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| Test | Description: | Price USD | Code: | Notes: |
|---------------------------------|---|-----------|-------|--|
| NIR PACKAGES | | | | |
| NIR1 Package | The NIR 1 Analysis includes tests for Dry Matter, Moisture, Crude Protein, ADFCP, NDFCP, Soluble Protein, ADF, NDF, Lignin, Starch, ESC, WSC, Fat, Ash, Calcium (Ca), Phosphorus (P), Magnesium (Mg), Potassium (K) and pH on ensiled forage. Calculated values are provided for RFV (forage only), Available Protein, Adjusted Protein, Degradable Protein, NEI, NEm, NEg (NRC summative energy equations), NSC and NFC. | \$22.50 | A1 | |
| NIR2 Package | The NIR 2 is the NIR 1 Analysis with wet-chemistry Minerals - Calcium (Ca), Phosphorus (P), Magnesium (Mg), Potassium (K), Sodium (Na), Iron (Fe), Manganese (Mn), Zinc (Zn), and Copper (Cu). | \$36.00 | A2 | |
| NIR3 Package | The NIR 3 is the NIR 2 Analysis plus wet-chemistry on Chloride (Cl), Sulfur (S), and DCAD. | \$46.00 | A3 | |
| NIR4 Package | The NIR 4 is the NIR 2 Analysis plus wet-chemistry on Crude Protein, ADF and NDF. | \$52.25 | A4 | |
| NIR5 Package | The NIR 5 is the NIR 1 Analysis plus wet-chemistry on Crude Protein, ADF, and NDF. | \$38.75 | A5 | |
| NIR Plus Option | Provides 30 hr NDF Digestibility with Kd Rate, NDF Digestibility 120 and 240, uNDF120, uNDF240, an NIR evaluation of Fermentation acids (for ensiled forages) for NIR1-NIR5 as well as Indigestible Fiber, Total Fatty Acids, and Soluble Fiber. This option also includes a soil contamination probability index of Low, Medium or High (not available for corn grain). For Corn Silages, the NIR Plus Option also provides 12 hr NDF digestibility and qualitative assessment of 7 hr starch digestibility. | \$11.25 | P | |
| Calibrate LEAF option | Leaves Enhance Alfalfa Forage test (LEAF) is a predictive equation that assists in determining leaf percentage of alfalfa samples. | \$0.00 | | |
| TMR Mixture Evaluation Package | (Set of 5 samples analyzed to assess mixer efficiency) NIR analysis with chemistry minerals. This package includes Dry Matter, Crude Protein, Soluble Protein, ADF, NDF, ADFCP, NDFCP, Lignin, Fat, Starch, Sugar, Ash, Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu, Cl, and S. | \$230.00 | A10 | |
| Manure Package | Provides Dry Matter, Crude Protein, ADF, NDF, Lignin, Starch, Ash, Ca, P, Mg, and K. | \$22.50 | A1 | |
| NIR 1 Non-Forage Ingredients | Almond hulls, Bakery, Beet Pulp, Brewers, Canola, Corn Distillers, Gluten Feed, Midds, SBM, and Small Grains. | \$22.50 | A1 | |
| Apparent Nutrient Digestibility | Includes a NIR1 Plus evaluation of a high group TMR and associated fecal matter to generate an evaluation of apparent NDF and starch digestibility. | \$71.25 | APN | TMR AND FECAL SAMPLE NEED TO COME TOGETHER |
| Equine Basic | This NIR package includes Dry Matter, Moisture, Digestible Energy, NSC, NFC, RFV (hays and haylages only), Starch, Sugar (WSC and ESC), Crude Protein, Soluble Protein, ADFCP, NDFCP, Lignin, ADF, NDF, NDFom, Fat, Ash, Calcium (Ca), Phosphorus (P), Magnesium (Mg), and Potassium (K). | \$22.50 | EQ1 | |
