

Advanced Protocol® Verified - 50 IF

5V00*

DESCRIPTION

Advanced Protocol® Verified 50 IF is a Constant Nutrition® formulation providing 20% protein for mice (and rats) in protocols where verified levels of dietary estrogenic activity needs to be assured. This diet is formulated using the unique and innovative concept of Constant Nutrition®, paired with the selection of highest quality ingredients to assure minimal inherent biological variation in long-term studies.

Features and Benefits

- Constant Nutrition® formula helps minimize nutritional variables
- Formulated with 20% protein
- Verified to contain less than 50 ppm total isoflavones (genistein, daidzein and glycitein)
- Provides proper nutrients without affecting outcome in estrogen-sensitive protocols as shown in the accompanying graph
- Precision processing assures Constant Nutrition® quality

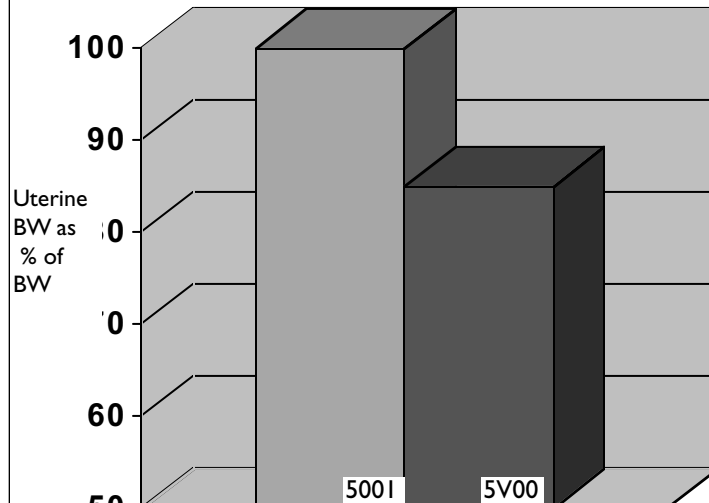
Product Forms Available

- Oval pellets, 10 mm x 16 mm x 25 mm length (3/8"x5/8"x1")
- Meal (ground pellets), special order

Other Versions Available

- 5V09: Advanced Protocol Extruded Verified - 50 IF Diet

Growing OVX Mouse Uterus



Purina Mills, LLC Research

An estrogen-sensitive parameter in the growing, ovariectomized mouse is the uterus. A smaller uterus indicates less estrogenic activity in the diet. When compared on a basis relative to body weight (BW), 5V00 (less than 50 ppm total isoflavones) produced a uterus that was 15% smaller than a uterus produced by LabDiet 5001 (approximately 400 ppm total isoflavones).

Additional data from Vanderbilt University, published in 2005 (*Wang, et al.) exhibited similar results. In this study, uterine weights as a percent of body weights were 16% smaller in mice consuming 5V00 (less than 50 ppm total isoflavones) than mice consuming 5001.

Valuable Tg mice used in estrogen-sensitive protocols must have a diet that contains what is supposed to be there and nothing else. Compare our research-backed Verified diets to those lacking the essentials for reliable, repeatable results.

*Wang, et al. (2005). Vol 102, No. 28, Pp. 9960-9965. Proceedings of the National Academy of Sciences of the United States of America.

GUARANTEED ANALYSIS

Crude protein not less than	20.0%
Crude fat not less than	4.5%
Crude fiber not more than	6.0%

INGREDIENTS

Ground wheat, ground corn, wheat middlings, ground oats, corn gluten meal, fish meal, casein, soybean oil, dicalcium phosphate, monocalcium phosphate, calcium carbonate, choline chloride, dehulled soybean meal, salt, DL-methionine, menadione dimethylpyrimidinol bisulfite, L-lysine, magnesium oxide, pyridoxine hydrochloride, chromium potassium sulfate, potassium chloride, tocopherols (a preservative), cholecalciferol, vitamin A acetate, thiamin mononitrate, biotin, dl-alpha tocopheryl acetate, L-tryptophan, calcium pantothenate, folic acid, manganese oxide, vitamin B₁₂ supplement, riboflavin, nicotinic acid, zinc oxide, ferrous carbonate, copper sulfate, zinc sulfate, calcium iodate, cobalt carbonate, sodium selenite.

FEEDING DIRECTIONS

Feed ad libitum. Plenty of fresh, clean water should be available to the animals at all times.

Rats- All rats will eat varying amounts of feed depending on their genetic origin. Larger strains will eat up to 30 grams per day. Smaller strains will eat up to 15 grams per day. Feeders in rat cages should be designed to hold two to three days supply of feed at one time.

Mice-Adult mice will eat up to 5 grams of pelleted ration daily. Some of the larger strains may eat as much as 8 grams per day per animal. Feed should be available on a free choice basis in wire feeders above the floor of the cage.

Hamsters-Adults will eat up to 14 grams per day.

CHEMICAL COMPOSITION¹

Nutrients²		Sulfur, %	.028
Protein, %	20.4	Sodium, %	.027
Arginine, %	.088	Chlorine, %	.054
Cystine, %	.026	Fluorine, ppm	.29
Glycine, %	.076	Iron, ppm	.280
Histidine, %	.047	Zinc, ppm	.100
Isoleucine, %	.096	Manganese, ppm	.130
Leucine, %	.206	Copper, ppm	.11
Lysine, %	.110	Cobalt, ppm	.058
Methionine, %	.080	Iodine, ppm	.1.1
Phenylalanine, %	.101	Chromium, ppm	.1.9
Tyrosine, %	.075	Selenium, ppm	.0.30
Threonine, %	.072		
Tryptophan, %	.022	Vitamins	
Valine, %	.105	Carotene, ppm	.1.3
Serine, %	.102	Vitamin K (as menadione), ppm	.7.1
Aspartic Acid, %	.1.59	Thiamin Hydrochloride, ppm	.26
Glutamic Acid, %	.4.96	Riboflavin, ppm	.8.5
Alanine, %	.1.26	Niacin, ppm	.86
Proline, %	.1.91	Pantothenic Acid, ppm	.29
Taurine, %	.0.02	Choline Chloride, ppm	.2100
Fat (ether extract), %	5.0	Folic Acid, ppm	.2.7
Fat (acid hydrolysis), %	6.1	Pyridoxine, ppm	.11
Cholesterol, ppm	.160	Biotin, ppm	.0.30
Linoleic Acid, %	.2.5	B ₁₂ , mcg/kg	.51
Linolenic Acid, %	.0.22	Vitamin A, IU/gm	.15
Arachidonic Acid, %	.0.01	Vitamin D ₃ (added), IU/gm	.2.0
Omega-3 Fatty Acids, %	.0.40	Vitamin E, IU/kg	.94
Total Saturated Fatty Acids, %	.1.06	Ascorbic Acid, mg/gm	—
Total Monounsaturated			
Fatty Acids, %	.1.20	Calories provided by:	
Fiber (Crude), %	3.6	Protein, %	.23.549
Neutral Detergent Fiber ³ , %	.14.9	Fat (ether extract), %	.12.974
Acid Detergent Fiber ⁴ , %	.4.6	Carbohydrates, %	.63.477
Nitrogen-Free Extract		*Product Code	
(by difference), %	55.0	1. Formulation based on calculated values from the latest ingredient analysis information. Since nutrient composition of natural ingredients varies and some nutrient loss will occur due to manufacturing processes, analysis will differ accordingly.	
Starch, %	.40.5	2. Nutrients expressed as percent of ration except where otherwise indicated. Moisture content is assumed to be 10.0% for the purpose of calculations.	
Glucose, %	.0.16	3. NDF = approximately cellulose, hemicellulose and lignin.	
Fructose, %	.0.16	4. ADF = approximately cellulose and lignin.	
Sucrose, %	.0.37	5. Physiological Fuel Value (kcal/gm) = Sum of decimal fractions of protein, fat and carbohydrate (use Nitrogen Free Extract) x 4,9,4 kcal/gm respectively.	
Lactose, %	.0.00		
Total Digestible Nutrients, %	76.1		
Gross Energy, kcal/gm	4.14		
Physiological Fuel Value⁵, kcal/gm	3.47		
Metabolizable Energy, kcal/gm	3.20		
Minerals			
Ash, %	5.8		
Calcium, %	.1.04		
Phosphorus, %	.0.82		
Phosphorus (non-phytate), %	.0.58		
Potassium, %	.0.43		
Magnesium, %	.0.20		