

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	10/18/2022

Enalytic ID	E2210020-001
Batch Number	310122022P
Train Number	TANK #10
Sample ID	DEF 32.2%
Date Sampled	10/12/2022
Date Received	10/14/2022
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.2% DEF Batch # 310122022P Train # TANK #10

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	31.8	SPT	10/18/2022	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3818	MDC	10/14/2022	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.05	MDC	10/18/2022	Pass
Biuret	%	22241-2 Annex E	<0.3	0.14	MDC	10/17/2022	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MDC	10/18/2022	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	MDC	10/17/2022	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/18/2022	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/18/2022	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/18/2022	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	DSD	10/18/2022	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/18/2022	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/18/2022	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MFB	10/14/2022	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0883	MDC	10/17/2022	---

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.

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 extended on 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: 10/18/2022

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	10/28/2022

Enalytic ID	E2210039-001
Batch Number	310202022M
Train Number	TANK 14-10
Sample ID	DEF 32.3%
Date Sampled	10/20/2022
Date Received	10/25/2022
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.3% DEF Batch # 310202022M Train # TANK 14-10**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.4	SPT	10/28/2022	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	MDC	10/27/2022	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.08	MFB	10/26/2022	Pass
Biuret	%	22241-2 Annex E	<0.3	0.13	MDC	10/26/2022	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	10/27/2022	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	MFB	10/26/2022	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/27/2022	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/27/2022	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/27/2022	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.077	DSD	10/27/2022	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/27/2022	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	10/27/2022	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.036	DSD	10/27/2022	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<(0.54)	0.55	DSD	10/27/2022	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.22	DSD	10/27/2022	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.077	DSD	10/27/2022	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	10/27/2022	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	10/27/2022	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0903	MDC	10/27/2022	---

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Certification Approval _____

Laboratory Director: Anthony J Scala

Date: 10/28/2022

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	11/1/2022

Enalytic ID	E2210047-001
Batch Number	310252022P
Train Number	Tank #14 & 10
Sample ID	DEF 32.50%
Date Sampled	10/25/2022
Date Received	10/28/2022
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.50% DEF Batch # 310252022P Train # TANK #14 & 10

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.3	SPT	11/1/2022	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3826	MDC	10/28/2022	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.05	MFB	10/28/2022	Pass
Biuret	%	22241-2 Annex E	<0.3	0.15	MDC	11/1/2022	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	10/31/2022	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	5.3	MFB	10/31/2022	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	11/1/2022	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	11/1/2022	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	11/1/2022	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	11/1/2022	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	11/1/2022	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	11/1/2022	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	11/1/2022	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	DSD	11/1/2022	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.088	DSD	11/1/2022	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	DSD	11/1/2022	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	DSD	11/1/2022	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	10/28/2022	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0893	MDC	11/1/2022	---

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Certification Approval 

Laboratory Director: Anthony J Scala

Date: 11/1/2022

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	E2011001-001
Batch Number	310302020M
Train Number	TILX265593
Sample ID	DEF 32.6%
Date Sampled	10/30/2020
Date Received	11/2/2020
Report Date	11/5/2020

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241


Client ID: **32.6% DEF Batch # 310302020M Train # TILX265593**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.4	32.6	SPT	11/4/2020	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3830	AEC	11/2/2020	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.07	AEC	11/3/2020	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	AEC	11/3/2020	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	11/3/2020	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	AEC	11/3/2020	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	CLB	11/4/2020	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	11/4/2020	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	11/4/2020	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.07	CLB	11/4/2020	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	11/4/2020	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	11/4/2020	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached)	Spectra	22241-2 Annex J	Control Match	Match	AEC	11/2/2020	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0918	AEC	11/2/2020	---

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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.

"The undersigned certifies that the value(s) reported have met the highest analytical quality control standards."

Certification Approval 
 Laboratory Director: Anthony J Scala

Date: 11/5/2020