

NIH SPECIFICATION

**Open Formula Rat and Mouse Diet - 18%
Crude Protein Autoclavable (NIH-31)**

<u>Ingredients</u>	<u>Percentage by Weight</u>
Fish meal (60% protein)	9.0
Soybean meal (48.5% protein)	5.0
Alfalfa meal (17% protein)	2.0
Corn gluten meal (60% protein)	2.0
Ground whole hard wheat	35.5
Ground #2 yellow shelled corn (8.5% protein)	21.0
Ground whole oats	10.0
Wheat middlings	10.0
Brewers dried yeast	1.0
Soy oil	1.5
Salt	.5
Dicalcium phosphate	1.5
Ground limestone	.5
Premixes	.5
	100.0

Vitamin Fortification per ton (2,000 lbs) of Finished Product.

<u>Vitamin</u>	<u>Amount</u>	<u>Source</u>
A Palmitate or Acetate	22,000,000 IU	Vitamin A
D ₃ animal sterol	3,800,000 IU	D activated
K dl Alpha-tocopheryl acetate	20 g. 15 g.	Menadione
Choline	700 g.	Choline chloride
Folic acid	1 g.	
Niacin	40 g.	
d Pantothenic acid	25 g.	d-Calcium Pantothenate
Riboflavin supplement	5 g.	
Thiamin	65 g.	Thiamin mono nitrate
B ₁₂ supplement	40,000 mcg.	
Pyridoxine	5 g.	Pyridoxine hydrochloride
Biotin	120 mg.	d-Biotin

Mineral Fortification per ton (2,000 lbs.) of Finished Product

<u>Mineral</u>	<u>Amount</u>	<u>Source</u>
Cobalt	400 mg.	Cobalt carbonate
Copper	4 g.	Copper sulfate
Iron	60 g.	Iron sulfate
Magnesium	400 g.	Magnesium oxide
Manganese	100 g.	Manganese oxide
Zinc	10 g.	Zinc oxide
Iodine	1500 mg.	Calcium iodate

These concentrations of vitamins and minerals shall be added to the ration via two separate (vitamin and mineral) premixes. The final formulation may be adjusted so the total amount of ingredients will equal 100%. In the case of the mineral fortification, the actual amount of each element required is specified. Therefore, the contractor shall adjust the amount of each compound used in the premix according to its mineral concentration.

Nutrient Standards

Micro Analysis - The total calculated concentrations of nutrients in the ration from ingredients and from the fortifications at the time of manufacture should be as follows:

Crude protein	%	Minimum	18.0
Crude fat	%	Minimum	4.0
Crude fiber	%	Maximum	5.0
Ash	%	Maximum	8.0

Amino Acids (% of total diet)

	Minimum
Arginine	.90
Lysine	.85
Methionine	.35
Cystine	.25
Tryptophan	.20
Glycine	.95
Histidine	.38
Leucine	1.40
Isoleucine	.95
Phenylalanine	.85
Tyrosine	.60
Threonine	.65
Valine	.90

Minerals

Calcium	%	Minimum	1.15
Phosphorous	%	"	.85
Potassium	%	"	.75
Sodium	%	"	.30
Magnesium	%	"	.15
Iron	PPM	"	345.00
Zinc	PPM	"	40.00
Manganese	PPM	"	140.00
Copper	PPM	"	12.00
Cobalt	PPM	"	0.70
Iodine	PPM	"	1.80

Vitamins

Vitamin A	IU/g	"	20.0 (10)*
Vitamin D	IU/g	"	4.0
Alpha-tocopherol	PPM	"	45.0
Thiamin	PPM	"	70.0
Riboflavin	PPM	"	7.0
Niacin	PPM	"	80.0
Pantothenic Acid	PPM	"	30.0
Choline	PPM	"	1900.0
Pyridoxine	PPM	"	10.0
Folic Acid	PPM	"	2.0
Biotin	PPM	"	.2
Vitamin B ₁₂	mcg/kg	"	40.0
Vitamin K	PPM	"	20.0

* TRUE VITAMIN A ACTIVITY BY HPLC METHOD