

## Teklad Global 16% Protein Rodent Diet (Sterilizable)

**Product Description-** 2016S is a fixed formula, autoclavable diet manufactured with high quality ingredients and designed to support growth and maintenance. 2016S does not contain alfalfa or soybean meal, thus minimizing the occurrence of natural phytoestrogens. Typical isoflavone concentrations (daidzein + genistein aglycone equivalents) range from non-detectable to 20 mg/kg. Exclusion of alfalfa reduces chlorophyll, improving optical imaging clarity. Absence of animal protein and fish meal minimizes the presence of nitrosamines. 2016S is supplemented with additional vitamins to ensure nutritional adequacy after autoclaving.

**Ingredients** (in descending order of inclusion)- Ground wheat, ground corn, wheat middlings, corn gluten meal, calcium carbonate, dicalcium phosphate, soybean oil, brewers dried yeast, L-lysine, iodized salt, DL-methionine, choline chloride, menadione sodium bisulfite complex (source of vitamin K activity), magnesium oxide, vitamin E acetate, calcium pantothenate, thiamin mononitrate, manganous oxide, niacin, ferrous sulfate, zinc oxide, riboflavin, vitamin A acetate, pyridoxine hydrochloride, copper sulfate, vitamin B<sub>12</sub> supplement, folic acid, calcium iodate, biotin, vitamin D<sub>3</sub> supplement, cobalt carbonate.

Standard Product Form: **Pellet**

| Macronutrients                        |               |            |
|---------------------------------------|---------------|------------|
| Crude Protein                         | %             | 16.4       |
| Fat (ether extract) <sup>a</sup>      | %             | 4.0        |
| Carbohydrate (available) <sup>b</sup> | %             | 48.5       |
| Crude Fiber                           | %             | 3.3        |
| Neutral Detergent Fiber <sup>c</sup>  | %             | 15.2       |
| Ash                                   | %             | 4.9        |
| Energy Density <sup>d</sup>           | kcal/g (kJ/g) | 3.0 (12.6) |
| Calories from Protein                 | %             | 22         |
| Calories from Fat                     | %             | 12         |
| Calories from Carbohydrate            | %             | 66         |

| Minerals               |       |      |
|------------------------|-------|------|
| Calcium                | %     | 1.0  |
| Phosphorus             | %     | 0.7  |
| Non-Phytate Phosphorus | %     | 0.4  |
| Sodium                 | %     | 0.2  |
| Potassium              | %     | 0.6  |
| Chloride               | %     | 0.4  |
| Magnesium              | %     | 0.2  |
| Zinc                   | mg/kg | 70   |
| Manganese              | mg/kg | 100  |
| Copper                 | mg/kg | 15   |
| Iodine                 | mg/kg | 6    |
| Iron                   | mg/kg | 200  |
| Selenium               | mg/kg | 0.23 |

| Amino Acids   |   |     |
|---------------|---|-----|
| Aspartic Acid | % | 1.0 |
| Glutamic Acid | % | 3.3 |
| Alanine       | % | 0.9 |
| Glycine       | % | 0.7 |
| Threonine     | % | 0.6 |
| Proline       | % | 1.5 |
| Serine        | % | 0.8 |
| Leucine       | % | 1.9 |
| Isoleucine    | % | 0.7 |
| Valine        | % | 0.8 |
| Phenylalanine | % | 0.9 |
| Tyrosine      | % | 0.5 |
| Methionine    | % | 0.5 |
| Cystine       | % | 0.3 |
| Lysine        | % | 0.9 |
| Histidine     | % | 0.4 |
| Arginine      | % | 0.8 |
| Tryptophan    | % | 0.2 |

| Vitamins                                 |       |      |
|--|-------|------|
| Vitamin A <sup>e, f</sup>                | IU/g  | 30.0 |
| Vitamin D <sub>3</sub> <sup>e, g</sup>   | IU/g  | 2.0  |
| Vitamin E                                | IU/kg | 135  |
| Vitamin K <sub>3</sub> (menadione)       | mg/kg | 100  |
| Vitamin B <sub>1</sub> (thiamin)         | mg/kg | 117  |
| Vitamin B <sub>2</sub> (riboflavin)      | mg/kg | 27   |
| Niacin (nicotinic acid)                  | mg/kg | 120  |
| Vitamin B <sub>6</sub> (pyridoxine)      | mg/kg | 26   |
| Pantothenic Acid                         | mg/kg | 140  |
| Vitamin B <sub>12</sub> (cyanocobalamin) | mg/kg | 0.15 |
| Biotin                                   | mg/kg | 0.90 |
| Folate                                   | mg/kg | 9    |
| Choline                                  | mg/kg | 1030 |

| Fatty Acids           |   |     |
|-----------------------|---|-----|
| C16:0 Palmitic        | % | 0.5 |
| C18:0 Stearic         | % | 0.1 |
| C18:1ω9 Oleic         | % | 0.7 |
| C18:2ω6 Linoleic      | % | 2.0 |
| C18:3ω3 Linolenic     | % | 0.1 |
| Total Saturated       | % | 0.6 |
| Total Monounsaturated | % | 0.7 |
| Total Polyunsaturated | % | 2.1 |

| Other       |       |    |
|-------------|-------|----|
| Cholesterol | mg/kg | -- |

<sup>a</sup> Ether extract is used to measure fat in pelleted diets, while an acid hydrolysis method is required to recover fat in extruded diets. Compared to ether extract, the fat value for acid hydrolysis will be approximately 1% point higher.

<sup>b</sup> Carbohydrate (available) is calculated by subtracting neutral detergent fiber from total carbohydrates.

<sup>c</sup> Neutral detergent fiber is an estimate of insoluble fiber, including cellulose, hemicellulose, and lignin. Crude fiber methodology underestimates total fiber.

<sup>d</sup> Energy density is a calculated estimate of *metabolizable energy* based on the Atwater factors assigning 4 kcal/g to protein, 9 kcal/g to fat, and 4 kcal/g to available carbohydrate.

<sup>e</sup> Indicates added amount but does not account for contribution from other ingredients.

<sup>f</sup> 1 IU vitamin A = 0.3 µg retinol

<sup>g</sup> 1 IU vitamin D = 25 ng cholecalciferol

For nutrients not listed, insufficient data is available to quantify.

Nutrient data represent the best information available, calculated from published values and direct analytical testing of raw materials and finished product. Nutrient values may vary due to the natural variations in the ingredients, analysis, and effects of processing.

Teklad Diets are designed and manufactured for research purposes only.

