ENVIGO

Rodent diet and ingredient comparison

Teklad Global Rodent Diets reduce rather than introduce variation to your research

- Modern formulas with a limited ingredient set
- Reduce or eliminate ingredients of concern
- Life stage specific and support multiple research purposes
- Fixed formulation and stringent ingredient procurement practices
- Certified quality systems ISO 9001:2015

TEKLAD DIETS: A FIXED FORMULATION APPROACH	
Method	Ingredients from approved suppliers are tested prior to acceptance and use.
Rationale	Both nutrients and non-nutrients can have important effects.
Result	Minimize nutrient variation and manage non-nutrient variation while maintaining formula integrity.

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Teklad Global Rodent Diet line

+ Ingredient selection is one key to assure that diet reduces rather than introduces variation.

+ These ingredients of concern can be reduced or eliminated in order to reduce research variables.

INGREDIENT	COMPONENT	SIGNIFICANCE
Soybean meal	Isoflavones: Genistein, Daidzein	Selective Estrogen Receptor Modulator
Alfalfa meal	Coumestrol Chlorophyll	Selective Estrogen Receptor Modulator Interferes with fluorescent imaging
Fish meal Meat meal	Nitrosamines	Potential carcinogen

(Ingredients of concern shown in **red** in the table below)

	TEKLAD GLOBAL RODENT DIETS					TEKLAD TRADITIONAL DIETS	
Diet	**2014**	**2016**	**2018**	**2019**	**2020X**	**7012**	**8604**
	14% Protein Rodent Maintenance Diet	16% Protein Rodent Diet	18% Protein Rodent Diet	19% Protein Extruded Rodent Diet	Soy Protein Free Extruded Rodent Diet	LM-485 Sterilizable Rodent Diet	Rodent Diet
Primary ingredients (Order of inclusion)	Wheat midds Wheat Corn Corn gluten meal Soy oil	Wheat Corn Wheat midds Corn gluten meal Soy oil	Wheat Corn Wheat midds **Soybean meal** Corn gluten meal Soy oil	Wheat Corn Corn gluten meal Wheat midds Soy oil	Wheat Corn Corn gluten meal Wheat midds Soy oil	Corn **Soybean meal** Oats Wheat midds **Alfalfa meal** Soy oil	Corn **Soybean meal** Wheat midds **Fish meal** Molasses Wheat Whey Soy oil
CALCULATED NUTRIENT PROFILE							
Protein %	14.3	16.4	18.6	19.0	19.1	19.1	24.3
Fat %	4.0	4.0	6.2	9.0	6.5	5.8	4.7
Metabolizable energy	2.9 kcal/g	3.0 kcal/g	3.1 kcal/g	3.3 kcal/g	3.1 kcal/g	3.1 kcal/g	3.0 kcal/g
Isoflavone content*	<20 mg/kg	<20 mg/kg	150-340 mg/kg	<20 mg/kg	<20 mg/kg	350-780 mg/kg	380-840 mg/kg

Variations in Global Diet product code nomenclature

- '9' in the second digit - the diet has been irradiated
- 'S' - the autoclavable version, supplemented with vitamins to account for presumed losses
- 'X' - extruded form; exception is 2019 which is extruded
- 'C' - certified; a representative sample is tested for a panel of contaminants
- 'M' - meal form

Not all product combinations are produced regularly or stocked locally.

Teklad Global Rodent Diets mean consistency across all possible applications

	TEKLAD RODENT DIET EXAMPLES*
Non-autoclavable	2016
Certified	2016C
Autoclavable	2016S
Irradiated	2916
Consistency factor	Identical macro-ingredient formulations

*Other diet suppliers do not offer near-identical diet versions in these four formulations

+ Our fixed formulation philosophy and quality practices translate to consistent research results for you.

+ PMI produces variable formula diets in which ingredient inclusion rates can be changed to an extent unknown to the investigator.

