Secondary Unregulated Quality Standards									
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match				-		
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0903	MFB	4/15/2025			

Note 1: All ISO standards are up to date with the latest revisions.

Note 2: The acceptable values are based on the standard 32.5% unless otherwise stated, and are less than or equal to the values shown.

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Certification Approval \_\_\_\_\_\_ Date:

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096 Page 1 of 1



6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

ISO/IEC 17025:2017

Client: DEF Products, LLC Contact Sharon Stegmuller Address 422 East Barioni Blvd Imperial, CA 02251 Email defproducts@gmail.com Phone

760 355 7997 Report Date 4/23/2025

Enalytic ID E2504046-001 TRAIN# KLRX243066 TRC# 304152025T T# 17&14 Sample ID DEF 32.4% Date Sampled 4/15/2025 Date Received 4/21/2025 Certificate Number: L24-103 ISO 17025

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.4% DEF TRAIN # KLRX243066 T # 17&14 TRC # 304152025T

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/	
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail	
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.4	SPT	4/23/2025	Pass	
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3827	CTM	4/22/2025	Pass	
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.02	MFB	4/23/2025	Pass	
Biuret	%	22241-2 Annex E	<0.3	0.15	CTM	4/23/2025	Pass	
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/23/2025	Pass	
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	4/22/2025	Pass	
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass	
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass	
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass	
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/23/2025	Pass	
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass	
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass	
Miscellaneous Secondary Unregulated Quality Standards								
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match					
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0899	CTM	4/22/2025		

Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) <sup>3</sup> Spectra 22241-2 Annex J Control Match							
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0899	CTM	4/22/2025	

Note 1: All ISO standards are up to date with the latest revisions.

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**Certification Approval** 

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096

4/23/2025 Date:



Report Date 4/23/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

PJLA Testing

ISO/IEC 17025:2017

Client: DEF Products, LLC
Contact Sharon Stegmuller
Address 422 East Barioni Blvd
Imperial, CA 02251
Email defproducts@gmail.com
Phone 760 355 7997

Enalytic ID	E2504046-002
TRAIN#	GATX236598
TRC#	304152025M
T #	2&3
Sample ID	DEF 32.2%
Date Sampled	4/15/2025
Date Received	4/21/2025
ISO 17025	Certificate Number: L24-103

### Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.2% DEF TRAIN # GATX236598 T # 2&3 TRC # 304152025M

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.2	SPT	4/23/2025	Pass
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3824	CTM	4/22/2025	Pass
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.07	MFB	4/23/2025	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	CTM	4/23/2025	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/23/2025	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	3.0	MFB	4/22/2025	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/23/2025	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/23/2025	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/23/2025	Pass
	Mis	scellaneous Sec	ondary Unregula	ated Qualit	y Standards		
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match				
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0894	CTM	4/22/2025	

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Certification Approval \_\_\_\_\_ Date: 4/23/2025

Laboratory Director: Anthony J Scala



Report Date 4/28/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

PJLA
Testing
ISO/IEC 17025:2017

Client: DEF Products, LLC
Contact Sharon Stegmuller
Address 422 East Barioni Blvd
Imperial, CA 02251
Email defproducts@gmail.com
Phone 760 355 7997

Enalytic ID E2504056-001 TRAIN# GATX235265 TRC# 304222025T T# 5&4 DEF 32.4% Sample ID Date Sampled 4/22/2025 Date Received 4/24/2025 Certificate Number: L24-103 ISO 17025

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/		
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail		
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.1	SPT	4/28/2025	Pass		
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3823	CTM	4/28/2025	Pass		
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.02	CTM	4/25/2025	Pass		
Biuret	%	22241-2 Annex E	<0.3	0.15	CTM	4/28/2025	Pass		
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/25/2025	Pass		
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	4/24/2025	Pass		
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass		
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass		
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass		
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/28/2025	Pass		
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass		
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass		
	Miscellaneous Secondary Unregulated Quality Standards								
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match						
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0899	CTM	4/28/2025			

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**Certification Approval** 

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096

Date: 4/28/2025



6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

PJIA
Testing
ISO/IEC 17025:2017

Client: DEF Products, LLC
Contact Sharon Stegmuller
Address 422 East Barioni Blvd
Imperial, CA 02251
Email defproducts@gmail.com

Phone 760 355 7997 Report Date 4/29/2025

Enalytic ID	E2504060-001
TRAIN#	GATX222482
TRC #	304232025T
T #	1&2
Sample ID	DEF 32.3%
Date Sampled	4/23/2025
Date Received	4/25/2025
ISO 17025	Certificate Number: L24-103

