

Ag Testing - Consulting

Account No. : 28692

NIR Analysis Report

SCASTA, DEREK
UNIVERSITY OF WYOMING DEPT 3354
1000 E UNIVERSITY AVE
LARAMIE WY 82071

Invoice No. : 1307163
Date Received : 12/18/2019
Date Reported : 12/19/2019
Lab Number : 16217

Results For : DEREK SCASTA RESEARCH

Sample ID : 1

Description : HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	8.56	0.00
Dry Matter, %	91.44	100.00
PROTEIN		
Crude Protein, %	3.0	3.3
FIBERS		
Acid Detergent Fiber, %	34.0	37.2
Neutral Detergent Fiber, %	55.9	61.1
NDFD (digestibility) 48 hr, % of NDF		48
IVTDMD (in vitro true digestibility) 48 hr, %	63.3	69.3
ENERGIES		
TDN Est., %	55.0	60.1
Net Energy Lact, MCal/lb	0.5621	0.6148
Net Energy Maint, MCal/lb	0.5457	0.5968
Net Energy Gain, MCal/lb	0.3076	0.3364
QUALITY VALUE		
Relative Feed Value		91
Relative Forage Quality		88
MINERALS		
Calcium, % Ca	0.30	0.33
Phosphorus, % P	0.15	0.16
Potassium, % K	1.25	1.37
Magnesium, % Mg	0.05	0.06
Ash, %	3.08	3.37
OTHER ANALYSIS		
Fat, %	1.4	1.5
Starch, %	3.4	3.7
Lignin, %	5.53	6.05
Non Fiber Carbohydrates, %	29.0	31.8
Ethanol-Soluble Carbohydrates, %	11.4	12.4
Water-Soluble Carbohydrates, %	13.3	14.6

Reviewed By : Rebecca Kern

12/19/2019

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Date Received : 12/18/2019
Date Reported : 12/19/2019
Lab Number : 16218

Results For : DEREK SCASTA RESEARCH

Sample ID : 2

Description : HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	8.49	0.00
Dry Matter, %	91.51	100.00
PROTEIN		
Crude Protein, %	4.1	4.4
FIBERS		
Acid Detergent Fiber, %	32.7	35.7
Neutral Detergent Fiber, %	52.9	57.8
NDFD (digestibility) 48 hr, % of NDF		60
IVTDMD (in vitro true digestibility) 48 hr, %	69.7	76.2
ENERGIES		
TDN Est., %	56.6	61.8
Net Energy Lact, MCal/lb	0.5800	0.6338
Net Energy Maint, MCal/lb	0.5696	0.6225
Net Energy Gain, MCal/lb	0.3292	0.3597
QUALITY VALUE		
Relative Feed Value		98
Relative Forage Quality		113
MINERALS		
Calcium, % Ca	0.26	0.28
Phosphorus, % P	0.18	0.20
Potassium, % K	1.72	1.88
Magnesium, % Mg	0.05	0.06
Ash, %	4.83	5.28
OTHER ANALYSIS		
Fat, %	1.6	1.7
Starch, %	3.5	3.8
Lignin, %	4.31	4.71
Non Fiber Carbohydrates, %	29.3	32.0
Ethanol-Soluble Carbohydrates, %	10.4	11.3
Water-Soluble Carbohydrates, %	12.3	13.4

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Invoice No. : 1307163
Date Received : 12/18/2019
Date Reported : 12/19/2019
Lab Number : 16219

Results For : DEREK SCASTA RESEARCH

Sample ID : 3

Description : HAY

	Analysis As Received	Analysis Dry Basis
Moisture, %	8.92	0.00
Dry Matter, %	91.08	100.00
PROTEIN		
Crude Protein, %	2.0	2.2
FIBERS		
Acid Detergent Fiber, %	37.2	40.8
Neutral Detergent Fiber, %	60.5	66.4
NDFD (digestibility) 48 hr, % of NDF		47
IVTDMD (in vitro true digestibility) 48 hr, %	60.0	65.9
ENERGIES		
TDN Est., %	51.0	56.0
Net Energy Lact, MCal/lb	0.5185	0.5693
Net Energy Maint, MCal/lb	0.4868	0.5345
Net Energy Gain, MCal/lb	0.2545	0.2794
QUALITY VALUE		
Relative Feed Value		80
Relative Forage Quality		69
MINERALS		
Calcium, % Ca	0.21	0.23
Phosphorus, % P	0.15	0.17
Potassium, % K	1.66	1.82
Magnesium, % Mg	0.07	0.08
Ash, %	4.14	4.55
OTHER ANALYSIS		
Fat, %	1.1	1.2
Starch, %	2.9	3.2
Lignin, %	5.89	6.47
Non Fiber Carbohydrates, %	24.0	26.4
Ethanol-Soluble Carbohydrates, %	9.3	10.2
Water-Soluble Carbohydrates, %	10.7	11.7

