

Client:	DEF Products, LLC/McNeece Bros.
Contact	Ray Pedersen
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Email	<a href="mailto:defproducts@gmail.com">defproducts@gmail.com</a>
Phone	760 427 4470

Enalytic ID:	E1701014-001
Batch Number	TRC #301032017
Sample ID	32.8% DEF
Date Sampled	1/4/2017
Date Received	1/10/2017
Report Date	1/20/2017

## Certificate of Analysis

Diesel Exhaust Fluid Analytical ISO-22241  
 Client ID: 32.8% DEF TRC #301032017

Test Parameter/Method	Units	Test Method (ISO)	Acceptable Limit	Results	Chemist	Analysis Date	Pass/Fail
Urea Content	wt%	22241-2 Ann C	31.8-33.2	32.0	SPT	1/20/2017	Pass
Density @ 20degC	g/cm <sup>3</sup>	3675/1285	1.0870-1.0930	1.0870	AVM	1/13/2017	Pass
Refractive Index @ 20degC	N <sub>D</sub> <sup>20</sup>	22241-2 Ann C	1.3814-1.3843	1.3820	AVM	1/13/2017	Pass
Alkalinity as NH <sub>3</sub>	%	22241-2 Ann D	<0.2	<0.2	AVM	1/11/2017	Pass
Biuret	%	22241-2 Ann E	<0.3	0.1	SLC	1/16/2017	Pass
Aldehyde	mg/kg	22241-2 Ann F	<5	<5	SLC	1/16/2017	Pass
Insolubles	mg/kg	22241-2 Ann G	<20	<20	SML	1/20/2017	Pass
Phosphate	mg/kg	22241-2 Ann H	<0.5	<0.25	AVM	1/16/2017	Pass
Calcium by ICP-OES	mg/kg	22241-2 Ann I	<0.5	0.43	SPT	1/19/2017	Pass
Iron by ICP-OES	mg/kg	22241-2 Ann I	<0.5	<0.05	SPT	1/19/2017	Pass
Copper by ICP-OES	mg/kg	22241-2 Ann I	<0.2	<0.02	SPT	1/19/2017	Pass
Zinc by ICP-OES	mg/kg	22241-2 Ann I	<0.2	<0.02	SPT	1/19/2017	Pass
Chromium by ICP-OES	mg/kg	22241-2 Ann I	<0.2	<0.02	SPT	1/19/2017	Pass
Nickel by ICP-OES	mg/kg	22241-2 Ann I	<0.2	<0.02	SPT	1/19/2017	Pass
Aluminum by ICP-OES	mg/kg	22241-2 Ann I	<0.5	<0.05	SPT	1/19/2017	Pass
Magnesium by ICP-OES	mg/kg	22241-2 Ann I	<0.5	<0.05	SPT	1/19/2017	Pass
Sodium by ICP-OES	mg/kg	22241-2 Ann I	<0.5	<0.05	SPT	1/19/2017	Pass
Potassium by ICP-OES	mg/kg	22241-2 Ann I	<0.5	<0.05	SPT	1/19/2017	Pass
Identity by FTIR (attached)	Spectra	22241-2 Ann J	Match	Reference Match	SPT	1/20/2017	Pass

