

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	E1901019-001
Batch Number	301092019
Train Number	UTLX647781
Sample ID	DEF 32.8
Date Sampled	1/9/2019
Date Received	1/11/2019
Report Date	1/24/2019

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.8% DEF Batch# 301092019 Train# UTLX647781

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ^{2,3}	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	33.1	SPT	1/16/2019	Pass
Density @ 20degC	g/cm ³	3675	1.0865-1.0935	1.0935	CND	1/21/2019	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3836	CND	1/15/2019	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	0.02	CND	1/14/2019	Pass
Biuret	%	22241-2 Annex E	<0.3	0.12	CND	1/15/2019	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	CND	1/15/2019	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	CND	1/14/2019	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.25	CND	1/16/2019	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/17/2019	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/17/2019	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/17/2019	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/17/2019	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/17/2019	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	CND	1/14/2019	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.

Note 3: The acceptable range for Density has been adjusted for reproducibility per Annex B.

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



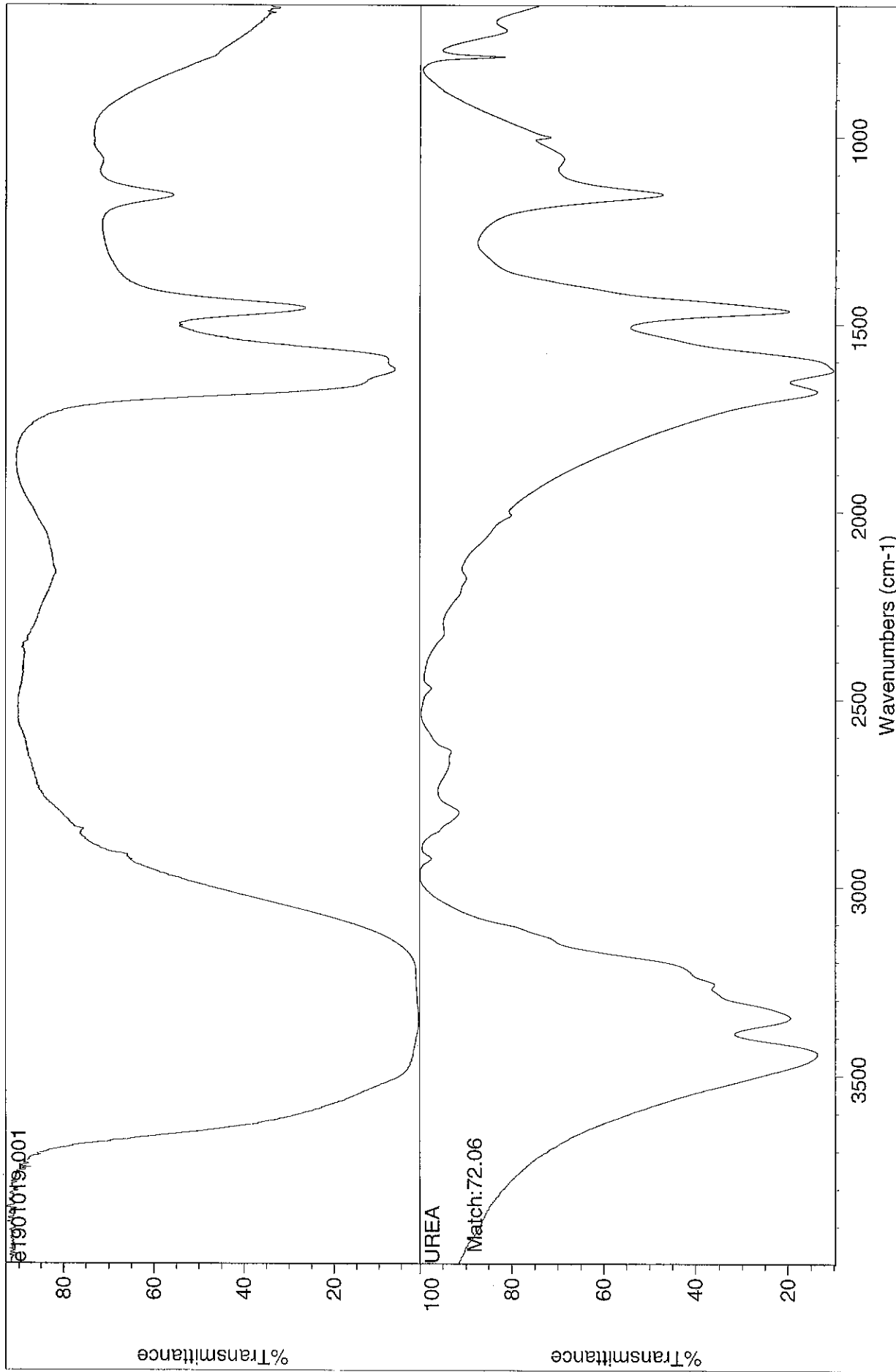
Certification Approval _____

Laboratory Director: Anthony J. Scala

Enalytic DUNS Reg. Number: 02-636-0096

Date: 1/24/2019

Search results for: e1901019-001
Date: Mon Jan 14 16:00:28 2019 (GMT-05:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



