

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	8/23/2021

Enalytic ID	E2108030-005
Batch Number	308132021L
Train Number	GATX225151
Sample ID	DEF 32.5%
Date Sampled	8/13/2021
Date Received	8/17/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF** Batch# **308132021L** Train# **GATX225151**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.5	SPT	8/19/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3830	ALB	8/18/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.10	MDC	8/19/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.15	ALB	8/19/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MDC	8/17/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	6.9	ALB	8/18/2021	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.30	SPT	8/18/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	8/18/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	8/18/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.06	SPT	8/18/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.05	SPT	8/18/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/18/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	8/18/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0893	ALB	8/18/2021	---


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.

Note 4: The report has been Amended to correct the Batch Number.

All procedures were conducted in accordance with Enalytic's Quality Control manual in its most current form and/or related procedures. The information contained in the analytical report represents only the materials tested and may not be reproduced except in full and without the written approval of the Technical Director of Enalytic Labs. Enalytic maintains a quality system in compliance with ISO17025:2017 with accreditations through ANAB certificate #AT-2956. All testing will be conducted in good faith by trained personnel equipped with the proper equipment and methodologies. Our liability will be limited to the cost of the services, including third-party charges. All test samples will be retained for a minimum of 3 months and/or extension by request. Fraudulent, false or statements of fiction are punishable by Federal Law. All samples received and reported above have been received in proper condition or as noted on the report.

Certification Approval 

Laboratory Director: Anthony J Scala

Date: 8/23/2021

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	8/25/2021

Enalytic ID	E2108039-001
Batch Number	308182021M
Train Number	TILX225269
Sample ID	DEF 32.5%
Date Sampled	8/16/2021
Date Received	8/23/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF** Batch# **308182021M** Train# **TILX225269**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.2	SPT	8/24/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3824	ALB	8/23/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	MDC	8/24/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.13	ALB	8/24/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MDC	8/23/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	2.8	MDC	8/23/2021	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	SPT	8/23/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	8/23/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	8/23/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.10	SPT	8/23/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.03	SPT	8/23/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	8/23/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	8/24/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0888	ALB	8/23/2021	---

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Laboratory Director: Anthony J Scala

Date: 8/25/2021

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	9/8/2021

Enalytic ID	E2109011-001
Batch Number	308282021M
Train Number	UTLX647931
Sample ID	DEF 32.2%
Date Sampled	8/28/2021
Date Received	9/3/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.2% DEF** Batch# 308282021M Train# UTLX647931

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.4	SPT	9/4/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	9/3/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.10	MDC	9/3/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.15	MDC	9/7/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MDC	9/3/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	9/3/2021	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.32	SPT	9/7/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	9/3/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0893	ALB	9/3/2021	---

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Contact	Sharon Stegmuller
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997
Report Date	9/8/2021

Enalytic ID	E2109011-002
Batch Number	308312021P
Train Number	GATX228444
Sample ID	DEF 32.2%
Date Sampled	8/31/2021
Date Received	9/3/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.2% DEF** Batch# **308312021P** Train# **GATX228444**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.6	SPT	9/8/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3832	ALB	9/3/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.10	MDC	9/3/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	MDC	9/7/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MDC	9/3/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	9/3/2021	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.25	SPT	9/7/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	SPT	9/7/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	SPT	9/7/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	9/3/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	9/3/2021	---

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