

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	3/10/2021

Enalytic ID	E2103026-002
Batch Number	303052021P
Train Number	GATX225164
Sample ID	DEF 32.3%
Date Sampled	3/5/2021
Date Received	3/9/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.3% DEF Batch# 303052021P Train# GATX225164

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	3/10/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	3/9/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.06	ALB	3/9/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	ALB	3/9/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/9/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	3/9/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/9/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.06	PEN	3/9/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/9/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	3/9/2021	---

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.

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Certification Approval

Laboratory Director: Anthony J Scala

Date: 3/10/2021

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	3/10/2021

Enalytic ID	E2103026-001
Batch Number	303042021M
Train Number	GATX222481
Sample ID	DEF 32.3%
Date Sampled	3/4/2021
Date Received	3/9/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.3% DEF Batch# 303042021M Train# GATX222481


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	3/10/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	ALB	3/9/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.03	ALB	3/9/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.11	ALB	3/9/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/9/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	2.4	ALB	3/9/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/9/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.08	PEN	3/9/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/9/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/9/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/9/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	3/9/2021	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/10/2021

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	3/17/2021

Enalytic ID	E2103038-001
Batch Number	303082021M
Train Number	TILX265220
Sample ID	DEF 32.5%
Date Sampled	3/8/2021
Date Received	3/15/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 303082021M Train# TILX265220


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	32.7	SPT	3/16/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3832	ALB	3/15/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	ALB	3/15/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.15	ALB	3/15/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/16/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	8.0	ALB	3/15/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/16/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.06	PEN	3/16/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.09	PEN	3/16/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.09	PEN	3/16/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.06	PEN	3/16/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/15/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0908	ALB	3/15/2021	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/17/2021

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	3/17/2021

Enalytic ID	E2103038-002
Batch Number	303092021M
Train Number	UTLX647970
Sample ID	DEF 32.5%
Date Sampled	3/9/2021
Date Received	3/15/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 303092021M Train# UTLX647970


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	3/16/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	ALB	3/15/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.04	ALB	3/15/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.19	ALB	3/15/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/16/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	3/15/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/16/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.06	PEN	3/16/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.08	PEN	3/16/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.06	PEN	3/16/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/15/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	3/15/2021	---

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Laboratory Director: Anthony J Scala

Date: 3/17/2021

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	3/17/2021

Enalytic ID	E2103037-001
Batch Number	303112021M
Train Number	TILX264928
Sample ID	DEF 32.5%
Date Sampled	3/11/2021
Date Received	3/15/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 303112021M Train# TILX264928

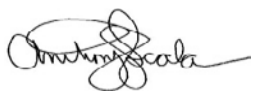
Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.4	SPT	3/16/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	3/15/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.03	ALB	3/15/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.20	ALB	3/15/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/16/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	3.0	ALB	3/15/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/16/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.07	PEN	3/16/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/15/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	3/15/2021	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/17/2021

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	3/17/2021

Enalytic ID	E2103037-002
Batch Number	303122021M
Train Number	GATX224320
Sample ID	DEF 32.5%
Date Sampled	3/12/2021
Date Received	3/15/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 303122021M Train# GATX224320


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	3/16/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	3/15/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.04	ALB	3/15/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.19	ALB	3/15/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/16/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	5.0	ALB	3/15/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/16/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.08	PEN	3/16/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/16/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/16/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/15/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0898	ALB	3/15/2021	---

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/17/2021

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	3/24/2021

Enalytic ID	E2103058-002
Batch Number	303182021P
Train Number	UTLX647702
Sample ID	DEF 32.5%
Date Sampled	3/18/2021
Date Received	3/22/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF** Batch# **303182021P** Train# **UTLX647702**

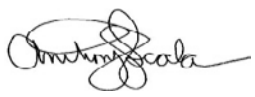
Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ²	Results	Chemist	Analysis Date	Pass/Fail
Urea Content ³	wt%	22241-2 Annex C	31.8-33.4	32.4	SPT	3/24/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3829	ALB	3/23/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.05	ALB	3/22/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	ALB	3/23/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/23/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	3/22/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/23/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.09	PEN	3/23/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/23/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0893	ALB	3/23/2021	---

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.

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/24/2021

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	3/24/2021

Enalytic ID	E2103058-003
Batch Number	303192021C
Train Number	TIMX400156
Sample ID	DEF 32.5%
Date Sampled	3/19/2021
Date Received	3/22/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF Batch# 303192021C Train# TIMX400156**


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	3/24/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	3/23/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.04	ALB	3/22/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.20	ALB	3/23/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/23/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	3/22/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/23/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/23/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/23/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/23/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0888	ALB	3/23/2021	---

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

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Note 3: ISO 17025 accreditation not applied for.

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 3/24/2021

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	4/1/2021

Enalytic ID	E2103071-001
Batch Number	303262021M
Train Number	TILX23252
Sample ID	DEF 32.5%
Date Sampled	3/26/2021
Date Received	3/30/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 303262021M Train# TILX23252


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	32.3	ALB	3/31/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3827	ALB	3/31/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.06	ALB	3/31/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	ALB	3/30/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/31/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	ALB	3/30/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/30/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.05	PEN	3/30/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/31/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0888	ALB	3/31/2021	---

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

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Note 3: ISO 17025 accreditation not applied for.

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Certification Approval 
Laboratory Director: Anthony J Scala

Date: 4/1/2021

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	4/1/2021

Enalytic ID	E2103071-003
Batch Number	303292021M
Train Number	UTLX682257
Sample ID	DEF 32.5%
Date Sampled	3/29/2021
Date Received	3/30/2021
ISO 17025	Certificate Number: AT-2956

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF** Batch# **303292021M** Train# **UTLX682257**

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	ALB	3/31/2021	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3828	ALB	3/31/2021	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.07	ALB	3/31/2021	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	ALB	3/30/2021	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5.0	<1.0	ALB	3/31/2021	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	4.2	ALB	3/30/2021	Pass
Phosphate as P by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.25	PEN	3/30/2021	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.04	PEN	3/30/2021	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	PEN	3/30/2021	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	PEN	3/30/2021	Pass
Miscellaneous Secondary Unregulated Quality Standards							
Identify by FTIR (attached) ³	Spectra	22241-2 Annex J	Control Match	Match	ALB	3/31/2021	---
Density @ 20degC	g/cm ³	3675	Not Applicable	1.0903	ALB	3/31/2021	---

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Certification Approval

Laboratory Director: Anthony J Scala

Date: 4/1/2021