



# Specialty Feeds

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## Diet

### Meat Free Rat and Mouse Diet

A fixed formulation diet for Laboratory Rats and Mice fortified with vitamins and minerals to meet the requirements of breeding animals after the diet is autoclaved or irradiated.

- Minor modifications were made to this fixed formulation on 27 Jan 2009. Please contact us for details.
- All nutritional parameters of this diet meet or exceed the NRC guidelines for Rats and Mice.
- The diet has been designed as a general ration for breeding and early growth in all rat and mouse strains. The total fat content has been deliberately kept low at around 5%, to maximise the long term breeding performance of most strains.
- The formulation is designed to be fed ad-lib to rodents of all ages. There is some indication that growth performance in a minority of strains can be improved by increasing dietary energy (fat content). BalbC mice, DA rats and some of the modified strains appear to be most susceptible to this problem. Please contact us if you are concerned about this issue.
- Mammalian meals have been excluded from the diet, however the diet does contain fish meal. We have formulated totally vegetarian diets, and maintained colonies for some time on these diets. Please contact us if you require such a diet.
- The feed is manufactured in a cylindrical form with a diameter of around 12 mm, length is variable from 10 mm to 30 mm. We have found that this form is ideal for overhead hopper feeding, maximising the ease of handling whilst minimising fines formation and the risk of bridging in the feed hopper. Pellet strength has been kept lower than conventional pelletised diets. While this leads to a slight increase in transit and storage damage to the diet (fines generation), we have found that juvenile mice often have a lower feed intake on harder pellets.
- The diet is packed in permeable bags suitable for direct loading into an autoclave. It is recommended that the diet be autoclaved at 120° C for 20 minutes with a post autoclaving vacuum drying cycle. Some clumping of the diet can be expected, but the diet clumps can usually be easily broken. Modifying the drying time to leave some residual moisture in the diet can minimise the clumping. Do not autoclave at 135° C as this will result in significant clumping that will be difficult to break.

Calculated Nutritional Parameters	
Protein	20.00%
Total Fat	4.80%
Crude Fibre	4.80%
Acid Detergent Fibre	7.60%
Neutral Detergent Fibre	16.40%
Total Carbohydrate	59.40%
Digestible Energy	14.0 MJ / Kg
% Total Calculated Energy From Protein	23.00%
% Total Calculated Energy From Lipids	12.00%

Ingredients
A Fixed formula ration using the following ingredients: Wheat, barley, Lupins, Soya meal, Fish meal, Mixed vegetable oils, Canola oil, Salt, Calcium carbonate, Dicalcium phosphate, Magnesium oxide, and a Vitamin and trace mineral premix.

Added Vitamins	
Vitamin A (Retinol)	10 000 IU/Kg
Vitamin D (Cholecalciferol)	2 000 IU/Kg
Vitamin E (a Tocopherol acetate)	100 mg/Kg
Vitamin K (Menadione)	20 mg/Kg
Vitamin B1 (Thiamine)	80 mg/Kg
Vitamin B2 (Riboflavin)	30 mg/Kg
Niacin (Nicotinic acid)	100 mg/Kg
Vitamin B6 (Pryridoxine)	25 mg/Kg
Calcium Pantothenate	50 mg/Kg
Biotin	300 ug/Kg
Folic Acid	5.0 mg/Kg
Vitamin B12 (Cyancobalamin)	150 ug/Kg

Diet Form and Features
<ul style="list-style-type: none"> <li>• Cereal grain base diet. 12 mm diameter pellets.</li> <li>• Pack size 10 and 20 Kg Bags.</li> <li>• Diet suitable for irradiation, also suitable for autoclave.</li> <li>• Lead time 2 weeks</li> </ul>

Added Trace Minerals	
Magnesium	100 mg/Kg
Iron	70 mg/Kg
Copper	16 mg/Kg
Iodine	0.5 mg/Kg
Manganese	70 mg/Kg
Zinc	60 mg/Kg
Molybdenum	0.5 mg/Kg
Selenium	0.1 mg/Kg

Calculated Amino Acids	
Valine	0.87%
Leucine	1.40%
Isoleucine	0.80%
Threonine	0.70%
Methionine	0.30%
Cystine	0.30%
Lysine	0.90%
Phenylalanine	0.90%
Tyrosine	0.50%
Tryptophan	0.20%

Calculated Total Minerals	
Calcium	0.80%
Phosphorous	0.70%
Magnesium	0.20%
Sodium	0.18%
Potassium	0.82%
Sulphur	0.20%
Iron	200 mg/Kg
Copper	23 mg/Kg
Iodine	0.5 mg/Kg
Manganese	104 mg/Kg
Cobalt	0.7 mg/Kg
Zinc	90 mg/Kg
Molybdenum	1.2 mg/Kg
Selenium	0.4 mg/Kg
Cadmium	0.05 mg/Kg

Calculated Fatty Acid Composition	
Myristic Acid 14:0	0.03%
Palmitic Acid 16:0	0.50%
Stearic Acid 18:0	0.14%
Palmitoleic Acid 16:1	0.01%
Oleic Acid 18:1	1.90%
Gadoleic Acid 20:1	0.03%
Linoleic Acid 18:2 n6	1.30%
a Linolenic Acid 18:3 n3	0.30%
Arachadonic Acid 20:4 n6	0.01%
EPA 20:5 n3	0.02%
DHA 22:6 n3	0.05%
Total n3	0.37%
Total n6	1.31%
Total Mono Unsaturated Fats	2.00%
Total Polyunsaturated Fats	1.77%
Total Saturated Fats	0.74%

Calculated Total Vitamins	
Vitamin A (Retinol)	10 950 IU/Kg
Vitamin D (Cholecalciferol)	2 000 IU/Kg
Vitamin E (a Tocopherol acetate)	110 mg/Kg
Vitamin K (Menadione)	20 mg/Kg
Vitamin C (Ascorbic acid)	No data
Vitamin B1 (Thiamine)	80 mg/Kg
Vitamin B2 (Riboflavin)	30 mg/Kg
Niacin (Nicotinic acid)	145 mg/Kg
Vitamin B6 (Pryridoxine)	28 mg/Kg
Pantothenic Acid	60 mg/Kg
Biotin	410 ug/Kg
Folic Acid	5 mg/Kg
Inositol	No data
Vitamin B12 (Cyanocobalamin)	150 ug/Kg
Choline	1 600 mg/Kg

Calculated data uses information from typical raw material composition. It could be expected that individual batches of diet will vary from this figure. **Diet post treatment by irradiation or auto clave could change these parameters.**

We are happy to provide full calculated nutritional information for all of our products, however we would like to emphasise that these diets have been specifically designed for manufacture by Specialty Feeds.