| Equine Lancer | This package includes Dry Matter, Moisture, Digestible Energy, NSC, NFC, RFV (hays and haylages only), Starch, Sugar, Crude Protein, Soluble Protein, ADFCP, NDFCP, Lignin, WSC, ADF, NDF, NDFom, Fat, Fatty Acids total), and Ash by NIR. Chemistry minerals are provided, superior analytically to NIR predictions, including Calcium (Ca), Phosphorus (P), Magnesium (Mg), Potassium (K), Sodium (Na), Iron (Fe), Manganese (Mn), Zinc (Zn), and Copper (Cu). | \$36.00 | EQ2 | |
| TMR Control - NIR Package | NIR analysis with chemistry minerals. This package includes Dry Matter, Crude Protein, Soluble Protein, ADF, NDF, ADFCP, NDFCP Lignin, Fat, Starch, Sugar, Ash, Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu, Cl, and S. Also included is an evaluation for peNDF, SPS (starch processing score), and the Penn State Particle Size Evaluation. | \$100.25 | | |
| Amino Acid Analysis | Only Available for Corn Silages | \$19.25 | | |
| uNDF RPE | Only Available for Corn Silages | \$19.25 | | |
| Soluble Starch | Soluble Starch | \$10.25 | | |

| CHEMISTRY PACKAGES | | | | |
|---|--|----------|-----|--|
| Standard Package | Includes Dry Matter, Moisture, Crude Protein, Adjusted Protein, Soluble Protein, calculated Degradable Protein (Forages only), Acid Detergent Fiber (ADF), Neutral Detergent Fiber (NDF), Ash, (Energy values on forages only) TDN, NEI, NEm, NEg, RFV (for hays and haylages), and Ca, P, Mg, K, Na, Fe, Mn, Zn, and Cu with pH on an ensiled forage. | \$49.50 | B1 | |
| Standard Plus Energy | Standard Package plus Fat, Lignin, ADFCP, and NDFCP. Includes NFC. Provides Energy values for non-forage samples. | \$81.00 | B9 | |
| CNCPS Package (previously CPM Plus) | Includes the Standard Analysis and Lignin, Fat, ADFCP, NDFCP, Chloride, Sulfur, Starch, Sugar, TDN, NFC, NEI, NEm, and NEg. When combined with our Fermentation Analysis a Soluble Fiber is calculated. | \$112.75 | B2 | |
| RFV Package | Includes Dry Matter, Moisture, Crude Protein, ADF, NDF, calculated RFV (on hays and haylages), and Adjusted Protein. NEI, NEm, NEg and TDN on forages only. | \$32.75 | B3 | |
| Basic NDF Package | Dry Matter, Moisture, Crude Protein, ADF, NDF, Minerals (Ca, P, Mg, K, Na, Fe, Mn, Zn, and Cu), pH on ensiled forages, with calculated values for Adjusted Protein, TDN, NEI, NEg, NEm and Ash. (Energy values on forages only). | \$44.25 | B4 | |
| Minerals Only | Includes Dry Matter, Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu, and Ash. | \$34.00 | B6 | |
| Minerals Only (High Concentrate) | Includes Dry Matter, Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu, and Ash. | \$52.25 | | |
| TMR Diagnostic Package | Includes DM, Crude Protein, Soluble Protein, Ammonia, ADF, NDF, ADFCP, NDFCP, Lignin, Fat, Starch, 7-hour Starch Digestibility, 24-hour NDF Digestibility, Sugar, Ash, Ca, P, Mg, K, Na, Cl, S, Fe, Mn, Zn, Cu, Lactic Acid, Acetic Acid, Butyric Acid, peNDF, (physically effective NDF - Mertens), SPS (starch processing score) and the Penn State Particle Size Evaluation. | \$239.00 | B7 | |
| Animal Protein Package | Provides Dry Matter, Moisture, Crude Protein, Soluble Protein, Ash, Fat, Ca, P, Cl, and S. | \$93.75 | B8 | |