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	E1901036-001
Batch Number	301232019
Train Number	UTLX648004
Sample ID	DEF 32.7
Date Sampled	1/23/2019
Date Received	1/24/2019
Report Date	1/30/2019

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: 32.7% DEF Batch# 301232019 Train# UTLX648004

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ^{2,3}	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.8	SPT	1/28/2019	Pass
Density @ 20degC	g/cm ³	3675	1.0865-1.0935	1.0935	CND	1/25/2019	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3833	CND	1/25/2019	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	1/25/2019	Pass
Biuret	%	22241-2 Annex E	<0.3	0.16	BDK	1/24/2019	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	BDK	1/24/2019	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	CND	1/24/2019	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.25	BDK	1/28/2019	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/29/2019	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/29/2019	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/29/2019	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.04	CLB	1/29/2019	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.04	CLB	1/29/2019	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/29/2019	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/29/2019	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/29/2019	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.10	CLB	1/29/2019	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.23	CLB	1/29/2019	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	CND	1/24/2019	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.

Note 3: The acceptable range for Density has been adjusted for reproducibility per Annex B.

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



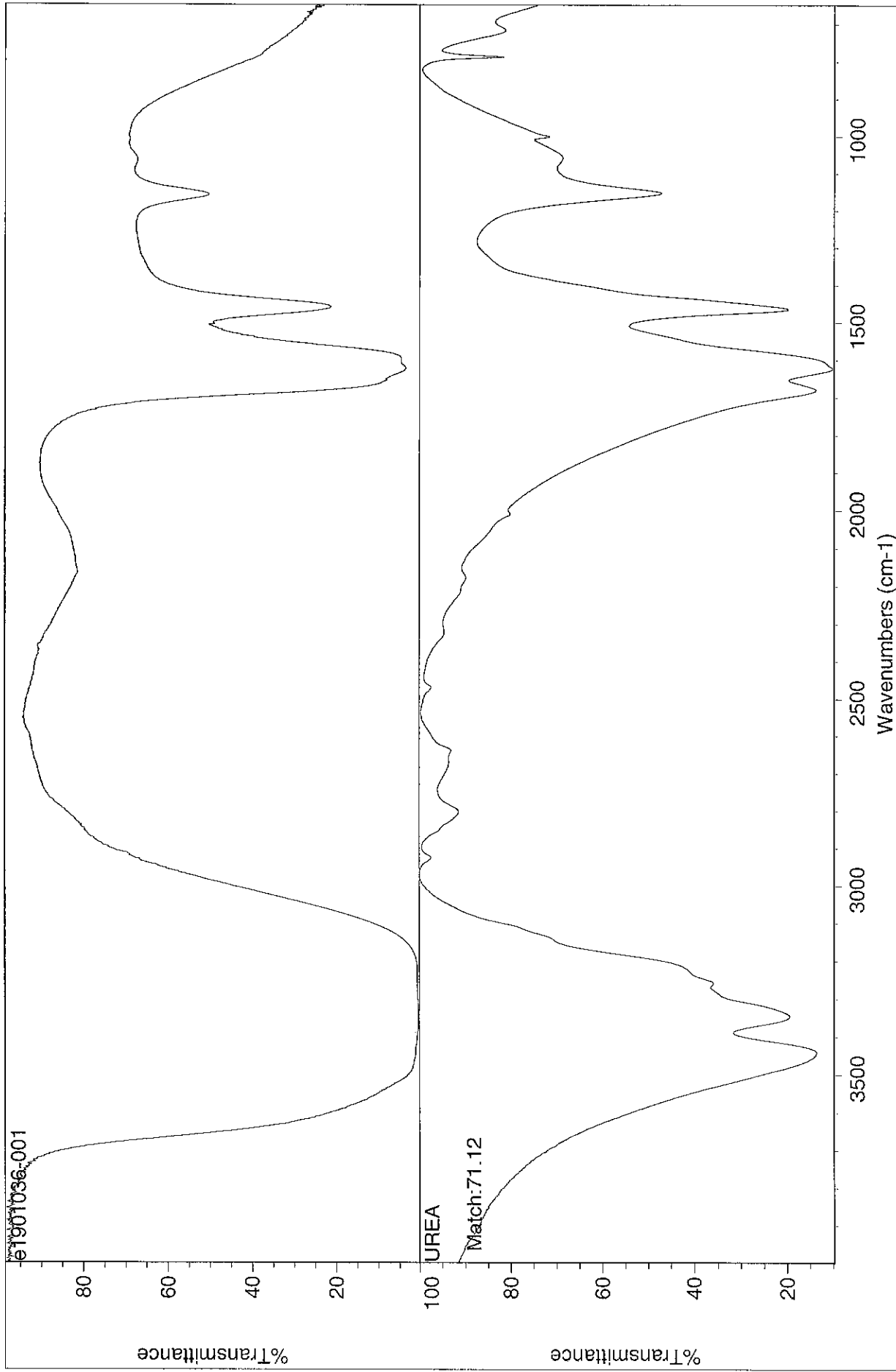
Certification Approval _____

Laboratory Director: Anthony J. Scala

Enalytic DUNS Reg. Number: 02-636-0096

Date: 1/30/2019

Search results for: e1901036-001
