



Equine Testing at CVAS

Understanding that equine nutrition requirements vary from bovine nutrition, CVAS provides several equine testing options. Any of our NIR or chemistry packages can provide the equine energy option, however CVAS also provides testing specifically for our equine customers.

Why the equine option?

Although horses can consume the same types of feeds as other animals, providing the right amounts of the nutrients within these feeds is important. It has been shown that diets high in fructans and starches can be detrimental to horses. To help our equine customers determine if their feeds are within the range they need for their horses, CVAS provides the following values on their equine reports:

- Ethanol Soluble Carbohydrates (ESC)
- Water Soluble Carbohydrate (WSC)
- Starch
- Non Structural Carbohydrates (NSC) – provided as the sum of the WSC and starch

Equine Option for any package:

Any NIR or chemistry package at CVAS offers the ability to choose the equine reporting option. This reporting option will generate several differences from our standard report. For instance, our equine report will include the equine total digestible nutrients (TDN) and equine digestible energy (DE) values. Additionally, the NSC is the sum of the WSC and starch rather than utilizing the ESC. We also provide both the WSC and ESC for evaluating sugar differences. Please see pages 3 and 4 for comparison reports.

Equine Specific Testing:

CVAS provides four packages specifically for our equine customers. Below is a table showing the test packages and what is provided in each.

Pricing:

Domestic Pricing for equine packages:

Equine Basic - \$18.00

Equine Lancer - \$29.00

Equine Chemistry Basic - \$62.50

Equine Chemistry Complete - \$82.00

The equine energy option can also be added to any test at no charge.



EQUINE PACKAGES

HAY

● = results by NIR
 ✕ = results by chemistry
 ■ = results by chemistry and NIR

ANALYSIS RESULTS	Equine Basic	Equine Lancer	Equine Chemistry Basic	Chemistry Complete
Moisture / Dry Matter	✕	✕	✕	✕
PROTEINS				
Crude Protein	●	●	✕	✕
Adjusted Protein	●	●	✕	✕
Soluble Protein	●	●	✕	✕
Ammonia (CPE)	●	●		
ADF Protein (ADICP) / NDF Protein (NDICP)	●	●		✕
Rumen Degradable Protein	●	●	✕	✕
FIBER				
ADF / aNDF	●	●	✕	✕
aNDFom	●	●		
Crude Fiber				
Lignin	●	●		✕
NDF Digestibility (30, 120, 240 hr)				
uNDF (30, 120, 240 hr)				
CARBOHYDRATES				
Silage Acids (fermented feeds only)				
Ethanol Soluble CHO (Sugar)	●	●		✕
WaterSoluble CHO (Sugar)	●	●	✕	✕
Starch	●	●	✕	✕
Soluble Fiber				
Starch Dig. (7 hr, 4 mm)				
Fatty Acids , Total and Profile				
Crude Fat	●	●		✕
MINERALS				
Ash	●	●	✕	✕
Macro Minerals (Ca, P, Mg, K)	●	✕	✕	✕
Micro Minerals (Fe, Mn, Zn, Cu)		✕	✕	✕
Tag Minerals (Ca, P)				
Sulfur, Chloride, DCAD calculation				✕
ENERGY & INDEX CALCULATIONS				
pH (fermented feeds only)				
Equine TDN	●	●		✕
Equine Digestible Energy	●	●		✕
Net Energy Lactation, Maintenance, Gain	●	●	■	✕
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin *2.4)				
NDF Dig. Rate (Kd, %HR, uNDF)	●	●	■	■
Starch Dig. Rate (Kd, %HR Mertens)				
Relative Feed Value	●	●	✕	✕
Relative Feed Quality				
Non Fiber Carbohydrates	●	●	■	✕
Non Structural Carbohydrates	●	●	■	✕



CUMBERLAND VALLEY ANALYTICAL SERVICES

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

Farm: CVAS
 Desc: EQUINE ENERGY
 Submitter: CVAS
 Account: CVAS

Copies to:

Lab ID: 22055 089
 Sampled: 02/11/2019
 Arrived: 02/12/2019
 Completed: 02/12/2019
 Reported: 02/12/2019

EQUINE ENERGY

SAMPLE INFORMATION

Lab ID: 22055 089 Version: 1.0
 Crop Year: Series:
 Feed Type: MMG FORAGE Cutting#:
 Package: BASIC NIR

NIR ANALYSIS RESULTS

Moisture 13.1
 Dry Matter 86.9

PROTEINS

	% SP	% CP	% DM
Crude Protein			7.4
Adjusted Protein			
Soluble Protein		35.3	2.6
Ammonia (CPE)	55.0	19.4	1.44
ADF Protein (ADICP)		12.5	0.93
NDF Protein (NDICP)		22.5	1.67
NDR Protein (NDRCP)			
Rumen Degr. Protein		67.6	5.0
Rumen Deg. CP (Strep.G)			

FIBER

	%NDFom	NDFom	% NDF	% DM
		%DM		
ADF			62.5	37.6
aNDF		58.4		60.2
NDR (NDF w/o sulfite)				
peNDF				
Crude Fiber				
Lignin			9.97	6.00
NDF Digestibility (12 hr)				
NDF Digestibility (24 hr)				
NDF Digestibility (30 hr)	45.6	26.6	44.2	26.6
NDF Digestibility (48 hr)				
NDF Digestibility (120 hr)	50.4	29.4	48.9	29.4
NDF Digestibility (240 hr)	54.0	31.5	52.2	31.4
uNDF (30 hr)	54.4	31.8	55.8	33.6
uNDF (120 hr)	49.7	29.0	51.1	30.8
uNDF (240 hr)	46.1	26.9	47.8	28.7

CARBOHYDRATES

	% Starch	% NFC	% DM
Silage Acids			
Ethanol Soluble CHO (Sugar)		31.7	8.2
Water Soluble CHO (Sugar)			12.8
Starch	8.7		2.3
Soluble Fiber			
Starch Dig. (7 hr, 4 mm)			
Fatty Acids, Total			1.05
Fatty Acids (%Fat)			37.5
Crude Fat			2.80

Values in bold were analyzed by wet chemistry methods.

Definitions and explanation of report terms



MINERALS

Ash (%DM)	5.38
Calcium (%DM)	0.41
Phosphorus (%DM)	0.14
Magnesium (%DM)	0.16
Potassium (%DM)	1.24
Sulfur (%DM)	0.16
Sodium (%DM)	
Chloride (%DM)	
Iron (PPM)	
Manganese (PPM)	
Zinc (PPM)	
Copper (PPM)	
Nitrate Ion (%DM)	
Selenium (PPM)	
Molybdenum (PPM)	

QUALITATIVE

Total VFA (%DM)	
Lactic Acid (%DM)	
Lactic as % of Total VFA	
Acetic Acid (%DM)	
Butyric Acid (%DM)	
1, 2 Propanediol (%DM)	

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

ENERGY & INDEX CALCULATIONS

pH	
Equine TDN (%DM)	47.9
Equine DE (mcal/lb)	0.96
Net Energy Lactation (Mcal/lb)	0.61
Net Energy Maintenance (Mcal/lb)	0.39
Net Energy Gain (Mcal/lb)	0.15
NDF Dig. Rate (Kd, %HR, Van Amburgh, Lignin*2.4)	2.78
NDF Dig. Rate (Kd, %HR, uNDF)	4.7
Starch Dig. Rate (Kd, %HR, Mertens)	
Relative Feed Value (RFV)	92
Relative Forage Quality (RFQ)	107
Milk per Ton (lbs/ton)	2484
Dig. Organic Matter Index (lbs/ton)	1061
Non Fiber Carbohydrates (%DM)	25.90
Non Structural Carbohydrates (%DM)	15.0
DCAD (meq/100gdm)	
CNCPS / CPM Lignin Factor	12.0
Summative Index % (Mass Balance)	
Additional sample information, source and lab pictures	



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Bipea



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