| Liquid Sample | Provides Dry Matter, Moisture, Crude Protein, Ammonia, Fat, Sugar, Ash, Ca, P, Mg, K, Na, Fe, Mn, Zn, and Cu. | \$85.00 | | |
| Liquid Sample with Karl Fischer Moisture | Above analysis with Karl Fischer moisture - appropriate when volatiles other than moisture are present in the sample. | \$141.75 | | |
| Equine Chemistry Basic | This package is similar to the Equine Lancer package but uses reference chemistry methods in place of more economical NIR. It provides Dry Matter, Moisture, Digestible Energy, NSC, NFC, RFV (hays and haylages only), Starch, WSC, Crude Protein, Soluble Protein, ADF, NDF, Ash, Calcium (Ca), Phosphorus (P), Magnesium (Mg), Potassium (K), Sodium (Na), Iron (Fe), Manganese (Mn), Zinc (Zn), and Copper (Cu). | \$83.25 | EQ3 | |
| Equine Chemistry Complete | This package includes Dry Matter, Moisture, Digestible Energy, NSC, NFC, RFV (hays and haylages only), starch, Sugar, Crude Protein, Soluble Protein, WSC, ADF, NDF, ADFCP, NDFCP, Lignin, Fat, Ash, Calcium (Ca), Phosphorus (P), Magnesium (Mg), Potassium (K), Sodium (Na), Sulfur (S), Chloride (Cl), Iron (Fe), Manganese (Mn), Zinc (Zn), and Copper (Cu). | \$128.75 | EQ4 | |
| COMPONENTS | | | | |
| Please note a \$8.25 handling fee will be added to any sample that is not requesting a package. | | | | |
| Acid Insoluble Ash | Acid Insoluble Ash | \$25.00 | | |
| ADF | ADF | \$10.25 | G1 | |
| ADFom (ash free) | ADFom (ash free) | \$14.00 | G2 | |
| ADFCP | Must be run with ADF | \$10.25 | G3 | |
| Ammonia Nitrogen | Ammonia Nitrogen | \$18.75 | G5 | |
| Ash | Ash | \$10.25 | G6 | |
| Barium | Barium | \$51.00 | | |
| Boron | Boron | \$17.00 | | |
| Calories (BTU) | | \$66.25 | | |
| Chloride | Chloride | \$10.25 | G7 | |
| Cobalt | Cobalt | \$49.50 | | |
| Crude Fiber | Crude Fiber | \$15.25 | E9 | |
| Crude Protein | Crude Protein | \$10.25 | G8 | |
| Degradable Protein (S. griseus) | Must be run with Crude Protein. | \$18.25 | G9 | |
| Ergot / Fescue Alkaloids in Feedstuff | | \$175.25 | | |
| Fat (Acid-Hydrolysis) | Fat (Acid-Hydrolysis) | \$35.75 | E8 | |
| Fat (Ether Extract) | Fat (Ether Extract) | \$14.75 | E7 | |
| Fecal Starch | Fecal Starch | \$17.75 | | THIS NEEDS TO BE ACCOMPANIED WITH A LETTER/PERMIT IF SENT TO FAS |
| Gossypol Free | For Cottonseed Extract and Meal | \$512.00 | | |
| Gossypol Total | For Cottonseed Extract and MEal | \$349.50 | | |
| Initial Peroxide on liquid materials | | \$40.25 | | |
| Initial Peroxide on dry materials | | \$119.00 | | |
| Iodine Value on fats and oils | Iodine Value on fats and oils | \$67.00 | | |

| | | | | |
|--|--|------------------|---------------------------|------------------------------------|
| Iodine, Elemental (Minerals & Metals) | Iodine, Elemental (Minerals & Metals) | \$103.00 | | |
| Karl Fischer Moisture | | \$56.75 | E10 | |
| KOH | Must be run with Crude Protein. | \$47.25 | | |
| Lactose | | \$100.00 | | |
| Lead | | \$49.50 | | |
| Lignin | | \$14.75 | G14 | |
| Moisture Only (Dry Matter) | Moisture loss at 135°C for 2 hrs for feed ingredients; 105°C for 3 hrs for forages. | \$4.50 | E6 | |
| Molybdenum | | \$17.00 | G15 | |
| aNDF | | \$10.25 | G16 | |
| aNDFom (ash-free) | | \$14.00 | G17 | |
