

# RANGE OF TESTS

w.e.f. October 2019

## A. General Quality Test

**Animal Feed:** Poultry Feed , Cattle Feed , Aqua Feed ,Swine Feed, Equine Feed Analysis etc.

**Feed Ingredients:** Oil Seed & By Products / Cereals / Pulses & By Products / Meat Products analysis etc.

(i.e.:- Ground nut cake & Extract, Rapeseed meal, Mustard DOC, Cottonseed cake, Soya DOC, Full Fat Soya, Soya been seed, Extracted rice bran, Sun Flower DOC, Maize & Maize Gluten, Rice & Rice Polish, Wheat & Wheat Bran, Guar churi, Guar korma, Bajara, Pulses, Meat Bone Meal, Fish Meal, Horn Meal, Meat meal etc.)

Sr.No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1.	Moisture	BIS 7874 Part-1:1975	Animal feed & Feed Ingredient	100
2.	Crude Ash	BIS 14827:2000	Animal feed & Feed Ingredient	100
3.	Acid Insoluble Ash (Sand & Silica)	BIS 7874 Part-1 :1975	Animal feed & Feed Ingredient	100
4.	Crude Protein	IS/ISO/-5983-2:2005	Animal feed & Feed Ingredient	100
5.	Crude Fat	BIS/ISO 6492:1999	Animal feed & Feed Ingredient	100
6.	Crude Fiber	ANT/STP/PROX/06 Based on AOAC 978.10	Animal feed & Feed Ingredient	100
7.	Acid Detergent Fiber	ANT/STP/PROX/08 Based on AOAC 973.18	Animal feed & Feed Ingredient	100
8.	Neutral Detergent Fiber	ANT/STP/PROX/07 Based on AOAC 2002.04	Animal feed & Feed Ingredient	100
9.	Salt	BIS 7874 Part II:1975	Animal feed & Feed Ingredient	100
10.	Energy (Gross)	ANT/STP/PROX/18	Animal feed & Feed Ingredient	100
11.	Calcium	AOAC 927.02	Animal feed & Feed Ingredient	100
12.	Total Phosphorous	BIS 14828:2000	Animal feed & Feed Ingredient	100
13.	Pepsin Digestibility Index	ANT/STP/PROX/11 Based AOAC 971.09	Animal feed & Feed Ingredient	100
14.	Urease Activity	ANT/STP/PROX14	Animal feed & Feed Ingredient	100

### B. Adulterations in feed & feed ingredients

Sr.No.	Parameter	Protocol	Type of sample	Min. sample quantity (gm)
1	Urea	BIS 14832:2000 (Quantitative)	Animal feed & Feed Ingredient	100
2	Urea	Qualitative (Absent / Present)	Animal feed & Feed Ingredient	100
3	Non-Protein Nitrogen	ANT/STP/PROX/10 (Quantitative)	MBM	100
4	Non-Protein Nitrogen	Qualitative (Absent / Present)	Animal feed & Feed Ingredient	100
5	Leather Meal	Qualitative (Absent / Present)	Animal feed & Feed Ingredient	100
6	Chromium	AAS	MBM	100

### C. Mycotoxins in feed & feed ingredients

Sr.no.	Parameter	Protocol	Type of sample	Min. sample quantity (gm)
1	Aflatoxin B1	ANT/STP/TOX/001	Animal feed & Feed Ingredient	200
2	Aflatoxin B1,B2,G1&G2	ANT/STP/TOX/001	Animal feed & Feed Ingredient	250

### D. Oil & fat

Sr.no.	Parameter	Protocol	Type of sample	Min. sample quantity (gm)
1	Peroxide Value / Rancidity	Indian Pharmacopoeia	OIL & Fat	100
2	Acid Value	FSSAI	OIL & Fat	100
3	Free Fatty Acid	AOAC 940.28	OIL & Fat	100
4	Saponification Value	Indian Pharmacopoeia	OIL & Fat	100
5	Iodine Value	Indian Pharmacopoeia	OIL & Fat	100

### E. Amino acids

Sr.no.	Parameter	Protocol	Type of sample	Min. sample quantity (gm)
1	Assay / Purity	British Pharmacopoeia	DL-Methionine	100
2	Assay / Purity	British Pharmacopoeia	L- Lysine	100
3	Assay / Purity	British Pharmacopoeia	L- Threonine	100
4	Assay / Purity	British Pharmacopoeia	Valine	100
5	Assay / Purity	United State Pharmacopoeia	Betaine Hydrochloride	100

