

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Analytic ID	E1809007-001
Batch Number	309042018
Train Number	UTLX647889
Sample ID	DEF 32.5
Date Sampled	9/4/2018
Date Received	9/6/2018
Report Date	9/10/2018

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.5% DEF Batch# 309042018 Train #UTLX647889

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	32.0	SPT	9/10/2018	Pass
Density @ 20degC	g/cm ³	3675	1.0870-1.0930	1.0895	CND	9/7/2018	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3820	CND	9/7/2018	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	CLB	9/10/2018	Pass
Biuret	%	22241-2 Annex E	<0.3	0.18	CLB	9/10/2018	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	CLB	9/7/2018	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	7.0	CND	9/10/2018	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.25	CLB	9/7/2018	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.22	BDK	9/6/2018	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	9/6/2018	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.03	BDK	9/6/2018	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	9/6/2018	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.12	BDK	9/6/2018	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	9/6/2018	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.18	BDK	9/6/2018	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.06	BDK	9/6/2018	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.14	BDK	9/6/2018	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.16	BDK	9/6/2018	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	CLB	9/10/2018	Pass

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.

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



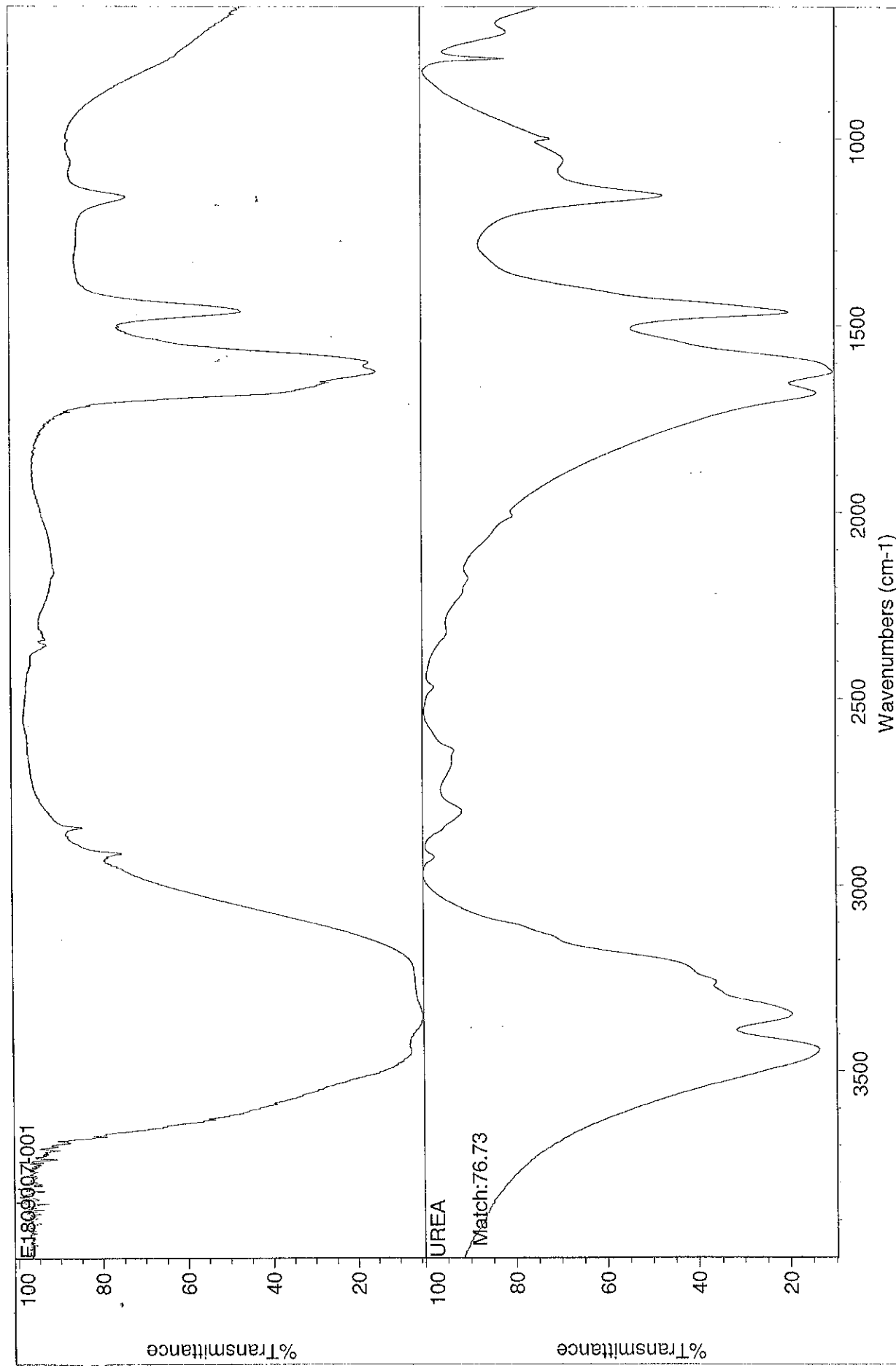
Certification Approval _____

Laboratory Director: Anthony J Scala

Analytic FDA Reg. Number: 02-636-0096

Date: 9/10/2018

Search results for: E1809007-001
Date: Mon Sep 10 13:46:19 2018 (GMT-04:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



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Client:

Project #/ Project Name

[illegible]