	FIXED FORMULATION	VARIABLE FORMULATION (MANAGED)
Method	Ingredients have strict specifications and are tested to verify specifications are met prior to acceptance and use	Ingredients are tested prior to acceptance and inclusions rates are altered as needed
Rationale	Both nutrients and non-nutrients have important effects	Ingredient variability translates to diet variability
Result	Minimize nutrient and manage non-nutrient variation while maintaining formula integrity	Stabilize a set of nutrients that can be monitored in real time

(Ingredients of concern shown in **red** in the table below)

COMMONLY USED COMPETITOR RODENT DIETS							
Diet	**5001**	**5002**	**5008**	**5010**	**5P00**	**5053**	**5058**
	PMI Rodent Diet	PMI Certified Rodent Diet	PMI Formulab Rodent Diet	PMI Autoclavable Rodent Diet	Prolab® RMH 3000	Picolab® Rodent Diet 20	Picolab® Mouse Diet 20
Primary ingredients (Order of inclusion)	**Soybean meal** Corn Beet pulp **Fish meal** Oats **Alfalfa meal** Molasses Wheat germ Whey Pork fat Wheat midds **Meat & bone meal**	Corn **Soybean meal** Wheat **Fish meal** Wheat midds Beet pulp Wheat germ Molasses Oats Soy oil **Alfalfa meal**	Corn **Soybean meal** Wheat **Fish meal** Wheat midds Pork fat Molasses **Meat & bone meal** Oats Wheat germ **Alfalfa meal**	Corn **Soybean meal** Wheat midds **Fish meal** Wheat Wheat germ Oats **Alfalfa meal** Pork fat Soy oil	Wheat **Soybean meal** Wheat midds Corn **Fish meal** Pork fat **Alfalfa meal** Soy oil	Corn **Soybean meal** Wheat midds Wheat **Fish meal** Beet pulp Wheat germ Molasses Oats **Alfalfa meal** Soy oil	Wheat Corn **Soybean meal** Wheat germ **Fish meal** Corn gluten meal Pork fat Soy oil Whey
CALCULATED NUTRIENT PROFILE							
Protein %	25.0	20.7	23.6	24.6	22.5	21	21.8
Fat %	5.0	5.0	6.7	5.0	5.8	5.0	9.0
Metabolizable energy	2.9 kcal/g	3.0 kcal/g	3.2 kcal/g	3.0 kcal/g	3.1 kcal/g	3.0 kcal/g	3.4 kcal/g
Isoflavone content*	300-750 mg/kg	160-430 mg/kg	300-750 mg/kg	350-800 mg/kg	300-650 mg/kg	250-500 mg/kg	125-275 mg/kg

* expected range of genistein + daidzein (aglycone) based on direct measurement of diet, soybean meal source, and/or published literature values.
Ingredient listing and nutrient information based on website, September 2015

Research areas affected by phytoestrogens

+ Cancer studies
  + Breast, prostate, colorectal, lung
+ Reproductive and endocrine disruptor studies
+ Immunology
+ Diabetes and other endocrine studies
  + Insulin, vasopressin, thyroid hormones
+ Central nervous system studies
  + Behavior, memory, learning, neural degeneration
+ Cardiovascular disorders
  + Thrombosis, atherosclerosis, lipid and cholesterol studies

Envigo Teklad Products

Reliable, repeatable results

Known for superior customer service, technical expertise, and sales support.

Custom research diets

Control nutrients

+ Vitamin or mineral adjusted
+ Protein or amino acid adjusted
+ Lipid or fatty acid adjusted

Induce disease

+ Atherogenic (cholesterol, fat, cholate)
+ Diet-induced obesity (40-60% fat kcal)
+ High carbohydrate (fructose, sucrose)
+ NaCl adjusted
+ Cuprizone demyelination

Dose animals

+ Control of gene expression – doxycycline or tamoxifen containing diets
+ Addition of customer-supplied ingredients/compounds

Standard natural ingredient diets for multiple species

+ Global
+ Traditional

Bedding and enrichment

+ Contact
+ Non-contact

Medicated diets

+ Fenbendazole
+ Ivermectin
+ Uniprim

+ Complimentary consultation with our nutritionists

Contact us

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