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Superseding
NIH-11-133l
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NIH SPECIFICATION
Open Formula Rat and Mouse Ration (NIH-07)
NIH Stock Number63-876

1. SCOPE

1.1 This specification is for an open formula laboratory rat and mouse ration which is void of any feed additives containing antibiotics or estrogen activity.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date invitation for bids or request for proposals form a part of this specification to the extent specified herein:

National Institutes of Health Standards

NIH STD 1 - Animal Feed Processing and Mill Sanitation Standard
NIH STD 5 - For Nutrient and Chemical Contaminant Analyses of Laboratory Animal Diets

(Copies of NIH Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the Contracting Officer).

3. REQUIREMENTS

3.1 Material - Material shall be as specified herein:

3.1.1 Ingredients

Ingredients	Percentage by weight
Dried skim milk	5.00
Fish meal (60% protein)	10.00
Soybean meal (49% protein)	12.00
Alfalfa meal (dehydrated 17% protein)	4.00
Corn gluten meal (60% protein)	3.00
Ground #2 yellow shelled corn	24.25
Ground hard winter wheat	23.00

(Ingredients continued on the next page)

Ingredients	Percentage by Weight
Wheat middlings	10.00
Brewer dried yeast	2.00
Dry molasses	1.50
soy oil	2.50
Salt	0.50
Dicalcium phosphate	1.25
Ground limestone	0.50
Choline Cl-70	0.10
Mineral Premix	0.15
Vitamin Premix	0.25
	100.00

Ingredients shall be ground to pass through a U.S. Standard Screen No. 16 prior to mixing.

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

Vitamin	Amount	Source
A	5,500,000 I.U.	Stabilized Vitamin A Palmitate or acetate
D_3	4,600,000 I.U.	D activated animal sterol
K	2.8 g.	dimethylpyrimidinol bisulfite
dl alpha-tocopheryl Acetate	20.0 g.	
Folic Acid	2.2 g.	
Niacin	30.0 g.	
d pantothenic acid	18.0 g.	d Calcium pantothenate
Riboflavin supplement	3.4	
Thiamin	10.0 g.	Thiamin mono nitrate
B_{12} supplement	45,400.0 mcg	
Pyridoxine	5.9 g.	Pyridoxine hydrochloride
Biotin	140.0 mg	d Biotin

Mineral Fortification Per Ton (2,000) of Finished Product

Mineral	Amount	Source
Cobalt	0.4 g.	Cobalt carbonate
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Copper	4.0 g.	Copper Sulfate
Iron	120.0 g.	Iron sulfate
Manganese	60.0 g.	Manganous oxide
Zinc	16.0 g.	Zinc oxide
Iodine	1.4 g.	Calcium iodate

These concentrations of vitamins and minerals shall be added to the ration via two separate (vitamin and mineral) premixes. 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.

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

Crude protein	%	Minimum	22.5
Crude fat	%	Minimum	5.0
Crude fiber	%	Maximum	4.5
Linoliec Acid	%	Minimum	0.7
Ash	%	Maximum	7.5

Amino Acids (% of total diet)	Minimum
Arginine	1.25
Lysine	1.20
Methionine	.50
Cystine	.35
Tryptophan	.25
Glycine	1.10
Histidine	.50
Leucine	1.80
Isoleucine	1.10
Phenylalanine	1.10
Tyrosine	.75
Threonine	.90
Valine	1.20

Minerals

Calcium	%	Minimum	1.20
Phosphorous	%	"	.95
Potassium	%	"	.80
Sodium	%	"	.33
Magnesium	%	"	.15
Chloride	%	"	.05
Iron	PPM	"	250.00
Zinc	PPM	"	45.00
Manganese	PPM	"	80.00
Copper	PPM	"	10.00
Cobalt	PPM	"	0.70
Iodine	PPM	"	1.80
Molybdenum	PPM	"	0.15
Selenium	PPM	"	0.15

Vitamins

Vitamin A	IU/g	Minimum	10.0(5.0)*
Vitamin D	IU/g	"	4.0
Alpha-tocopherol	PPM	"	35.0
Thiamin	PPM	"	14.0
Riboflavin	PPM	"	7.0
Niacin	PPM	"	80.0
Pantothenic Acid	PPM	"	20.0
Choline	PPM	"	2000.0
Pyridoxine	PPM	"	10.0
Folic Acid	PPM	"	3.0
Biotin	PPM	"	0.3
Vitamin B_{12}	ug/kg	"	60.0
Vitamin K	PPM	"	3.0

* TRUE VITAMIN A ACTIVITY BY HPLC METHOD

3.1.3 Approximate Analysis - Analysis for nutrient content of both ingredients and the finished product shall be conducted in accordance with the procedures of the Association of Official Agricultural Chemists (most recent issue). All nutrient contents shall be expressed as a percentage by weight on an air-dry basis.