| NDFCP | Must be run with aNDF | \$10.25 | G18 | |
| aNDR | | \$10.25 | G19 | |
| Nitrate | | \$16.00 | G20 | |
| Non-Protein Nitrogen (NPN) | Urea and ammonia, CPE basis | \$41.25 | G21 | |
| Pepsin Digestibility | 0.2% pepsin as per AOAC. Includes Crude Protein | \$70.50 | | |
| pH | | \$9.00 | | |
| Prolamin (grain only) | | \$38.00 | | |
| Prussic Acid (Cyanide) | | \$80.25 | | FROZEN SAMPLE NEEDED + SENT ON ICE |
| Salt (as chloride) | | \$10.25 | | |
| Selenium | Must provide expected levels | \$58.75 | G24 | |
| Soluble Protein | | \$10.25 | G25 | |
| Starch | | \$17.75 | G26 | |
| Starch (Gelatinized) | | \$65.00 | | |
| Sugar (ESC) | | \$16.00 | G27 | |
| Sugar (WSC) | | \$16.00 | G27a | |
| Sulfur | | \$10.25 | G28 | |
| Trypsin Inhibitor | | \$128.00 | | |
| Urease Activity | Soy products only | \$34.25 | G29 | |
| Vitamin A | Approximate levels needed | Call for pricing | | |
| Vitamin D for premixes (LOD 45,359 IU/lb) | Vitamin D for premixes (LOD 45,359 IU/lb) | Call for pricing | | |
| Vitamin D by LC-MS/MS (LOD 18.1 IU/lb) | Vitamin D by LC-MS/MS (LOD 18.1 IU/lb) | Call for pricing | | |
| Vitamin E | Vitamin E | Call for pricing | | |
| PROXIMATE | | | | |
| TAG 1 Package | Includes Dry Matter, Moisture, Crude Protein, Crude Fat and Crude Fiber. | \$38.25 | E1 | |
| TAG 2 Package | Includes Tag I plus Ash, Ca and P. | \$50.75 | E2 | |
| TAG 3 Package | Includes Tag I plus Ash and Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu. | \$63.25 | E3 | |
| TAG 4 Package | Includes Dry Matter, Moisture, Ash, Ca and P. | \$32.00 | E4 | |
| IN VITRO DIGESTIBILITY | | | | |
| MSPE (freeze dry method) | Must be run with Crude Protein. | \$193.50 | | |
| MSPE | Based on work by Dr. Debbie Ross and Dr. Mike Van Amburgh. An In vitro evaluation of feed material is followed by treatment sequentially with acid and enzymes. Rumen availability and intestinal digestibility is provided. Must be run with Crude Protein. | \$154.25 | | |
| NDF Digestibility In Vitro Per Time Point | 6, 12, 24, 30, 48 or 240 hrs (uNDF). Other time points may be available upon request. A request for a 72 hr or higher time point needs run with NDFom. | \$37.00 | C1-C5, C9 RESPECTIVELY | |
| NDF Digestibility In Vitro Time Point Series (6 points) | | \$192.50 | | |
| Starch Digestibility In Vitro Per Time Point | 2, 4, 6, 7, 8, 12, 24, or 30 hrs. Other time points may be available upon request. | \$45.00 | D1-D6 RESPECTIVELY | |
| Starch Digestibility In Vitro Time Point Series (6 points) | | \$236.00 | D7 | |
| Dry Matter Digestibility In Vitro Per Time Point | 4, 6, 12, 24, 30, 48, 72, 96, 120, or 240 hrs. | \$30.75 | | |
| Dry Matter Digestibility In Vitro Time Point Series (6 points) | | \$141.75 | | |
| NDF Basic RPE (Rate Pool Evaluation) for Forages | 12, 30, 120, and 240 hrs. Needs run with NDFom. | \$126.00 | | |
| NDF Standard RPE for Forages | 4, 8, 12, 24, 48, 72, 120, and 240 hrs. Needs run with NDFom. | \$268.50 | | |
| NDF Basic RPE for Ingredients | 12, 30, 72, and 120 hrs. Needs run with NDFom. | \$126.00 | | |
| NDF Standard RPE for Ingredients | 4, 8, 12, 24, 48, 72 and 120 hrs. Needs run with NDFom. | \$268.50 | | |
