



Diet **SF14-154** Additional Vitamin and Mineral Modification of **SF03-002** For Irradiation

A very high fat semi-pure diet formulation for laboratory rats and mice based on AIN-93G.

- Total fat content has been increased to 36% fat. Using generally recognised energy data this would equate to a diet where 59.5% of total energy is from lipids.
- The fats included to make up the total fat content have been chosen to maximise diet palatability whilst retaining a good spread of fatty acids. All known fatty acid requirements have been met or exceeded.
- We would recommend that this diet be transported and stored at less than 15°C. At higher temperatures the diet softens considerably.
- Calculated digestible energy has increased as a result of the increased fat inclusion.
- Dietary carbohydrate content is from sucrose only. All starch has been removed from the diet. This has been done primarily to improve pellet strength but may also have some physiological implications.
- Vitamin and Mineral inclusion rate has been increased proportionally to account for the assumed reduction in voluntary feed intake due to the higher energy density to the control AIN93G (SF09-091: modified AIN93G plus additional Vitamins for Irradiation).
- Additional Vitamins have been added to account for vitamin losses in the irradiation process.

Calculated Nutritional Parameters

Protein	19.50%
Total Fat	36.00%
Crude Fibre	4.70%
AD Fibre	4.70%
Digestible Energy	22.2 MJ / Kg
% Total calculated digestible energy from lipids	59.50%
% Total calculated digestible energy from protein	15.50%

Diet Form and Features

- Semi pure diet. 15mm x 20mm block to mimic similar size of pellet.
- Packed in plastic trays. Trays packed in groups of five (5). with a protective layer of cling wrap between each tray to protect diet.
- Vacuum packed under nitrogen in oxygen impermeable bags. Packed in cardboard cartons for protection during transit.
- Diet must be stored at or below 15°C
- Diet suitable for irradiation
- Diet not suitable for autoclave
- Lead time 4 weeks

Ingredients	
Casein (Acid)	200 g/Kg
Sucrose	320 g/Kg
Canola Oil	60 g/Kg
Cocoa Butter	240 g/Kg
Hydrogenated Vegetable Oil (Cofa)	60 g/Kg
Cellulose	50 g/Kg
L Methionine	4.2 g/Kg
Calcium Carbonate	18.3 g/Kg
Sodium Chloride	3.6 g/Kg
AIN93 Trace Minerals	2.0 g/Kg
Potassium Citrate	3.5 g/Kg
Potassium Dihydrogen Phosphate	9.7 g/Kg
Potassium Sulphate	2.2 g/Kg
Choline Chloride (75%)	3.5 g/Kg
AIN93 Vitamins	21 g/Kg
Vitamin K 0.23%	1.7 g/Kg
Antioxidant (Oxicap E2)	0.04 g/Kg

Calculated Essential Amino Acids as Fed	
Valine	1.30%
Leucine	1.80%
Isoleucine	0.90%
Threonine	0.80%
Methionine	0.95%
Cysteine	0.06%
Lysine	1.50%
Phenylalanine	1.00%
Tyrosine	1.00%
Tryptophan	0.30%
Histidine	0.60%

Calculated Total Minerals as Fed	
Calcium	0.96%
Phosphorous	0.38%
Magnesium	0.07%
Sodium	0.16%
Chloride	0.22%
Potassium	0.54%
Sulphur	0.26%
Iron	67 mg/Kg
Copper	9.5 mg/Kg
Iodine	0.3 mg/Kg
Manganese	19 mg/Kg
Cobalt	No data
Zinc	60 mg/Kg
Molybdenum	0.2 mg/Kg
Selenium	0.4 mg/Kg
Cadmium	No data
Chromium	1.4 mg/Kg
Fluoride	1.4 mg/Kg
Lithium	0.14 mg/Kg
Boron	1.5 mg/Kg
Nickel	0.7 mg/Kg
Vanadium	0.14 mg/Kg

Calculated Total Vitamins as Fed		Calculated Fatty Acid Composition as Fed	
Vitamin A (Retinol)	8 400 IU/Kg	Saturated Fats C12:0 or less	3.20%
Vitamin D (Cholecalciferol)	2 100 IU/Kg	Myristic Acid 14:0	0.90%
Vitamin E (a Tocopherol acetate)	171 mg/Kg	Palmitic Acid 16:0	7.10%
Vitamin K (Menadione)	6 mg/Kg	Stearic Acid 18:0	9.30%
Vitamin C (Ascorbic acid)	None added	Arachidic Acid 20:0	0.30%
Vitamin B1 (Thiamine)	12.7 mg/Kg	Palmitoleic Acid 16:1	0.10%
Vitamin B2 (Riboflavin)	12.9 mg/Kg	Oleic Acid 18:1	12.00%
Niacin (Nicotinic acid)	63 mg/Kg	Gadoleic Acid 20:1	0.10%
Vitamin B6 (Pryridoxine)	15 mg/Kg	Linoleic Acid 18:2 n6	2.00%
Pantothenic Acid	34 mg/Kg	a Linolenic Acid 18:3 n3	0.70%
Biotin	420 ug/Kg	Arachadonic Acid 20:4 n6	No data
Folic Acid	4 mg/Kg	EPA 20:5 n3	Trace
Inositol	None added	DHA 22:6 n3	No data
Vitamin B12 (Cyancobalamin)	213 ug/Kg	Total n3	0.74%
Choline	2 030 mg/Kg	Total n6	2.05%
		Total Mono Unsaturated Fats	12.20%
		Total Polyunsaturated Fats	2.79%
		Total Saturated Fats	20.92%

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 autoclave 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.