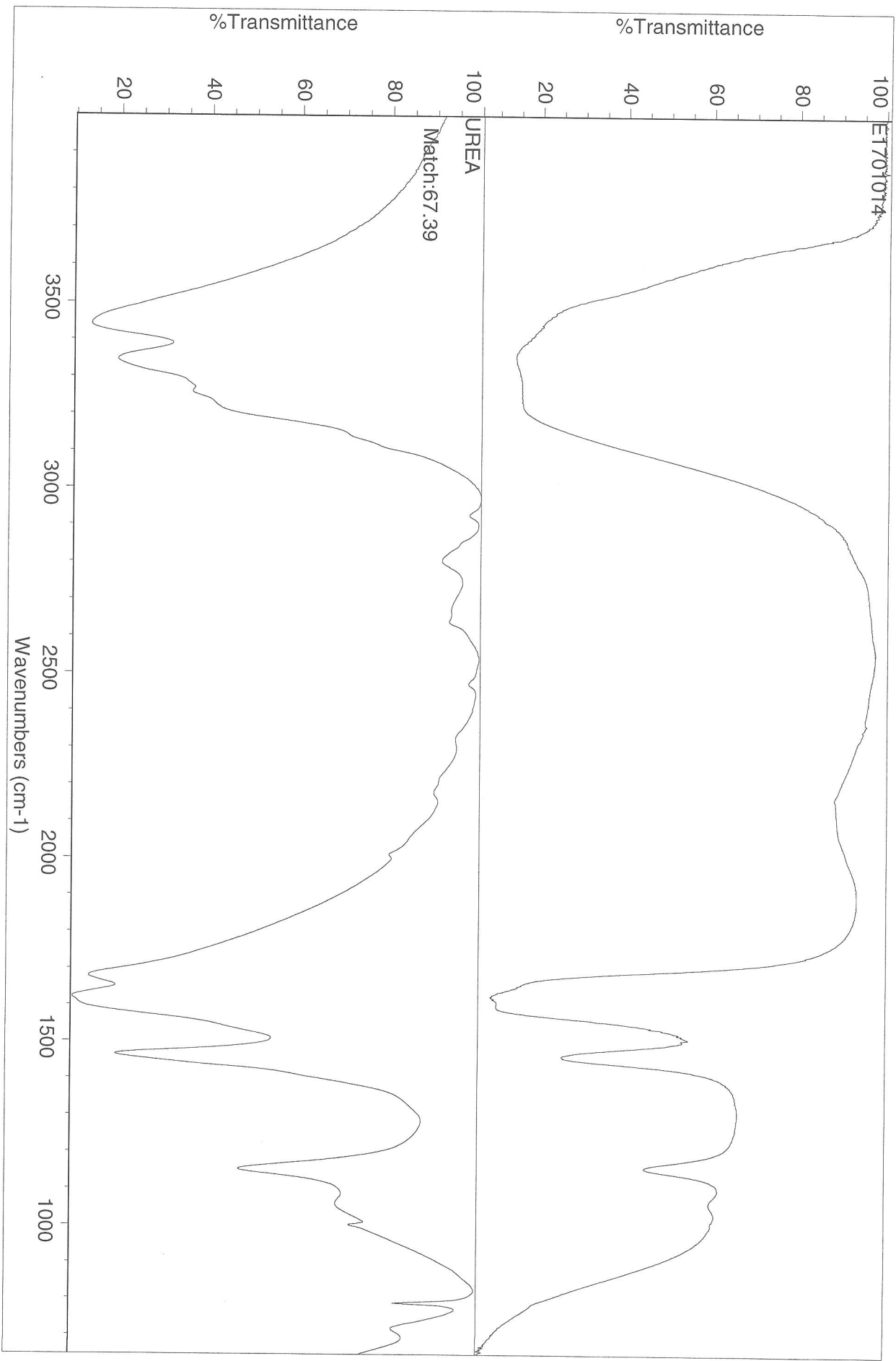
"The undersigned certifies that the value(s) reported have met the highest analytical quality control standards."



Certification Approval \_\_\_\_\_  
 Laboratory Director: Anthony J Scala  
 Enalytic FDA Reg. Number: 02-636-0096

Date: 1/20/2017

Search results for: E1701014  
Date: Fri Jan 20 11:48:54 2017 (GMT-05:00)  
Search algorithm: Search Expert  
Regions searched: 2600.00-450.00



# analytic

Analytical Testing Laboratories

## Chain of Custody Record

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

Quote Number:

ISO 22241 DEF Testing

Location (City/State)

422 E. Barton Blvd., Imperial CA

Phone #

Ray Pedersen (760) 427-4479

Remarks

Product Testing  
Certificate of Analysis

Client Contact: DEF Products, LLC

Sample ID

Date

Time

Matrix

Grab or Comp

Lab Internal Use Only

Number of Containers

1

2

3

4

5

6

7

8

9

10

32.8% DEF TRC #301032017

1/4/2017

N/A

Liquid

Comp

-001

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X

X

X

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Parameter and Method	Sample bottle:	Type	Size	Preservative	Sampled by (Print)	Date	Time	Name of Courier
1 Urea Content		HDPE	500 ml	None	Ray Pedersen DEF Products, LLC			UPS 3 Day Select
2 Refractive Index @ 20degC								
3 Density @ 20degC								
4 Alkalinity (as NH3)								
5 Biuret								
6 Aldehydes								
7 Insolubles								
8 Phosphate								
9 Total Metals: Al,Ca,Cr,Cu,Fe,K,Mg,NI,Na,Zn.								
10 FTIR								

Rec'd for Lab by:  
PETER KRICANO  
ANALYTIC LLC