

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	6/12/2023

Enalytic ID	E2306007-001
TANK	1&2
Batch Number	306012023L
Train Number	UTLX647899
Sample ID	DEF 32.5%
Date Sampled	6/1/2023
Date Received	6/7/2023
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF TANK 1&2 Batch # 306012023L Train # UTLX647899**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ^{2,4}	Results ⁵	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.6	SPT	6/12/2023	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3831	MDC	6/9/2023	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.08	MDC	6/7/2023	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	MDC	6/8/2023	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	6/7/2023	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	6/8/2023	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.040	NAB	6/9/2023	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/9/2023	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/9/2023	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	NAB	6/9/2023	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.17	NAB	6/9/2023	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	6/8/2023	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	MDC	6/8/2023	---

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 ISO 22241 acceptable limit plus reproducibility for Zinc is shown in parentheses, and is less than or equal to the value shown.

Note 5: Analysis for the Metals section is being conducted on a different ICP while our 2 ICPs undergo upgrades. We have not performed the necessary ANAB QC checks, so the results are valid but not covered under our ISO 17025 Certification.

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: 6/12/2023

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	6/12/2023

Enalytic ID	E2306007-002
TANK	5&4
Batch Number	306052023L
Train Number	UTLX647713
Sample ID	DEF 32.5%
Date Sampled	6/5/2023
Date Received	6/7/2023
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF TANK 5&4 Batch # 306052023L Train # UTLX647713**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ^{2,4}	Results ⁵	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.3	SPT	6/12/2023	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3826	MDC	6/9/2023	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.09	MDC	6/7/2023	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	MDC	6/8/2023	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	6/7/2023	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	6/8/2023	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.049	NAB	6/9/2023	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/9/2023	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/9/2023	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	NAB	6/9/2023	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/9/2023	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/9/2023	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	6/8/2023	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0888	MDC	6/8/2023	---

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 ISO 22241 acceptable limit plus reproducibility for Zinc is shown in parentheses, and is less than or equal to the value shown.

Note 5: Analysis for the Metals section is being conducted on a different ICP while our 2 ICPs undergo upgrades. We have not performed the necessary ANAB QC checks, so the results are valid but not covered under our ISO 17025 Certification.

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Certification Approval 

Laboratory Director: Anthony J Scala

Date: 6/12/2023

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	6/14/2023

Enalytic ID	E2306014-001
TANKS	3&2
Batch Number	306062023M
Train Number	GATX220511
Sample ID	DEF 32.5%
Date Sampled	6/6/2023
Date Received	6/9/2023
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF TANKS 3&2 Batch # 306062023M Train # GATX220511

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results ⁴	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.5	SPT	6/12/2023	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	MDC	6/9/2023	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.09	MDC	6/9/2023	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	MDC	6/12/2023	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	6/9/2023	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MDC	6/12/2023	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/14/2023	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.18	NAB	6/14/2023	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/14/2023	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/14/2023	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/14/2023	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/14/2023	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/14/2023	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	NAB	6/14/2023	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/14/2023	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/14/2023	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/14/2023	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	6/13/2023	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0893	MDC	6/14/2023	---

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Note 3: ISO 17025 accreditation not applied for.

Note 4: Analysis for the Metals section is being conducted on a different ICP while our 2 ICPs undergo upgrades. We have not performed the necessary ANAB QC checks, so the results are valid but not covered under our ISO 17025 Certification.

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Laboratory Director: Anthony J Scala

Date: 6/14/2023

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	6/29/2023

Enalytic ID	E2306053-001
Batch Number	306222023M
Train	GATX220544
Sample ID	DEF 32.5%
Date Sampled	6/22/2023
Date Received	6/27/2023
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF** Batch # **306222023M** Train # **GATX220544**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results ⁴	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.3	SPT	6/29/2023	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3827	MDC	6/27/2023	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.09	MDC	6/27/2023	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	MDC	6/28/2023	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	MFB	6/29/2023	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.5	MFB	6/28/2023	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/27/2023	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/27/2023	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/27/2023	Pass
Phosphate by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	NAB	6/27/2023	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	NAB	6/27/2023	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	NAB	6/27/2023	Pass

Miscellaneous Secondary Unregulated Quality Standards

Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	MDC	6/29/2023	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0888	MDC	6/28/2023	---

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

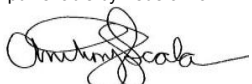
Note 2: The acceptable values are based on the standard 32.5% unless otherwise stated, and are less than or equal to the values shown.

Note 3: ISO 17025 accreditation not applied for.

Note 4: Analysis for the Metals section is being conducted on one of our 2 ICPs which has undergone upgrades, currently being Certified.

We have not performed the necessary ANAB QC checks, so the results are valid but not covered under our ISO 17025 Certification.

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