| ROSS UIP | Total track protein digestibility and indigestibility. Needs run with Crude Protein. | \$95.00 | | |

| WET CHEMISTRY OPTIONS | | | | |
|--|--|----------|-----|--|
| Fermentation | Includes Dry Matter, Lactic Acid, Acetic Acid, Propionic Acid, Butyric Acid, Iso-butyric Acid, 1, 2 - Propanediol, Total VFA, pH, Lactic Acid/VFA ratio, Crude Protein equivalent of Ammonia as a percentage of Dry Matter and Crude Protein | \$38.25 | F1 | |
| Fermentation Analysis Plus | Includes Fermentation Analysis as well as a breakdown of Alcohols, Acetates, and Lactates. | \$57.50 | | |
| Fatty Acid Profile, 30 meter | 30 meter column: 22 fatty acids from C12 to C24, and total fatty acids. | \$84.00 | | |
| Fatty Acid Profile, 100 meter | Other products requiring 100 meter column: C4 to C24 with trans fatty acids. | \$126.25 | F3 | |
| Milk Fatty Acid Profile | 100 meter column: C4 to C24 with trans fatty acids, de novo, mixed, preformed, total saturated and unsaturated fatty acids, CLA, MUFA, and PUFA. | \$126.25 | F3a | |
| Free Fatty Acids | | \$37.50 | | |
| Mold Count | Provides both Mold and Yeast counts. | \$36.25 | | |
| Mold Identification | Mold and Yeast Count with Mold Identification | \$63.25 | | |
| PDI/Urease (soy products only) | Protein Dispersibility Index (includes PDI, and Urease Activity). Needs run with Crude Protein. | \$73.25 | F8 | |
| Micron Particle Size | | \$27.75 | E12 | |
| Byproduct | An add-on to the standard package, fat, lignin, ADFCP, NDFCP, sulfur, and chloride. | \$46.50 | F9 | |
| DCAD (CL, S) | Must also include a package with wet chemistry minerals to calculate DCAD value. | \$20.00 | G23 | |
| Soluble Starch | | \$28.75 | | |
| CSPS | Corn Silage Processing Score. Must run with a starch or a package that includes a starch. | \$26.50 | F7 | |
| peNDF | Physically Effective NDF | \$26.50 | | |
| Particle Size | Penn State Separator | \$11.25 | F11 | |
| Toxic Elements | Includes: Arsenic, Lead, Chromium, Mercury | \$78.50 | F12 | |
| Trace Elements | Includes: Cobalt, Copper, Iron, Manganese, Molybdenum, Selenium, Zinc | \$78.50 | F13 | |
| WATER | | | | |
| Total Coliform and E.coli | Billed in CAD from Fraser Analytical. All other water tests follow USD price schedule. | \$59.50 | W1 | SAMPLES MUST BE RECEIVED WITHIN 24 HOURS OF COLLECTION, MUST BE COLLECTED IN A BOTTLE WITH SODIUM THIOSULFATE. CAN BE RUN AT FAS |
| Nitrate Nitrogen and pH | | \$19.75 | | |
| Livestock Suitability Package | Includes pH, hardness, total dissolved solids, Ca, P, Mg, K, Na, Fe, Mn, Zn, Cu, chlorides, sulfate, and nitrate. | \$53.25 | LSP | |
| pH | | \$9.00 | | |
| Alkalinity | | \$17.00 | | |
| Toxic Elements | Includes Antimony, Arsenic, Barium, Cadmium, Copper, Iron, Lead, Manganese, Mercury, Phosphorous, Selenium, Sodium, Sulfur, Thallium and Zinc in ppm. | \$78.00 | | |
| PLANT TISSUE ANALYSIS | | | | |
| Standard | Provides Nitrogen, Phosphorous (P), Potassium (K), Calcium (Ca), Magnesium (Mg), Sodium (Na), Sulfur (S), Iron (Fe), Manganese (Mn), Zinc (Zn), Copper (Cu), and Boron (B). | \$71.25 | L1 | |
| Trace Minerals each | Cadmium, Cobalt, Lead or Nickel, priced per mineral. | \$49.50 | L2 | |
