

Certificate of Analysis



Certificate Number: 18-019109

Report Date: November 14, 2018

Client:

HOMELAND ENERGY SOLUTIONS

2779 IA HIGHWAY 24

LAWLER IA 52154

UNITED STATES

Sample Information:

SGS Sample Identification: MW18-11685.001

Client Sample Identification: CHS 2018 WEEK 44

Received: November 07, 2018

Sample/Product Type: Distillers dried grains with solubles

Analysis	Result	Units	L.O.Q.	Method
Hunter L Color	54.03		N/A	ColorFlex User's Guide, Ver. 2.5
Calcium	0.02	%	0.0028	AOAC 968.08 (ICP)
Copper	4.62	PPM	2.7889	AOAC 968.08 (ICP)
Iron	63.02	PPM	6.8889	AOAC 968.08 (ICP)
Potassium	1.22	%	0.0694	AOAC 968.08 (ICP)
Magnesium	0.34	%	0.0209	AOAC 968.08 (ICP)
Manganese	12.30	PPM	0.9778	AOAC 968.08 (ICP)
Sodium	N.D.	%	0.014	AOAC 968.08 (ICP)
Phosphorus	0.95	%	0.0554	AOAC 968.08 (ICP)
Sulfur	0.51	%	0.021	AOAC 968.08 (ICP)
Zinc	62.23	PPM	5.5556	AOAC 968.08 (ICP)
Vomitoxin (DON)	2.779	PPM	0.5	Neogen Veratox (ELISA)
Aflatoxin	N.D.	PPB	5	AOAC-RI 050901 (ELISA)
Aflatoxin B1	N.D.	PPB	1	LC/MS/MS
Aflatoxin B2	N.D.	PPB	1	LC/MS/MS
Aflatoxin G1	N.D.	PPB	1	LC/MS/MS
Aflatoxin G2	N.D.	PPB	1	LC/MS/MS
Aflatoxin Summation	N.D.	PPB	1	LC/MS/MS
DON (Vomitoxin)	2.49	PPM	0.1	LC/MS/MS

Analysis	As Received	On Dry Matter	Units	Method
Drymatter	88.66	--	%	NFTA 2.2.2.5
Moisture	11.34	--	%	NFTA 2.2.2.5
Crude ash content	4.543	5.124	%	AOAC 942.05
Crude Fiber	7.61	8.59	%	AOAC 962.09
NDF	27.61	--	%	ANKOM Technology Method 6
Crude Fat	7.31	8.25	%	AOAC 2003.06 (Petroleum Ether)
Acid detergent fiber	9.52	10.73	%	Calculation
Digestable Energy	1.60	1.81	Mcal/lb	Calculation
Metabolizable Energy	1.34	--	Mcal/lb	Calculation

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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Analysis	As Received	On Dry Matter	Units	Method
Net Energy Gain	0.59	0.67	Mcal/lb	Calculation
Net Energy Lactation	0.80	0.90	Mcal/lb	Calculation
Net Energy Maintenance	0.88	0.99	Mcal/lb	Calculation
Total digestible nutrients	75.69	85.37	%	Calculation
Crude Protein	29.23	32.96	%	AOAC 990.03

Abbreviations:

L.O.Q.: Limit of Quantification

L.O.D.: Limit of Detection

N/A: Not Applicable

N.D.: Not Detected

Jacob Swanson
Analytical Chemistry Supervisor
Start/End Analysis: 11/07/2018 - 11/13/2018

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