

Certificate Number: 18-019225

Report Date: November 16, 2018

**Client:****HOMELAND ENERGY SOLUTIONS**

2779 IA HIGHWAY 24

LAWLER IA 52154

UNITED STATES

**Sample Information:****SGS Sample Identification:** MW18-11722.001**Client Sample Identification:** 11.06.18 SYRUP**Received:** November 08, 2018**Sample/Product Type:** Syrup, DDG

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Analysis	Result	Units	L.O.Q.	Method
Calcium	0.03	%	0.0124	AOAC 968.08 (ICP)
Copper	4.01	PPM	0.081	AOAC 968.08 (ICP)
Iron	67.99	PPM	0.2428	AOAC 968.08 (ICP)
Potassium	1.70	%	0.0044	AOAC 968.08 (ICP)
Magnesium	0.45	%	0.0029	AOAC 968.08 (ICP)
Manganese	16.10	PPM	0.0917	AOAC 968.08 (ICP)
Sodium	0.02	%	0.0015	AOAC 968.08 (ICP)
Phosphorus	1.30	%	0.0063	AOAC 968.08 (ICP)
Sulfur	0.42	%	0.0177	AOAC 968.08 (ICP)
Zinc	66.88	PPM	1.4846	AOAC 968.08 (ICP)

Analysis	As Received	On Dry Matter	Units	Method
Drymatter	45.93	--	%	NFTA 2.2.2.5
Moisture	54.07	--	%	NFTA 2.2.2.5
Crude Fiber	1.12	2.45	%	AOAC 962.09
Crude ash content	5.837	12.709	%	AOAC 942.05
NDF	10.15	--	%	ANKOM Technology Method 6
Crude Fat	4.57	9.96	%	AOAC 2003.06 (Petroleum Ether)
Crude Protein	13.61	29.63	%	AOAC 990.03
Acid detergent fiber	8.80	19.17	%	Calculation
Digestable Energy	0.80	1.74	Mcal/lb	Calculation
Metabolizable Energy	0.62	--	Mcal/lb	Calculation
Net Energy Gain	0.27	0.58	Mcal/lb	Calculation
Net Energy Lactation	0.38	0.83	Mcal/lb	Calculation
Net Energy Maintenance	0.42	0.91	Mcal/lb	Calculation
Total digestable nutrients	36.27	78.96	%	Calculation
ADF	8.80	19.17	%	ANKOM Technology Method 5

**Abbreviations:****L.O.Q.:** Limit of Quantification**L.O.D.:** Limit of Detection**N/A:** Not Applicable**N.D.:** Not Detected

WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and/or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

The sample condition upon arrival was acceptable for testing unless otherwise noted.

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Jacob Swanson  
Analytical Chemistry Supervisor  
**Start/End Analysis:** 11/08/2018 - 11/15/2018

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