

## NVFEL Fuel Analysis Report

24293

## Tier 3

Batch#

Facility Name: US EPA NVFEL Testing Fuel Group Facility Type: In House

Owner: USEPA Phone: (734) 214-4881

2565 Plymouth Road

Ann Arbor MI 48105-2425 Washtenaw County

US

Inspector: Chuck Schenk Inspection Date : 5/2/2011

Time In: 00:00 Time Out: 00:00

Samples Type: Test Fuel

VOC

Inspection information logged in by NST on 7/14/2014.

Season:

Tier 3-non cert

FTAG: 24293

Comments:

Test Code	Test Method	Results	Units	Fuel_ Code:	76	Analyst	Analysis Date
595	Volume Percent Oxygenates by D4815	9.80	Volume Percent			TS	7/16/2014
5808	Weight Percent Oxygenates by D5599	10.08	Weight Percent			TS	7/15/2014
596	MTBE by D4815	0.00	Volume Percent			TS	7/16/2014
597	ETBE by D4815	0.00	Volume Percent			TS	7/16/2014
598	TAME by D4815	0.00	Volume Percent			TS	7/16/2014
600	DIPE by D4815	0.00	Volume Percent			TS	7/16/2014
5807	i-Propanol by D4815	0.00	Volume Percent			TS	7/16/2014
5809	t-Amyl Alcohol by D4815	0.00	Volume Percent			TS	7/16/2014
5810	n-Butanol by D4815	0.00	Volume Percent			TS	7/16/2014
5804	sec-Butanol by D4815	0.00	Oxygen weight Percent			TS	7/16/2014
5806	n-Propanol by D4815	0.00	Volume Percent			TS	7/16/2014
590	Weight Percent Oxygen by D4815	3.58	Weight Percent			TS	7/16/2014
594	Weight Percent Oxygenates by D4815	10.33	Weight Percent			TS	7/16/2014
5810	n-Butanol by D4815	0.00	Volume Percent			TS	7/16/2014
428	Sulfur in Gasoline by D5453	6.30	Parts Per Million			NS	7/16/2014
5803	sec-Butanol by D4815	0.00	Volume Percent			TS	7/16/2014
552	MTBE by D5599	0.00	Oxygen Percent			TS	7/15/2014
562	ETBE by D5599	0.00	Oxygen Percent			TS	7/15/2014
534	Ethanol by D5599	3.50	Oxygen Percent			TS	7/15/2014
572	TAME by D5599	0.00	Oxygen Percent			TS	7/15/2014
62	Vapor Pressure by D5191 (Modified)	9.20	PS I			NST	7/15/2014
62	Vapor Pressure by D5191 (Modified)	9.21	PS I			NST	7/15/2014
65	Percent Evaporated at 200 Degrees F D86	50.3	Volume Percent			RG	7/15/2014
66	Percent Evaporated at 300 Degrees F D86	90.4	Volume Percent			RG	7/15/2014
48	Aromatics in Gasoline MSD D5769	25.49	Volume Percent			TW	7/17/2014
49	Olefins in by FIA D1319	6.6	Volume Percent			RCG	7/16/2014
64	Benzene in Gasoline D3606	0.65	Volume Percent			TW	7/18/2014
55	MTBE by D5599	0.00	Volume Percent			TS	7/15/2014
593	Volume Percent Oxygenates by D5599	9.56	Volume Percent			TS	7/15/2014
59	Weight Percent Oxygen by D5599	3.50	Weight Percent			TS	7/15/2014
57	TAME by D5599	0.00	Volume Percent			TS	7/15/2014
532	Ethanol by D5599	9.56	Volume Percent			TS	7/15/2014
56	ETBE by D5599	0.00	Volume Percent			TS	7/15/2014

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46	Aromatics by FIA D1319	27.3 Volume Percent	RCG	7/16/2014
63	Benzene in Gasoline by GC/MSD D5769	0.66 Volume Percent	TW	7/17/2014
630	Toluene in gasoline by MSD D5769	23.73 Volume Percent	TW	7/17/2014
69	Specific Gravity @ 60 deg F D4052	0.75327 60/60F	NT	7/15/2014
69	Specific Gravity @ 60 deg F D4052	0.75321 60/60F	NT	7/15/2014
692	Degrees API D4052	56.35 Degrees API	NT	7/15/2014
692	Degrees API D4052	56.36 Degrees API	NT	7/15/2014
691	Density @ 60 deg F D4052	0.75246 g/cm-03 @ 60 deg F	NT	7/15/2014
691	Density @ 60 deg F D4052	0.75253 g/cm-03 @ 60 deg F	NT	7/15/2014
101	Initial Boiling Point D86	94.2 Degrees F	RG	7/15/2014
110	10 Percent D86	125.0 Degrees F	RG	7/15/2014
150	50 Percent D86	197.5 Degrees F	RG	7/15/2014
190	90 Percent D86	296.0 Degrees F	RG	7/15/2014
200	End Point D86	372.8 Degrees F	RG	7/15/2014
201	Residue D86	1.1 mL	RG	7/15/2014
202	Total Recovery D86	97.8 mL	RG	7/15/2014
203	Loss D86	1.1 mL	RG	7/15/2014
543	Methanol by D5599	0.00 Volume Percent	TS	7/15/2014
533	Ethanol by D4815	9.80 Volume Percent	TS	7/16/2014
584	Isopropanol by D5599	0.00 Volume Percent	TS	7/15/2014
585	t-Butanol by D5599	0.00 Volume Percent	TS	7/15/2014
586	n-Propanol by D5599	0.00 Volume Percent	TS	7/15/2014
587	sec-Butanol by D5599	0.00 Volume Percent	TS	7/15/2014
588	DIPE by D5599	0.00 Volume Percent	TS	7/15/2014
589	Isobutanol by D5599	0.00 Volume Percent	TS	7/15/2014
5801	t-Amyl Alcohol by D5599	0.00 Volume Percent	TS	7/15/2014
5802	n-Butanol by D5599	0.00 Volume Percent	TS	7/15/2014
542	Methanol in Gasoline D4815	0.00 Volume Percent	TS	7/16/2014
582	t-Butanol in Gasoline D4815	0.00 Volume Percent	TS	7/16/2014
583	i-Butanol in Gasoline D4815	0.00 Volume Percent	TS	7/16/2014
32	Weight Fraction Carbon D3343	0.83190 Weight Fraction	JG	
221	Motor Octane	85.4 Motor Octane Number	Paragon	7/18/2014
218	Sensitivity	9.3 RON-MON	CPU	7/18/2014
220	Research Octane	94.7 Research Octane Number	Paragon	7/18/2014
219	Antiknock	90.05 (RON+MON)/2	CPU	7/18/2014
230	Net Heating Value D240	17709.00 BTU/lb	JG	7/22/2014
492	Olefins by D6550	5.6 Volume Percent	LS	7/16/2014

SUGGESTED CITATION: 2013 Chevrolet Malibu ILS Vehicle Tier 2 & 3 Fuels – Test Data Package. Version 2018-09.

Ann Arbor, MI: US EPA, National Vehicle and Fuel Emissions Laboratory, National Center for Advanced Technology, 2018.