Client:	DEF Products, LLC
Contact	Joe Servin, General Manager
Address	422 East Barioni Blvd Imperial, CA 02251
Email	defproducts@gmail.com
Phone	760 355 7997

Enalytic ID	E1810009-001
Batch Number	309262018
Train Number	AEX11804
Sample ID	DEF 32.7
Date Sampled	9/26/2018
Date Received	10/3/2018
Report Date	10/8/2018

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.7% DEF Batch# 309262018 Train #AEX11804

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	32.3	SPT	10/8/2018	Pass
Density @ 20degC	g/cm ³	3675	1.0870-1.0930	1.0905	CND	10/4/2018	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3826	CND	10/4/2018	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	CND	10/4/2018	Pass
Biuret	%	22241-2 Annex E	<0.3	0.26	CND	10/4/2018	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	CND	10/5/2018	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	CLB	10/5/2018	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.25	CLB	10/4/2018	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	10/5/2018	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	10/5/2018	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	10/5/2018	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	10/5/2018	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	10/5/2018	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	BDK	10/5/2018	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	10/5/2018	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	BDK	10/5/2018	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.12	BDK	10/5/2018	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.39	BDK	10/5/2018	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	CLB	10/4/2018	Pass

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

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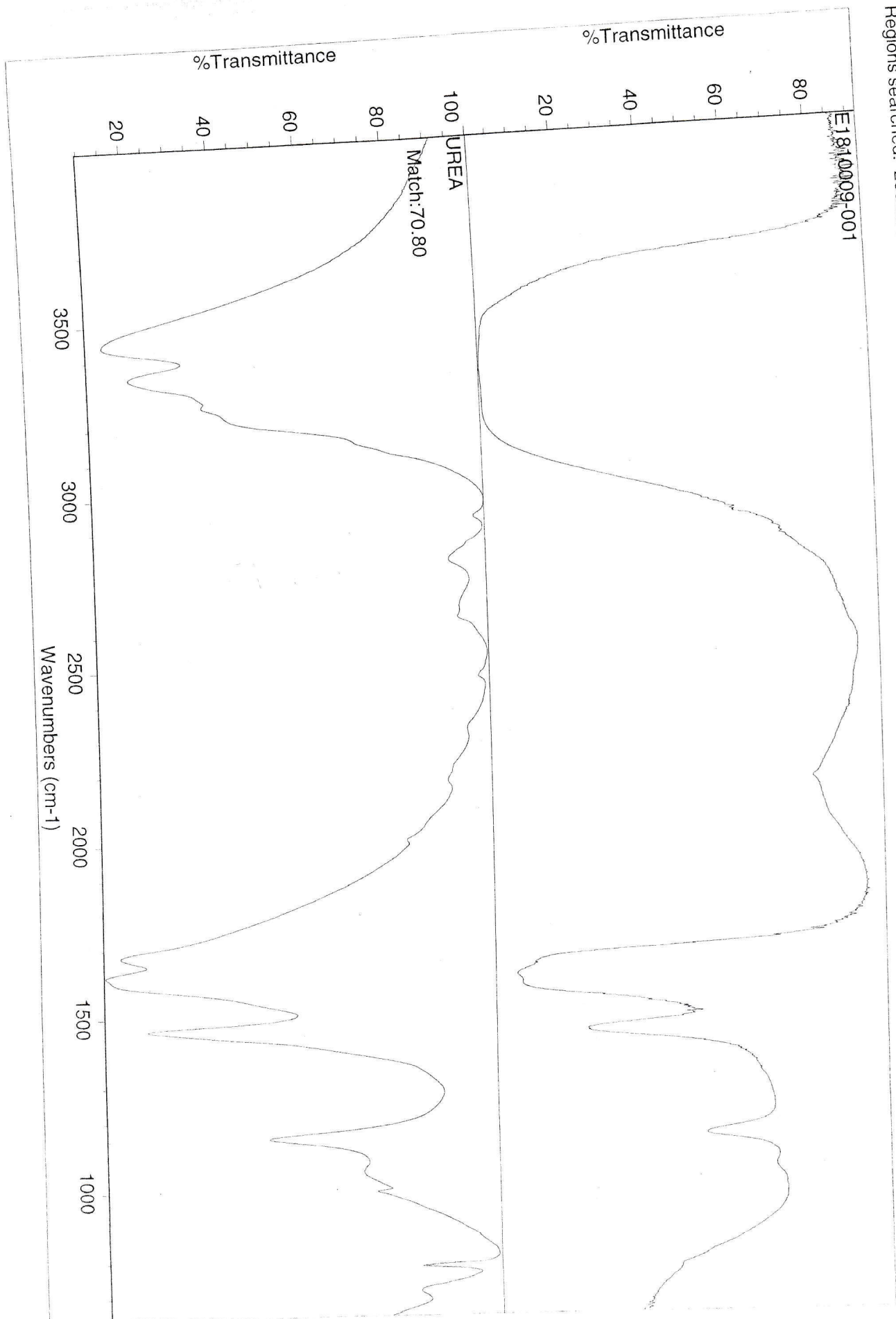
Certification Approval _____

Laboratory Director: Anthony J Scala

Enalytic FDA Reg. Number: 02-636-0096

Date: 10/8/2018

Search results for: E1810009-001
Date: Thu Oct 04 09:01:58 2018 (GMT-04:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



Chain of Custody Record

Quote Number:

Date	Time	Rec'd for Lab by:
10/11/18	11:58 am	Anthony T Scuda