### F. Individual Enzymes

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Phytase Activity	ANT/STP/MIN/67	Phytase Enzyme	100

### G. Calcium & Phosphorous Rich Minerals Supplements

(Monobasic / Dibasic / Tribasic Calcium Phosphate, Calcium Carbonate, Lime Stone Powder, Marble grit, Marble Powder etc.)				
Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Calcium (Ca) (ASB)	BIS 13574:1992	Mineral Salt	50
2	Calcium (Ca) (ODB)	BIS 13433 (P-1):1992	Mineral Salt	50
3	Phosphorous (P) (ASB)	BIS 14828:2000	Mineral Salt	50
4	Phosphorous (P) (ODB)	BIS 14828:2000	Mineral Salt	50
5	Acid Insoluble ash (Sand & Silica)	BIS 7874 Part-1 :1975	Mineral Salt	50
6	Magnesium (Mg)	BIS 13574:1992	Mineral Salt	50
7	Moisture	BIS 5470:2002	Mineral Salt	50

### H. Individual Minerals

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Assay /Calcium	Indian Pharmacopoeia	Calcium Carbonate	50
2	Assay /Calcium	IP/BP/USP	Calcium Oxide	50
3	Assay /Calcium	BIS 6031:1997	Calcium Propionate	50
4	Assay /Cobalt	ANT/STP/MIN/10	Cobalt Carbonate	50
5	Assay /Copper	British Pharmacopoeia	Copper Sulphate	50
6	Assay	BIS 6031:1997	Calcium Propionate	50
7	Assay / Ferrous	Indian Pharmacopoeia	Ferrous Sulphate	50
8	Assay /Magnesium	Indian Pharmacopoeia	Magnesium Oxide	50
9	Assay / Magnesium	Indian Pharmacopoeia	Magnesium Sulphate	50
10	Assay / Manganese	BIS 1473: 2004	Manganese Oxide	50
11	Assay / Iodine	Indian Pharmacopoeia	Potassium Iodide	50
12	Assay / Iodine	British Pharmacopoeia	Potassium Iodate	50
13	Assay / Potassium	Indian Pharmacopoeia	Potassium Chloride	50
14	Assay	British Pharmacopoeia	Sodium Sulphate	50
15	Assay / Selenium	British Pharmacopoeia	Sodium Selenite	50
16	Assay / Sodium	Indian Pharmacopoeia	Sodium Benzoate	50
17	Assay	Indian Pharmacopoeia	Sodium Bicarbonate	50
18	Assay / Zinc	Indian Pharmacopoeia	Zinc Sulphate	50
19	Assay / Zinc	Indian Pharmacopoeia	Zinc Oxide	50
20	Copper	BP /BIS	Tribasic Copper Chloride (TBCC)	50
21	Assay	Indian Pharmacopoeia	Sod. Thiosulphate	50
22	Assay	Indian Pharmacopoeia	Sod. Dihydrogen Phosphate	50
23	Assay	Indian Pharmacopoeia	Disodium Hydrogen Phosphate	50
24	Purity / Assay	IP/BP/USP/BIS	Any Mineral Sample on request	-

### I. Elemental Mineral Content in Premix (% to PPM Level)

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Copper	ANT/STP/AAS/004	Mineral Premix	50
2	Zinc	ANT/STP/AAS/006	Mineral Premix	50
3	Cobalt	ANT/STP/AAS/003	Mineral Premix	50
4	Chromium	ANT/STP/AAS/005	Mineral Premix	50
5	Manganese	ANT/STP/AAS/002	Mineral Premix	50
6	Iron (Ferrous)	ANT/STP/AAS/001	Mineral Premix	50

### J. Assay of Individual Vitamins

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Assay of Vitamin A	ANT/STP/VIT/12	Vitamin AD3	50
2	Assay of Vitamin D3	ANT/STP/VIT/12	Vitamin AD3	50
3	Assay	ANT/STP/VIT/13	Vitamin D3	50
4	Assay	Indian Pharmacopoeia	Vitamin B1 (HCL/ Mononitrate)	50
5	Assay	Indian Pharmacopoeia	Vitamin B2 /Vit. B2 Sod. Phosphate	50
6	Assay	Indian Pharmacopoeia	Vitamin B3 (Niacin/Niacinamide)	50
7	Assay	Indian Pharmacopoeia	Vitamin B5 (Calcium-D- Pantothenate)	50
8	Assay	Indian Pharmacopoeia	Vitamin B6 (Pyridoxine HCL)	50
9	Assay	Indian Pharmacopoeia	Vitamin B9 (Folic Acid)	50
10.	Assay	Indian Pharmacopoeia	Vitamin B12 (Cyanocobalamin)	50
11.	Assay	United State Pharmacopoeia	Choline Chloride	50
12	Assay	Indian Pharmacopoeia	Vitamin C (Ascorbic Acid)	50
13	Assay	ANT/STP/VIT/09	Vitamin E (Tocopheryl Acetate)	50
14	Assay	ANT/STP/VIT/10	Vitamin H (Biotin)	50
15	Assay (Vitamin K3)	ANT/STP/VIT/08	Menadione Sodium Bisulfite (MSB)	50
16	Nicotinamide	ANT/STP/VIT/18	Menadione Nicotinamide Bisulfite (MNB)	50
17	Menadione (K3)	ANT/STP/VIT/18	Menadione Nicotinamide Bisulfite (MNB)	50
18	Purity / Assay	IP/BP/USP	Any Vitamin Sample on request	50

### K. Other Analysis

(Medicaments / Antioxidants / Ammonia Binder / Toxin Binder)

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Assay	ANT/STP/MIN/52	Ethoxyquin	100
2	Assay / Purity	ANT/STP/MIN/66	Diclazuril	100
3	Ammonia Binding Capacity	ANT/STP/MIN/62	Yucca Extract Powder / Ammonia binder	100
4	MB Value	BIS 877:1989	Activated Carbon	100
5	CEC / MB Value	BIS 12446:2007	Calcium Bentonite	100
6	Assay	British Pharmacopoeia	Propyl Gallate	50

### L. CV Studies (Homogeneity)

	<p>The coefficient of variation (CV) is a measure of relative variability. It is the ratio of the standard deviation to the mean (average) of analysis.</p> <p>Please send at least 10 samples of the product for correct CV studies. The cost of analyzing &amp; sharing the study would be discussed after we receive the proposal &amp; other details like type of sample, parameters, study to be conducted etc.</p>	
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### M. Physical Analysis

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Bulk Density	British Pharmacopoeia	Premix/ Vitamin / Mineral	100
2	Angle of repose / Followability	British Pharmacopoeia	Premix/ Vitamin / Mineral	100
3	Lumpiness	British Pharmacopoeia	Premix/ Vitamin / Mineral	100
4	pH	Indian Pharmacopoeia	Premix/ Vitamin / Mineral	100
5	Sieve Analysis	Indian Pharmacopoeia	Premix/ Vitamin / Mineral	100
6	Pellet Durability test	Pellet Durability Tester	Feed Pellets	100
7	Loss on Drying	Indian Pharmacopoeia	Feed /Premix/ Vitamin / Mineral	50
8	Water Content	Indian Pharmacopoeia	Premix/ Vitamin / Mineral	50

### N. Heavy Metals Analysis

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	Lead	ANT/STP/HMT/01	Mineral Salt / Mineral premix	50
2	Cadmium	ANT/STP/HMT/02	Mineral Salt / Mineral premix	50
3	Mercury	ANT/STP/HMT/03	Mineral Salt	50
4	Arsenic	ANT/STP/HMT/04	Mineral Salt	50

### O. Water Analysis

Sr. No.	Parameter	Protocol	Type of sample	Min. Sample Quantity (gm)
1	pH	BIS	Water	100
2	TDS	BIS	Water	100
3	Total Hardness	BIS	Water	100
4	Calcium	BIS	Water	100
5	Magnesium	BIS	Water	100
6	Chloride	BIS	Water	100
7	Sulphate	BIS	Water	100
8	Alkalinity	BIS	Water	100
9	Iron	APHA	Water	100
10	Lead	APHA	Water	100
11	Cadmium	APHA	Water	100
12	Arsenic	APHA	Water	100
13	Mercury	APHA	Water	100

#### T & C:

- ***\*All applicable Taxes are extra at actuals.***
- ***All payments to be made in advance.***
- ***ASB: Test Result on "As Such Basis"***
- ***ODB: Test Result on "On Dried Basis"***

**Note:** For any other analysis, please email us at [lab@avitechnutrition.com](mailto:lab@avitechnutrition.com) or call at +91-124-4749063/65/41