Date: Thu Jan 24 13:58:13 2019 (GMT-05:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



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	E1901047-001
Batch Number	301242019
Train Number	TILX265030
Sample ID	DEF 32.5
Date Sampled	1/24/2019
Date Received	1/25/2019
Report Date	1/30/2019

Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241

Client ID: **32.5% DEF Batch# 301242019 Train# TILX265030**

Test Parameter/Method	Units	Test Method (ISO) ¹	Acceptable Limit ^{2,3}	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Annex C	31.8-33.2	32.6	SPT	1/30/2019	Pass
Density @ 20degC	g/cm ³	3675	1.0865-1.0935	1.0925	CND	1/25/2019	Pass
Refractive Index @ 20degC	N _D ²⁰	22241-2 Annex C	1.3814-1.3843	1.3830	CND	1/25/2019	Pass
Alkalinity as NH ₃	%	22241-2 Annex D	<0.2	<0.01	BDK	1/25/2019	Pass
Biuret	%	22241-2 Annex E	<0.3	0.17	BDK	1/25/2019	Pass
Aldehyde	mg/kg	22241-2 Annex F	<5	<1.0	BDK	1/29/2019	Pass
Insolubles	mg/kg	22241-2 Annex G	<20	<2.0	BDK	1/28/2019	Pass
Phosphate	mg/kg	22241-2 Annex H	<0.5	<0.25	BDK	1/30/2019	Pass
Calcium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/30/2019	Pass
Iron by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/30/2019	Pass
Copper by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/30/2019	Pass
Zinc by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.04	CLB	1/30/2019	Pass
Chromium by ICP-OES	mg/kg	22241-2 Annex I	<0.2	0.04	CLB	1/30/2019	Pass
Nickel by ICP-OES	mg/kg	22241-2 Annex I	<0.2	<0.02	CLB	1/30/2019	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/30/2019	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	<0.05	CLB	1/30/2019	Pass
Sodium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.07	CLB	1/30/2019	Pass
Potassium by ICP-OES	mg/kg	22241-2 Annex I	<0.5	0.10	CLB	1/30/2019	Pass
Identity by FTIR (attached)	Spectra	22241-2 Annex J	Match	Reference Match	CND	1/25/2019	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.

Note 3: The acceptable range for Density has been adjusted for reproducibility per Annex B.