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Invoice No. : 1307163
Date Received : 12/18/2019
Date Reported : 12/19/2019
Lab Number : 16220

Results For : DEREK SCASTA RESEARCH

Sample ID : 1

Description : NATIVE

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.28	0.00
Dry Matter, %	90.72	100.00
PROTEIN		
Crude Protein, %	2.4	2.6
FIBERS		
Acid Detergent Fiber, %	40.2	44.3
Neutral Detergent Fiber, %	70.9	78.2
NDFD (digestibility) 48 hr, % of NDF		46
IVTDMD (in vitro true digestibility) 48 hr, %	53.9	59.5
ENERGIES		
TDN Est., %	47.2	52.0
Net Energy Lact, MCal/lb	0.4761	0.5249
Net Energy Maint, MCal/lb	0.4284	0.4722
Net Energy Gain, MCal/lb	0.2011	0.2217
QUALITY VALUE		
Relative Feed Value		65
Relative Forage Quality		64
MINERALS		
Calcium, % Ca	0.25	0.28
Phosphorus, % P	0.14	0.15
Potassium, % K	0.24	0.27
Magnesium, % Mg	0.05	0.05
Ash, %	1.77	1.95
OTHER ANALYSIS		
Fat, %	2.8	3.1
Starch, %	3.1	3.5
Lignin, %	5.54	6.11
Non Fiber Carbohydrates, %	15.2	16.7
Ethanol-Soluble Carbohydrates, %	4.4	4.9
Water-Soluble Carbohydrates, %	4.7	5.1

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Invoice No. : 1307163
Date Received : 12/18/2019
Date Reported : 12/19/2019
Lab Number : 16221

Results For : DEREK SCASTA RESEARCH
Sample ID : 2
Description : NATIVE

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.52	0.00
Dry Matter, %	90.48	100.00
PROTEIN		
Crude Protein, %	2.0	2.2
FIBERS		
Acid Detergent Fiber, %	40.5	44.8
Neutral Detergent Fiber, %	72.2	79.8
NDFD (digestibility) 48 hr, % of NDF		47
IVTDMD (in vitro true digestibility) 48 hr, %	53.9	59.6
ENERGIES		
TDN Est., %	46.6	51.5
Net Energy Lact, MCal/lb	0.4698	0.5193
Net Energy Maint, MCal/lb	0.4200	0.4643
Net Energy Gain, MCal/lb	0.1939	0.2143
QUALITY VALUE		
Relative Feed Value		63
Relative Forage Quality		60
MINERALS		
Calcium, % Ca	0.24	0.27
Phosphorus, % P	0.13	0.14
Potassium, % K	0.24	0.26
Magnesium, % Mg	0.05	0.06
Ash, %	1.62	1.79
OTHER ANALYSIS		
Fat, %	2.9	3.2
Starch, %	3.5	3.9
Lignin, %	5.40	5.97
Non Fiber Carbohydrates, %	14.2	15.7
Ethanol-Soluble Carbohydrates, %	3.6	4.0
Water-Soluble Carbohydrates, %	3.7	4.1

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Lab Number : 16222

Results For : DEREK SCASTA RESEARCH
Sample ID : 3
Description : NATIVE

	Analysis As Received	Analysis Dry Basis
Moisture, %	9.24	0.00
Dry Matter, %	90.76	100.00
PROTEIN		
Crude Protein, %	2.2	2.5
FIBERS		
Acid Detergent Fiber, %	41.1	45.3
Neutral Detergent Fiber, %	73.4	80.8
NDFD (digestibility) 48 hr, % of NDF		46
IVTDMD (in vitro true digestibility) 48 hr, %	53.3	58.7
ENERGIES		
TDN Est., %	46.2	50.9
Net Energy Lact, MCal/lb	0.4650	0.5123
Net Energy Maint, MCal/lb	0.4123	0.4543
Net Energy Gain, MCal/lb	0.1861	0.2051
QUALITY VALUE		
Relative Feed Value		62
Relative Forage Quality		62
MINERALS		
Calcium, % Ca	0.23	0.25
Phosphorus, % P	0.13	0.14
Potassium, % K	0.20	0.22
Magnesium, % Mg	0.05	0.05
Ash, %	0.80	0.88
OTHER ANALYSIS		
Fat, %	2.7	2.9
Starch, %	3.2	3.6
Lignin, %	5.54	6.10
Non Fiber Carbohydrates, %	13.9	15.3
Ethanol-Soluble Carbohydrates, %	4.2	4.6
Water-Soluble Carbohydrates, %	4.3	4.7

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