

# 2018SX

## Teklad Global 18% Protein Extruded Rodent Diet (Sterilizable)

**Product Description** - 2018SX is a fixed formula, autoclavable extruded diet manufactured with high quality ingredients designed to support gestation, lactation, and growth of rodents. 2018SX excludes alfalfa meal, which lowers phytoestrogen (coumestrol) content, and reduces chlorophyll, improving optical imaging clarity. A moderate inclusion of soybean meal results in an expected isoflavone range of 225-340 mg/kg diet (daidzein + genistein aglycone equivalents). Absence of fish meal minimizes the presence of nitrosamines. 2018SX is supplemented with additional vitamins to ensure nutritional adequacy after autoclaving. The extruded form helps reduce diet clumping and hardness. Related codes 2018, 2018C (certified), 2918C (irradiated, certified), 2018X (extruded), 2918X (irradiated, extruded), 2018S/SC (sterilizable, certified).

### Macronutrients

Crude Protein	%	18.4
Fat (ether extract) <sup>a</sup>	%	6.0
Fat (acid hydrolysis) <sup>a</sup>	%	7.0
Carbohydrate (available) <sup>b</sup>	%	44.2
Crude Fiber	%	3.8
Neutral Detergent Fiber <sup>c</sup>	%	14.7
Ash	%	5.5
Energy Density <sup>d</sup>	kcal/g (kJ/g)	3.1 (13.0)
Calories from Protein	%	24
Calories from Fat	%	18
Calories from Carbohydrate	%	58

### 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	%	1.4
Glutamic Acid	%	3.4
Alanine	%	1.1
Glycine	%	0.8
Threonine	%	0.7
Proline	%	1.6
Serine	%	1.1
Leucine	%	1.8
Isoleucine	%	0.8
Valine	%	0.9
Phenylalanine	%	1.0
Tyrosine	%	0.6
Methionine	%	0.6
Cystine	%	0.3
Lysine	%	1.1
Histidine	%	0.4
Arginine	%	1.0
Tryptophan	%	0.2

Teklad Diets are designed and manufactured  
for research purposes only.



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**Ingredients** (in descending order of inclusion)- Ground wheat, ground corn, wheat middlings, dehulled soybean meal, corn gluten meal, soybean oil, calcium carbonate, dicalcium phosphate, brewers dried yeast, iodized salt, L-lysine, DL-methionine, calcium propionate, 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: Extruded

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	115
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	1200
Fatty Acids		
C16:0 Palmitic	%	0.7
C18:0 Stearic	%	0.2
C18:1ω9 Oleic	%	1.2
C18:2ω6 Linoleic	%	3.1
C18:3ω3 Linolenic	%	0.3
Total Saturated	%	0.9
Total Monounsaturated	%	1.3
Total Polyunsaturated	%	3.4
Other		
Cholesterol	mg/kg	--

**Shelf life:** With proper storage, diet is suitable for use out to 9 months.

[www.inotivco.com/shelf-life-of-diets-used-in-research](http://www.inotivco.com/shelf-life-of-diets-used-in-research)

<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.