OPTIMAL LABORATORIES, INC.

Since 1997

Accreditation and Recognition
PNS ISO/IEC 17025:2017
Department of Health
Food and Drug Administration
DENR - Environmental Management Bureau
DA - Bureau of Animal Industry

FEED AND FEED INGREDIENT ANALYSIS

Livestock Industry in the Philippines is a vital component in the country's agricultural sector. Feed and Feed Ingredients Testing is needed to assess its nutrient content and quality.

Animals fed with contaminated feed can acquire diseases, which are then transferred to meat and dairy products, as well as to the environment. To ensure the quality of these feeds, microbiological testing is very essential. With regular testing, the danger of the spread of microbes can be lessen and enhance feed processing capacity.

The Philippine National Standard PNS/BAFS 163:2015 Animal Feed Ingredients of the Department of Agriculture is one of the regulatory measures for the production of Animal Feeds in the country.

Optimal Laboratories, Inc. has comprehensive testing services for feed and feed ingredients that are advantageous to feed millers in manufacturing safe, palatable, and quality animal feeds.

CAPABILITIES AND SERVICES

- Chemical Analysis
- Physico-chemical Analysis
- HPLC Analysis
- AAS / GFAAS Analysis
- GC Analysis
- NIR Spectroscopy
- Fats and Oil Analysis
- Colorimetric Analysis
- Mycotoxin Analysis
- Microbiological Analysis

ANALYSIS USING NEAR INFRA-RED REFLECTANCE (Rice Bran D1, Copra, Yellow Corn, Hard and Pollard, DDGS, US Soya, Feed Wheat)
Analyte
Ash
Calcium (for Limestone only)
Crude Fat
Crude Fiber
Crude Protein
Moisture
Protein Solubility (for US Soya only)
Urease Activity (for US Soya only)

PROXIMATE ANALYSIS USING WET / STANDARD METHOD	
Analyte	Method
Ash	Gravimetric
Crude Fat	Soxhlet
Crude Fiber	Weende Method
Crude Fiber	Fiber Bag System
Crude Protein	Dumas Combustion
Crude Protein	Semi-micro Kjeldahl Distillation
Moisture	Air-Oven Drying
Moisture	Infra-red Drying
Moisture	Moisture Meter-Quick Test

ANALYSIS OF FATS AND OILS	
Analyte	Method
Acetone Insoluble Matter (Lecithin Oil)	Gravimetric
Free Fatty Acid (Oil)	Titrimetric
Free Fatty Acid (Powdered Fat)	Titrimetric
Iodine Value	Titrimetric
Peroxide Value	Titrimetric
Rancidity Test	Qualitative
Sodium	AAS

OTHER ANALYSIS

Analyte	Method
Acid Insoluble Ash	Gravimetric
Brix	Refractometry
Acid Buffering Capacity	Potentiometric
Calcium Solubility	Gravimetric
Carbohydrates	By computation (Proximate Analysis)
Cation Exchange Capacity (CEC)	Titrimetric
Feed Microscopy	Microscopy
Fluorine	Ion-Selective Electrode
Lactose	Colorimetric-UV-Vis
Metabolic Energy	By computation (Proximate Analysis)
Mixability	Microtracer Recovery
Mixability with Swab	Microtracer Recovery
Nitrogen-Free Extract	By computation (Proximate Analysis)
Pepsin Digestibility	Pepsin Digestion Semi-micro Kjeldahl Distillation
pH	Electrometric
Phosphorus	Colorimetric-UV-Vis
Protein Solubility	Saponification with KOH Semi-micro Kjeldahl Distillation
Salt (NaCl)	Titrimetric
Starch	Colorimetric-UV-Vis
Urease Activity	Caskey and Knapp

METALS AND MINERALS

Analyte	Method
Arsenic	AAS - HVG
Barium	GFAAS
Cadmium	AAS
Calcium	AAS
Calcium	Titrimetric
Chromium	AAS
Cobalt	AAS
Copper	AAS
Iron	AAS
Lead	AAS
Magnesium	AAS
Manganese	AAS
Mercury	Mercury Analyzer
Nickel	AAS
Potassium	AAS
Selenium	GFAAS
Sodium	AAS
Tin	AAS
Zinc	AAS