4/29/2025

### Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/	
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail	
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.1	SPT	4/29/2025	Pass	
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3823	CTM	4/28/2025	Pass	
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.03	CTM	4/25/2025	Pass	
Biuret	%	22241-2 Annex E	<0.3	0.15	CTM	4/28/2025	Pass	
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/29/2025	Pass	
Insolubles	mg/kg	22241-2 Annex G	<20	8.8	MFB	4/28/2025	Pass	
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass	
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass	
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass	
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/28/2025	Pass	
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/28/2025	Pass	
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/28/2025	Pass	
Miscellaneous Secondary Unregulated Quality Standards								
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match					
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0902	CTM	4/28/2025		

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Certification Approval \_\_\_\_\_ Date:

Laboratory Director: Anthony J Scala



Report Date 4/30/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

ISO/IEC 17025:2017

Client: DEF Products, LLC Contact Sharon Stegmuller Address 422 East Barioni Blvd Imperial, CA 02251 Email defproducts@gmail.com Phone 760 355 7997

Enalytic ID E2504066-001 TRAIN# GBRX711550 TRC# 304242025T T# 3&17 DEF 32.4% Sample ID Date Sampled 4/24/2025 Date Received 4/28/2025 Certificate Number: L24-103 ISO 17025

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.4% DEF TRAIN # GBRX711550 T # 3&17 TRC # 304242025T

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/	
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail	
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.2	SPT	4/30/2025	Pass	
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3825	CTM	4/28/2025	Pass	
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.02	MFB	4/28/2025	Pass	
Biuret	%	22241-2 Annex E	<0.3	0.15	CTM	4/29/2025	Pass	
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	4/29/2025	Pass	
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	SPT	4/29/2025	Pass	
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/29/2025	Pass	
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/29/2025	Pass	
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/29/2025	Pass	
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	4/29/2025	Pass	
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	4/29/2025	Pass	
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	4/29/2025	Pass	
Miscellaneous Secondary Unregulated Quality Standards								
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match					
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0901	CTM	4/28/2025		

Note 1: All ISO standards are up to date with the latest revisions.

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Certification Approval

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096

4/30/2025 Date:



Report Date 5/8/2025

6034 Corporate Dr. East Syracuse NY 13057 Web Site: Enalytic.com Ph:315-437-0255

ISO/IEC 17025:2017

Client: DEF Products, LLC Contact Sharon Stegmuller Address 422 East Barioni Blvd Imperial, CA 02251 Email defproducts@gmail.com Phone 760 355 7997

Enalytic ID E2505013-001 TRAIN# GATX222475 TRC# 304302025M T# 4, 13 Sample ID DEF 32.5% Date Sampled 4/30/2025 Date Received 5/6/2025 ISO 17025 Certificate Number: L24-103

# Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF TRAIN # GATX222475 T # 4, 13 TRC # 304302025M

Test Parameter/Method	Units	Test	Acceptable	Results	Chemist	Analysis	Pass/	
		Method (ISO) <sup>1</sup>	Limit <sup>2</sup>			Date	Fail	
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.3	SPT	5/8/2025	Pass	
Refractive Index @ 20degC	$N_D^{20}$	22241-2 Annex C	1.3814-1.3843	1.3825	CTM	5/7/2025	Pass	
Alkalinity as NH <sub>3</sub>	%	22241-2 Annex D	<0.2	0.03	CTM	5/8/2025	Pass	
Biuret	%	22241-2 Annex E	<0.3	0.14	CTM	5/7/2025	Pass	
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	SPT	5/8/2025	Pass	
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	SPT	5/7/2025	Pass	
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	5/7/2025	Pass	
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.18	BDK	5/7/2025	Pass	
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	5/7/2025	Pass	
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	5/7/2025	Pass	
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	5/7/2025	Pass	
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	5/7/2025	Pass	
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	5/7/2025	Pass	
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.46	BDK	5/7/2025	Pass	
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.15	BDK	5/7/2025	Pass	
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.15	BDK	5/7/2025	Pass	
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.06	BDK	5/7/2025	Pass	
Miscellaneous Secondary Unregulated Quality Standards								
Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match					
Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0899	CTM	5/7/2025		

identity by First (attached) Special 22241-2 Annex 9 Control Match	Miscellaneous Secondary Unregulated Quality Standards								
Density a source grow <sup>3</sup> 2675 Net Applicable 4.0900 CTM 5/7/2025	Identify by FTIR (attached) <sup>3</sup>	Spectra	22241-2 Annex J	Control Match	-			-	
Defisity @ 20degC 9/cm S675 Not Applicable 1:0699 CTW 5/7/2025	Density @ 20degC	g/cm <sup>3</sup>	3675	Not Applicable	1.0899	CTM	5/7/2025		

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**Certification Approval** 

Laboratory Director: Anthony J Scala

Enalytic DUNS Reg. Number: 02-636-0096

5/8/2025 Date: