

**DESCRIPTION**

Advanced Protocol® PicoLab® Verified Mouse 50 IF Diet is a Constant Nutrition® formulation providing 20% protein for mouse colonies that require extra levels of energy and where 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. Irradiation and special 4-ply packaging provide a virtually bacteria-free diet. Especially suited for transgenic mice and breeding mice colonies maintained in barrier facilities.

**Features and Benefits**

- Constant Nutrition® formula helps minimize nutritional variables
- Formulated with 20% protein and 9% total fat for strains requiring high nutrient density diets
- Verified to contain less than 50 ppm total isoflavones (genistein, daidzein and glycitein)
- Precision processing assures Constant Nutrition® quality
- Irradiation gives reliable microbial control and eliminates the need for autoclaving

**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**

- 5V06: Advanced Protocol Extruded Verified Mouse 50 IF Diet

Strain differences have been shown when different dietary fat levels are fed. Breeding performance is improved in BALBc mice when fed higher fat levels while C57BL/6 mice fed high fat diets tend to produce fewer numbers of pups at birth and when weaned.

Strains requiring high fat diets for optimum reproductive performance should receive 5V03. However, strains that do not require high fat diets should be fed Advanced Protocol® PicoLab® Verified Rodent 50 IF Diet - 5V02 when involved in protocols measuring estrogen-sensitive parameters.

An estrogen-sensitive parameter in the growing, ovariectomized mouse is the uterus. A smaller uterus indicates less estrogenic activity in the diet. As a percent of total body weight, mice receiving a diet with less than 50 ppm total isoflavones produced a uterus that was 15% smaller than those receiving a diet with approximately 400 ppm total isoflavones.

**GUARANTEED ANALYSIS**

Crude protein not less than	20.0%
Crude fat not less than	9.0%
Crude fiber not more than	5.0%

**INGREDIENTS**

Ground wheat, ground corn, corn gluten meal, ground oats, wheat middlings, soybean oil, casein, dicalcium phosphate, monocalcium phosphate, calcium carbonate, brewers dried yeast, salt, L-lysine, menadione dimethylpyrimidinol bisulfite, DL-methionine, choline chloride, magnesium oxide, pyridoxine hydrochloride, chromium potassium sulfate, tocopherols (a preservative), cholecalciferol, vitamin A acetate, thiamin mononitrate, biotin, dl-alpha tocopheryl acetate, calcium pantothenate, folic acid, vitamin B<sub>12</sub> supplement, L-tryptophan, riboflavin, nicotinic acid, manganese oxide, zinc oxide, ferrous carbonate, copper sulfate, zinc sulfate, calcium iodate, cobalt carbonate, sodium selenite.

**FEEDING DIRECTIONS**

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

**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.

**CHEMICAL COMPOSITION<sup>1</sup>**

**Nutrients<sup>2</sup>**

<b>Protein, %</b>	<b>21.1</b>
Arginine, %	0.81
Cystine, %	0.27
Glycine, %	0.61
Histidine, %	0.48
Isoleucine, %	1.05
Leucine, %	2.39
Lysine, %	1.14
Methionine, %	0.72
Phenylalanine, %	1.13
Tyrosine, %	0.88
Threonine, %	0.75
Tryptophan, %	0.20
Valine, %	1.14
Serine, %	1.07
Aspartic Acid, %	1.51
Glutamic Acid, %	5.17
Alanine, %	1.30
Proline, %	2.08
Taurine, %	0.00
<b>Fat (ether extract), %</b>	<b>9.0</b>
<b>Fat (acid hydrolysis), %</b>	<b>10.2</b>
Cholesterol, ppm	0.00
Linoleic Acid, %	4.88
Linolenic Acid, %	0.61
Arachidonic Acid, %	0.00
Omega-3 Fatty Acids, %	0.61
Total Saturated Fatty Acids, %	1.54
Total Monounsaturated Fatty Acids, %	2.07
<b>Fiber (Crude), %</b>	<b>3.4</b>
Neutral Detergent Fiber <sup>3</sup> , %	14.1
Acid Detergent Fiber <sup>4</sup> , %	4.6
<b>Nitrogen-Free Extract (by difference), %</b>	<b>50.6</b>
Starch, %	37.0
Glucose, %	0.16
Fructose, %	0.15
Sucrose, %	0.34
Lactose, %	0.01
<b>Total Digestible Nutrients, %</b>	<b>82.3</b>
<b>Gross Energy, kcal/gm</b>	<b>4.54</b>
<b>Physiological Fuel Value<sup>5</sup>, kcal/gm</b>	<b>3.68</b>
<b>Metabolizable Energy, kcal/gm</b>	<b>3.49</b>
<b>Minerals</b>	
<b>Ash, %</b>	<b>5.5</b>
Calcium, %	0.99
Phosphorus, %	0.80
Phosphorus (non-phytate), %	0.58
Potassium, %	0.35
Magnesium, %	0.20

Sulfur, %	0.22
Sodium, %	0.23
Chlorine, %	0.50
Fluorine, ppm	37
Iron, ppm	310
Zinc, ppm	120
Manganese, ppm	130
Copper, ppm	15
Cobalt, ppm	0.51
Iodine, ppm	1.5
Chromium, ppm	2.4
Selenium, ppm	0.31

**Vitamins**

Carotene, ppm	1.9
Vitamin K (as menadione), ppm	7.1
Thiamin Hydrochloride, ppm	26
Riboflavin, ppm	8.5
Niacin, ppm	90
Pantothenic Acid, ppm	29
Choline Chloride, ppm	2300
Folic Acid, ppm	2.7
Pyridoxine, ppm	11
Biotin, ppm	0.30
B <sub>12</sub> , mcg/kg	51
Vitamin A, IU/gm	15
Vitamin D <sub>3</sub> (added), IU/gm	2.0
Vitamin E, IU/kg	93
Ascorbic Acid, mg/gm	—

**Calories provided by:**

Protein, %	22.925
Fat (ether extract), %	22.106
Carbohydrates, %	54.970

**\*Product Code**

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.
2. Nutrients expressed as percent of ration except where otherwise indicated. Moisture content is assumed to be 10.0% for the purpose of calculations.
3. NDF = approximately cellulose, hemi-cellulose and lignin.
4. ADF = approximately cellulose and lignin.
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.