VITAMINS

Analyte	Method
Ascorbic Acid (Vitamin C)	HPLC
Vitamin A (Retinol)	HPLC
Vitamin B1 (Thiamine HCl)	HPLC
Vitamin B2 (Riboflavin)	HPLC
Vitamin B3 (Niacin/ Nicotinic Acid)	HPLC
Vitamin B5 (Calcium pantothenate/ Pantothenic acid)	HPLC
Vitamin B6 (Pyridoxine HCl)	HPLC
Vitamin B9 (Folic acid)	HPLC
Vitamin B12 (Cyanocobalamin)	HPLC
Vitamin D3 (Calciferol)	HPLC
Vitamin E (Tocopherol)	HPLC
Vitamin H (Biotin)	HPLC
Vitamin K3 (Menadione)	HPLC

ANTIBIOTICS / ANTIOXIDANTS

Analyte	Method
Amprolium HCl	HPLC
Amoxicillin	HPLC
ButylHydroxyAnisole (BHA)	HPLC
ButylHydroxytoluene (BHT)	HPLC
Chlortetracycline	HPLC
Cyromazine	HPLC
Doxycycline	HPLC
Enrofloxacin	HPLC
Ethoxyquin	HPLC
Febantel	HPLC
Florfenicol	HPLC
Ivermectin	HPLC
Lincomycin	HPLC
Norfloxacin	HPLC
Oxytetracycline	HPLC
Paracetamol	HPLC
Penicillin VK	HPLC
Sulfadiazine	HPLC
Sulfamethazine	HPLC
Sulfamethoxazole	HPLC
Tiamulin	HPLC
Trimethoprim	HPLC
Tylosin	HPLC

PURITY TEST

Analyte	Method
Acetic Acid	Titrimetric
Arginine	Dumas Combustion Semi-micro Kjeldahl
Ascorbic Acid	Titrimetric
Betaine	Titrimetric
Calcium Acetate	Titrimetric
Calcium Carbonate	Titrimetric
Calcium Chloride	Titrimetric
Calcium Formate	Titrimetric
Calcium propionate	Titrimetric
Choline Chloride	Gravimetric
Citric Acid	Titrimetric
Copper Sulfate	Titrimetric
Dimagnesium Phosphate	Titrimetric
DL-Methionine	Dumas Combustion Semi-micro Kjeldahl
Ferrous Sulfate	Titrimetric
Fumaric Acid	Titrimetric
Hydrocyanic Acid	Titrimetric
Identification (Purity)	Titrimetric
Iodine	Titrimetric
Lactic Acid	Titrimetric
Lysine	Dumas Combustion Semi-micro Kjeldahl
Lysine HCl	Dumas Combustion Semi-micro Kjeldahl Titrimetric
Lysine Sulfate	Dumas Combustion Semi-micro Kjeldahl Titrimetric
Magnesium Chloride	Titrimetric
Magnesium Oxide	Titrimetric
Magnesium Sulfate	Titrimetric
Manganese Sulfate	Titrimetric
Potassium Chloride	Titrimetric
Potassium Iodide	Titrimetric
Propionic Acid	Titrimetric
Sodium Bicarbonate	Titrimetric
Sodium Butyrate	Titrimetric
Sodium Hypochlorite	Titrimetric
Sodium Propionate	Titrimetric
Sodium Selenite	Titrimetric
Taurine	Dumas Combustion Semi-micro Kjeldahl
Threonine	Dumas Combustion Semi-micro Kjeldahl
Tricalcium Phosphate	Titrimetric
Tryptophan	Dumas Combustion Semi-micro Kjeldahl
Zinc Oxide	Titrimetric
Zinc Sulfate	Titrimetric

MYCOTOXIN QUANTITATIVE ANALYSIS ELISA BASED TEST KITS

Analyte
AFLATOXIN
T2 TOXIN
ZEARALENONE

MICROBIOLOGICAL ANALYSIS

Analyte	Method
Aerobic Plate Count	Pour Plate
Escherichia coli	Conventional - Multiple Tube Fermentation Technique (MPN)
Listeria monocytogenes	Rapid Test using Nissui Compact Dry Disc
Mold Count	Spread Plate
Staphylococcus aureus Count (coagulase positive)	Spread Plate
Salmonella	Conventional
Salmonella	Rapid Test using Nissui Compact Dry
Salmonella	RT-PCR
Total Coliform Count	Pour Plate
Total Coliform Count	Multiple Tube Fermentation Technique (MPN)
Yeast Count	Spread Plate

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