3.1.4 Ingredients Standards - Ingredients used in the manufacture of this ration will not be contaminated with any more than 3 percent of foreign materials such as other grains, weed seeds, chaff, etc. Nor will any mold, must, or insect-rodent infestation be allowed. The average minimum nutrient concentrations of ingredients used in the manufacture of this ration

shall be equal to the values published in the most recent issue of the National Academy of Sciences Publication, "United States - Canadian Tables of Feed Composition". Contractors may be requested to provide a significant amount of data show an effective ingredient quality control program is being followed.

3.2 Form - The finished product shall be furnished in Oval shape pellets 5/8" - 3/4" wide; 3/8" - 7/16" thick; 1" - 1 3/8" long.

3.3 Nutrient and Chemical Contaminant Assays - The product covered by this Specification is subject to nutrient and chemical contaminant analyses assays in accordance with the latest issue of National Institutes of Health Standard No. 5. All assays shall be conducted by an independent laboratory under a National Institutes of Health contract.

3.3.1 Product Sample - The feed manufacturing contractor shall be responsible for collecting representative sample (Approximately 2 kg) from each production batch of product manufactured under this Specification. For the purpose of this Specification, a "batch" shall be defined as one continuous production run which may or may not consist of several small batches. In those instances where more than one batch is required to make up a production run for one shipment, samples for testing shall be made up using an equal portion of each of the small batches and one (1) sample will be sufficient for that production run or shipment. The minimum number of feed bags sampled shall be calculated by using the square root of the total number of bags of feed per production batch. The samples shall be shipped within 24 hours after the manufacturing process is completed as designated at the time the feed contract is awarded. Each sample shall be identified as to the name of manufacturer, the name of the product, the NIH Stock Number, and the date of manufacture. No coding of these items will be allowed.

3.3.2 Samples Analyses - A laboratory receiving the samples will be under an NIH contract to analyze then for compliance with Section 3.1.2 of this Specification. If nutrient concentrations in these samples are not consistent with the requirements specified in Section 3.1.2 of this Specification, the batch of feed from which the sample was obtained may be rejected

and returned to the manufacturer at no cost to the Government. Analyses will also be made for concentrations of chlorinated hydrocarbon pesticides, polychlorinated biphenyls, organo-phosphate pesticides, lead, cadmium, mercury, mycotoxins, and nitrates.

3.3.3 Estrogen Content and Feed additives - The product shall contain no antibiotics or estrogen additives of any kind. Award of the contract is contingent on an inspection by NIH personnel to determine if the contractor ha established a program designed to prevent estrogen contamination of the product during manufacture and/or warehousing. Additional unannounced inspections may be made during the term of the contract to ascertain if the program is implemented at all times. The NIH reserves the right to assay any batch of product manufactured under this Specification for estrogen activity. If at any time the estrogen activity in a batch shall be taken back and replaced by the contractor at no expense to the National Institutes of Health.

3.4 Processing Restrictions - All milling and warehousing conditions and/or restrictions as specified in the latest issue of National Institutes of Health Standard No. 1 apply to the feed covered by this Specification.

3.5 Alteration of Product - The product shall not be altered in any manner without prior approval from the Contracting Officer, National Institutes of Health.

3.6 Certification of Processing - The successful bidder shall carry through without operational delay the milling or manufacturing process which shall be completed not more than thirty (30) days prior to the delivery of the product.

3.7 Marking - Each bag shall be marked (via light green tag) with the name of the product, the name of the manufacturer, The net weight, the guaranteed analysis of its contents, the date (month, day ,year) the manufacturing process was completed, and the batch number under which it was processed. The manufacturing date shall be printed at the top and/or bottom of the bag so that the date is visible when the bags are stacked on pallets. Codes or coding will not be acceptable for any markings specified herein. Each bag of product shall be marked with the NIH Stock Number as follows: 63-87604.

4 QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection - Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the Specification when such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

5. PREPARATION FOR DELIVERY

5.1 Packaging - The finished product shall be packaged in commercially acceptable 3 ply laminated paper bags, 50 lbs. per bag. Bags shall be used with markings in accordance with 3.7 of this Specification. The paper bags shall be closed in a manner that will insure the delivery of uncontaminated animal feed at the National Institutes of Health.

6. NOTES

6.1 Ordering Data

a. Name of diet, number and date of this Specification.
b. Quantity required.