

Client:	DEF Products, LLC
Contact	Sharon Stegmuller
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Analytic ID:	E1802036-001
Batch Number	302072018
Sample ID	DEF 32.8%
Date Sampled	2/7/2018
Date Received	2/14/2018
Report Date	2/19/2018

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.8% DEF Batch# 302072018

Test Parameter/Method	Units	Test Method (ISO)	Acceptable Limit	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.7	SPT	2/19/2018	Pass
Density @ 20degC	g/cm ³	3675	1.0870-1.0930	1.0920	SPT	2/15/2018	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3830	SPT	2/19/2018	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	CLB	2/15/2018	Pass
Biuret	%	22241-2 Annex E	<0.3	<0.1	CLB	2/16/2018	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	CLB	2/14/2018	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	3.0	CLB	2/19/2018	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.31	CLB	2/19/2018	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/14/2018	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/14/2018	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/14/2018	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/14/2018	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/14/2018	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	BDK	2/16/2018	Pass

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

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



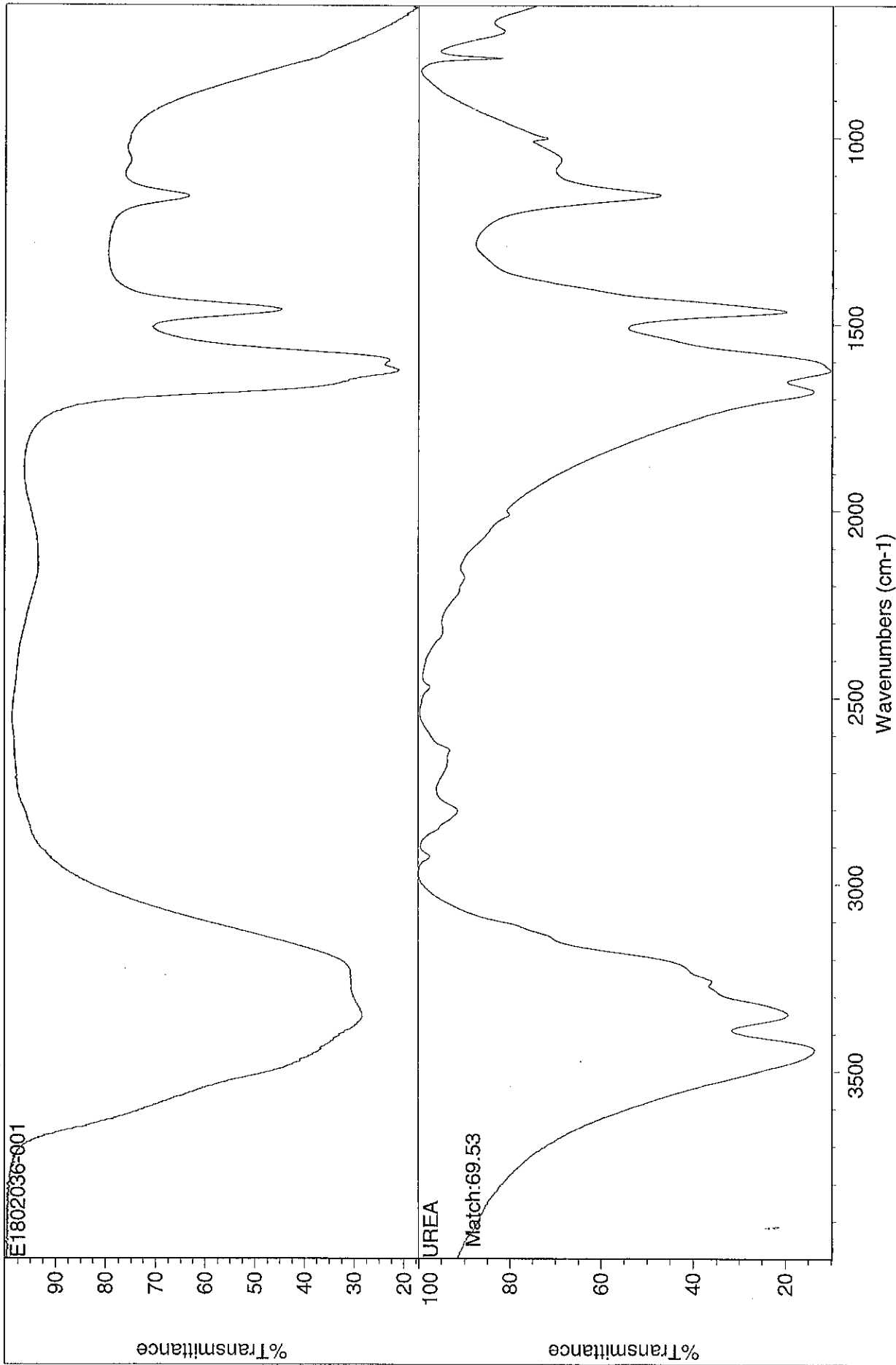
Certification Approval _____

Laboratory Director: Anthony J Scala

Analytic FDA Reg. Number: 02-636-0096

Date: _____ 2/19/2018

Search results for: E1802036-001
Date: Fri Feb 16 09:20:05 2018 (GMT-05:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



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Contact:	Sharon Stegmuller
Address:	422 East Barioni Blvd Imperial, CA 02251
Email:	defproducts@gmail.com
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Analytic ID:	E1802053-001
Batch Number:	302152018
Sample ID:	DEF 32.6%
Date Sampled:	2/15/2018
Date Received:	2/22/2018
Report Date:	2/27/2018

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241
Client ID: 32.6% DEF Batch# 302152018

Test Parameter/Method	Units	Test Method (ISO)	Acceptable Limit	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.2	SPT	2/27/2018	Pass
Density @ 20degC	g/cm ³	3675	1.0870-1.0930	1.0910	CLB	2/26/2018	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3825	SPT	2/23/2018	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	CLB	2/26/2018	Pass
Biuret	%	22241-2 Annex E	<0.3	0.23	CLB	2/26/2018	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	CLB	2/27/2018	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	6.0	CLB	2/27/2018	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.31	CLB	2/27/2018	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/27/2018	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/27/2018	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/27/2018	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	2/27/2018	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	2/27/2018	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	BDK	2/27/2018	Pass

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Certification Approval _____

Laboratory Director: Anthony J Scala

Analytic FDA Reg. Number: 02-636-0096

Date: 2/27/2018

Search results for: E1802053-001
Date: Tue Feb 27 13:40:19 2018 (GMT-05:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00

