



# CUMBERLAND VALLEY ANALYTICAL SERVICES

"Laboratory services for agriculture ... from the field to the feed bunk"

Farm: **VANDENBERG HAY FARMS**  
Desc: **#600**  
Submitter: **CVAS, ANALYSIS**  
Account: **CVAS ANALYSIS**

Copies to: **NEELS, PETE**  
**DE KOK, MAKAYLA**

Lab ID: **34470 233**  
Sampled: **11/15/2023**  
Arrived: **11/16/2023**  
Completed: **11/16/2023**  
Reported: **11/16/2023**

## #600

### SAMPLE INFORMATION

Lab ID: 34470 233      Version: 1.0  
Crop Year:                      Series:  
Feed Type: LEGUME FORAGE      Cutting#:  
Package: BASIC NIR

### NIR ANALYSIS RESULTS

Moisture 8.1  
Dry Matter 91.9

### PROTEINS

	% SP	% CP	% DM
Crude Protein			22.4
Adjusted Protein			22.4
Soluble Protein		51.5	11.5
Ammonia (CPE)	14.9	7.7	1.71
ADF Protein (ADICP)		5.9	1.31
NDF Protein (NDICP)		7.1	1.59
NDR Protein (NDRCP)			
Rumen Degr. Protein		75.7	16.9
Amino Acid Protein, Total			

### FIBER

	%NDFom	NDFom %DM	% NDF	% DM
ADF			90.5	32.2
aNDF		32.4		35.6
NDR (NDF w/o sulfite)				
Crude Fiber				
Lignin			17.8	6.34
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	46.0	14.9	41.9	14.9
NDF Digestibility (72 hr)				
NDF Digestibility (120 hr)	48.5	15.7	44.1	15.7
NDF Digestibility (240 hr)	50.6	16.4	45.9	16.3
uNDF (12 hr)				
uNDF (30 hr)	54.0	17.5	58.2	20.7
uNDF (120 hr)	51.5	16.7	55.9	19.9
uNDF (240 hr)	49.4	16.0	54.1	19.2

### CARBOHYDRATES

	% Starch	% NFC	% DM
Silage Acids			
Ethanol Soluble CHO (ESC-Sugar)		19.4	5.6
Water Soluble CHO (WSC-Sugar)			7.0
Starch		4.3	1.2
Soluble Starch			
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Crude Fat			2.11
Fatty Acids, Total			1.26
C16:0			0.38
C18:0			0.06
C18:1			0.03
C18:2			0.22
C18:3			0.36
Unsaturated Fatty Acids (RUFAL)			0.61
Fatty Acids (%Fat)			59.7

### MINERALS

Ash (%DM)	12.7
Calcium (%DM)	1.83
Phosphorus (%DM)	0.32
Magnesium (%DM)	0.47
Potassium (%DM)	2.65
Sulfur (%DM)	0.35
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Molybdenum (PPM)	

### QUALITATIVE

pH  
Total VFA (%DM)  
Lactic Acid (%DM)  
Lactic as % of Total VFA  
Acetic Acid (%DM)  
Butyric Acid (%DM)  
1, 2 Propanediol (%DM)  
Nitrate Ion (%DM)  
Nitrate-Nitrogen, ppm

Soil Contamination Probability      Probable low to none  
NIR Statistical Confidence      Excellent prediction potential

### ENERGY & INDEX CALCULATIONS

TDN (%DM)	58.6
Net Energy Lactation (Mcal/lb)	0.60
Net Energy Lactation NASEM (Mcal/lb)	0.72
Net Energy Maintenance (Mcal/lb)	0.59
Net Energy Gain (Mcal/lb)	0.33
ME (Mcal/lb)	0.98
AA Protein as % of Total Protein	
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	4.07
NDF Dig. Rate (Kd, %HR, uNDF)	5.3
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	167
Relative Forage Quality (RFQ)	157
Milk per Ton (lbs/ton)	2668
Dig. Organic Matter Index (lbs/ton)	1283
ROM (Residual Organic Matter)	30.30
NFC (Non-Fiber Carbohydrates)(%DM)	28.9
NSC (Non-Structural Carbohydrates) ESC (%DM)	6.8
NSC (Non-Structural Carbohydrates) WSC (%DM)	8.2
DCAD (meq/100gdm)	
Summative Index % (Mass Balance)	

Additional sample information, submitted documents and lab pictures linked to QR code



Values in bold were analyzed by wet chemistry methods.