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



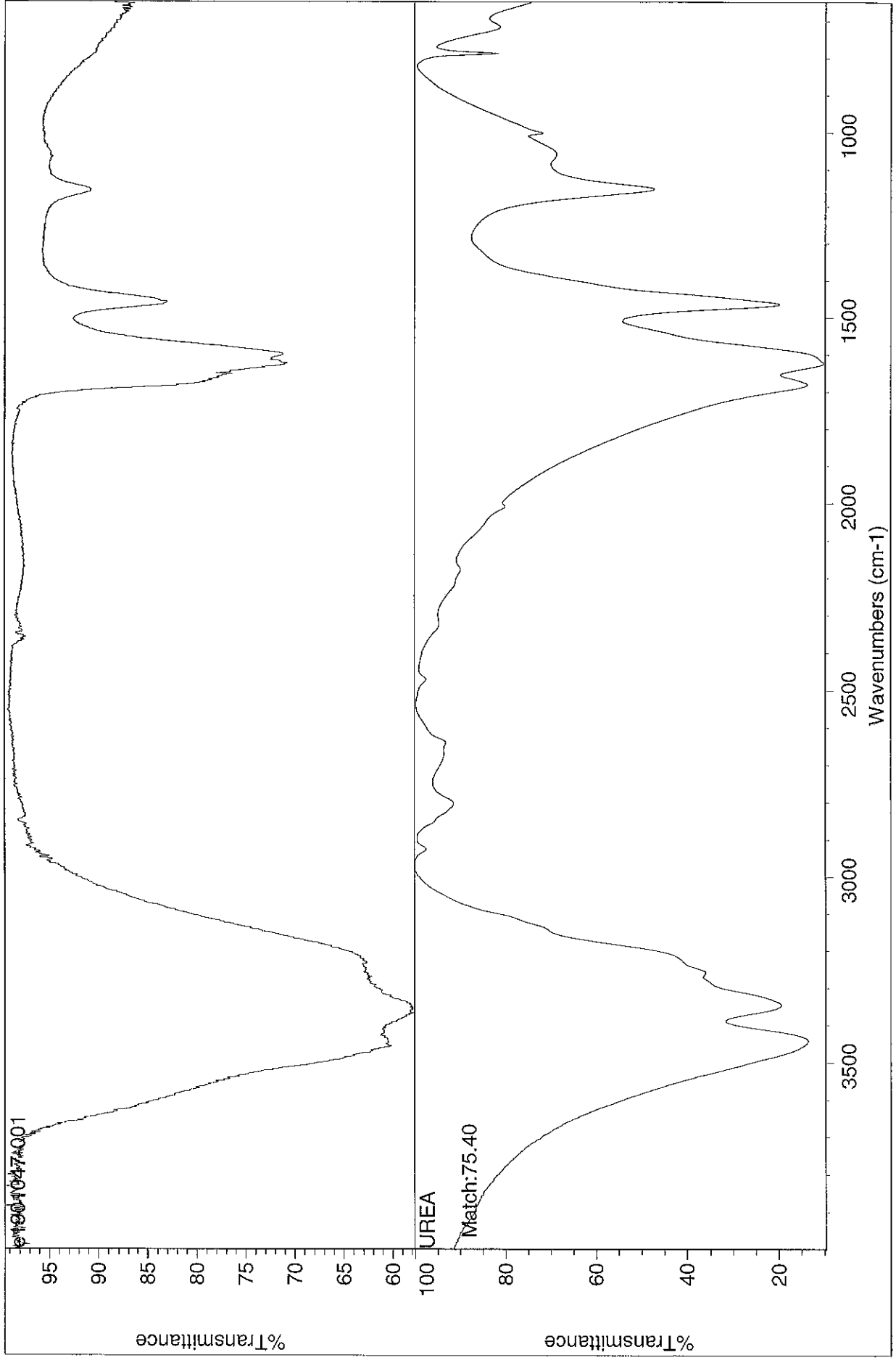
Certification Approval _____

Laboratory Director: Anthony J. Scala

Analytic DUNS Reg. Number: 02-636-0096

Date: 1/30/2019

Search results for: e1901047-001
Date: Fri Jan 25 13:44:56 2019 (GMT-05:00)
Search algorithm: Search Expert
Regions searched: 2600.00-450.00



Chain of Custody Record

6034 Corporate Drive, East Syracuse, NY 13057
 Phone: 315.437.0255 Fax: 315.437.1209

Quote Number:

Client: DEF Products, LLC Phone #: (760) 355-7897			Project # Project Name: ISO 22241 DEF Testing			Number of Containers: 2			Remarks: Product Testing Certificate of Analysis		
Client Contact: Sharon Stegmuller Sample ID: Batch # 301242019 Train # TILX265030 PERCENT DEF 32.5%			Location (City/State): 422 E. Barioni Blvd., Imperial CA			Date: 1/24/2019			Lab Internal Use Only: E1901047		
Matrix: Liquid			Grab or Comp: Comp			Time: N/A			1 2 3 4 5 6 7 8 9 10		
Type: HDPE			Size: 500 ml			Preservative: None			Name of Courier: UPS Next Day Air Saver		
Sample bottle:			Parameter and Method:			Relinquished by: (sign)			Date: 1/25/19		
1 Urea Content			2 Refractive Index @ 20degC			DEF Products, LLC			Time: 9:33 am		
3 Density @ 20degC			4 Alkalinity (as NH3)			Relinquished by: (sign)			Date: 1/25/19		
5 Biuret			6 Aldehydes			DEF Products, LLC			Received by: (sign)		
7 Insolubles			8 Phosphate			Relinquished by: (sign)			Date: 1/25/19		
9 Total Metals: Al,Ca,Cr,Cu,Fe,K,Mg,Ni,Na,Zn.			10 FTIR			Relinquished by: (sign)			Rec'd for Lab by: C. Scala		