| Molybdenum | | \$17.00 | | |
| Nitrate | | \$16.00 | L5 | |
| Nitrogen | | \$10.25 | | |
| Carbon | | \$19.25 | L4 | |
| Chloride | | \$10.25 | | |
| Sulfur | | \$10.25 | L6 | |
| MANURE | | | | |
| (Original manure samples needed wet chem need a letter/permit) | | | | |
| Base Test Package 1 | Total Nitrogen, Organic Nitrogen, P2O5, K2O, NH4+-N, Total Solids, Density | \$50.50 | | |
| Base Test Package 2 | Total Nitrogen, Organic Nitrogen, P2O5, K2O, NH4+-N, Total Solids | \$44.50 | | |
| Water Soluble Phosphorus | PSC included | \$16.25 | | |
| Minerals (with manure package) | Ca, P, K, Mg, Na, Fe, Mn, Zn, and Cu | \$19.25 | | |
| Volatile Solids | | \$10.25 | | |
| pH | | \$9.00 | | |
| Total Carbon | Provides Total Carbon to Nitrogen Ratio | \$19.25 | | |

| MYCOTOXINS | | | | |
|---|--|----------|-----|----------------------------|
| Mycotoxin Basic | Aflatoxin (B1, B2, G1, G2), Deoxynivalenol, and Zearalenone | \$125.50 | T1 | |
| Mycotoxin Plus | Aflatoxin (B1, B2, G1, G2), Deoxynivalenol, Zearalenone, Fumonisin (B1, B2, B3), T-2, HT-2, and Ochratoxin A | \$187.75 | T1a | |
| Mycotoxin Premier | Aflatoxin (B1, B2, G1, G2), Deoxynivalenol, Zearalenone, Fumonisin (B1, B2, B3), T-2, HT-2, 3-Acetyl DON, 15-Acetyl DON, Ochratoxin A, 3 Acetyl Don, 15 Acetyl Don, Citrinin, Fusarenon X, Neosolaniol, and Diacetoxyscirpenol (DAS) | \$311.00 | | |
| Mycotoxin, individual | Aflatoxin (B1, B2, G1, G2), Deoxynivalenol, Zearalenone, Fumonisin (B1, B2, B3), T-2, HT-2, 3-Acetyl DON, 15-Acetyl DON, Ochratoxin A, 3 Acetyl Don, 15 Acetyl Don, Citrinin, Fusarenon X, Neosolaniol, or Diacetoxyscirpenol (DAS) | \$84.00 | | |
| IN SITU ANALYSIS | | | | |
| MSPE In Situ | | \$189.75 | | |
| Protein Digestibility In Situ | Rumen Undegradable Protein (RUP) at 16 hrs. | \$128.75 | I1 | |
| Dry Matter Digestibility In Situ Per Time Point | 24, 30, or 48 hrs. Other time points may be available upon request. | \$94.50 | I4 | |
| Starch Digestibility In Situ Per Time Point | 7, 16, or 24 hrs. Other time points may be available upon request. | \$116.50 | I2 | |
| NDF Digestibility In Situ Per Time Point | 6, 24, 30, 48, 96, or 120 hrs. Other time points may be available upon request. | \$128.75 | I3 | |
| AMINO ACIDS (Must be run with Crude Protein) | | | | |
| Cystine, Methionine, Lysine plus 9 more | Cysteine, Methionine, Lysine, Aspartic Acid, Threonine, Glutamic Acid, Proline, Glycine, Alanine, Valine, Isoleucine, and Leucine. | \$129.25 | | ANITICIPATED LEVELS NEEDED |
| Full Profile without Tryptophan | Cysteine, Methionine, Lysine, Aspartic Acid, Threonine, Glutamic Acid, Proline, Glycine, Alanine, Valine, Isoleucine, Leucine, Serine, Tyrosine, Phenylalanine, Ornithine, Histidine, and Arginine. | \$176.25 | | ANITICIPATED LEVELS NEEDED |
| Full Profile with Tryptophan | Cysteine, Methionine, Lysine, Aspartic Acid, Threonine, Glutamic Acid, Proline, Glycine, Alanine, Valine, Isoleucine, Leucine, Serine, Tyrosine, Phenylalanine, Ornithine, Histidine, Arginine, and Tryptophan. | \$202.75 | | ANITICIPATED LEVELS NEEDED |
| Total Lysine | | \$113.75 | | ANITICIPATED LEVELS NEEDED |
| Total Methionine | | \$113.75 | | |
| Tryptophan | | \$113.75 | | |