



LabDiet®



SUMMARY OF
IRRADIATED RODENT DIETS





IRRADIATED LABDIET® PRODUCTS

PICOLAB® & ISOPRO®

Researched and developed by Purina, LabDiet® PicoLab® products were introduced in 1984 as the first research animal diets treated with irradiation. In 1996, the IsoPro® product range was added, providing researchers a wider selection of diets to choose. PicoLab® and IsoPro® undergo an irradiation treatment process which assures you of reliable microbial control and virtually bacteria-free, sanitized diets.

PACKAGING

CapSack

PicoLab® and IsoPro® products are packaged in exclusive 4-ply bags with removable pop-out durable inner pouches. Simply follow the on-bag instructions to remove the inner bag. This special packaging assures that the diets arrive in your lab in the same virtually bacteria-free condition achieved when irradiated and shipped from our production facility. The removable pop-out pouch design allows you to disinfect the package before taking it into animal rooms.

Pico-Vac®

Pico-Vac® diets offer the same advantages of irradiation as the standard PicoLab® and IsoPro® diets, but are vacuum-packed in 5-pound plastic bags. The unbroken vacuum seal is an additional assurance of the integrity of the package. The package can be dipped or sprayed for disinfecting, and the 5-pound size is convenient for use in laminar flow hoods.

CONFIDENCE

Reducing Your Research Risk

Each PicoLab®, IsoPro® and Pico-Vac® diet product provides the LabDiet® managed formulation process that assures Constant Nutrition® for your animals. These, and all LabDiet® products are manufactured and packaged with extreme care in our FSSC 22000 plant in Richmond, Indiana.

Helping to Speed Your Research Process

By combining our nutritional expertise with irradiation technology, we've produced a complete irradiated product line to meet all of your sanitized feed needs. Irradiated diets save handling time and are ready-to-use when they arrive at your facility.

BENEFITS OF USING PICOLAB®, ISOPRO® AND PICO-VAC® IRRADIATED DIETS

- Irradiation causes minimal nutritional damage to the formulated product.
- Irradiation extends shelf-life of feed by removing bacteria and mold spores.
- Irradiation does not affect the palatability of animal diets.
- Irradiation provides batch to batch nutrient stability.
- Irradiated diets are easy to handle, typically requiring less labor at the research facility level.

WHAT IS IRRADIATION AND WHAT DOES IRRADIATION DO?

- Irradiation is 'Energy' that moves through space in invisible waves.
- Irradiation damages the DNA of bacteria, insects and mold spores and prevents replication of these unsanitary and interfering substances.



SUMMARY OF IRRADIATED RODENT DIETS

	PicoLab®/ Pico-Vac® Rodent Diet 20	PicoLab®/ Pico-Vac® Mouse Diet 20	Certified PicoLab® Rodent 20	Pico-Vac® Rodent Soft Mix	JL Rat & Mouse/ Irr	PicoLab® High Energy Mouse Diet	Prolab® IsoPro® RMH 3000	Verified PicoLab® Select Rodent 50 IF/6F	Verified PicoLab® Select Mouse 50 IF/9F	Verified 75 IF Irr
PRODUCT CODE #	5053/5061	5058/5062	5K75	5K92	5LG4/5LL4	5LJ5	5P75/5P76	5V5R	5V5M	5V75
NUTRIENTS										
Protein, %	20.0	21.8	21.1	21.8	19.3	18.9	22.5	20.8	19.0	20.0
Fat, ether extr., %	5.0	9.0	5.0	9.0	6.2	11.0	5.4	5.9	8.9	5.0
Fat, acid hydr., %	5.6	9.1	5.5	9.9	7.2	11.2	6.4	7.6	10.5	5.5
Crude fiber, %	4.7	2.2	4.3	2.5	4.3	2.2	3.4	2.4	2.3	3.8
Ash, %	6.1	5.0	6.0	4.8	6.5	5.8	6.1	5.0	5.0	5.4
NFE, %	52.9	51.8	53.4	52.3	53.6	52.2	52.0	55.9	54.8	55.6
Lysine, %	1.16	1.13	1.16	1.13	0.97	1.05	1.31	1.19	1.16	1.00
Cystine, %	0.28	0.31	0.28	0.32	0.25	0.28	0.30	0.40	0.37	0.31
Methionine, %	0.70	0.67	0.70	0.49	0.73	0.70	0.49	0.65	0.60	0.66
Threonine, %	0.77	0.79	0.78	0.80	0.68	0.70	0.83	0.66	0.60	0.62
Tryptophan, %	0.26	0.25	0.26	0.26	0.23	0.26	0.30	0.27	0.26	0.24
Calcium, %	0.81	0.81	0.81	0.81	1.17	0.80	1.00	0.99	0.99	0.87
Phosphorus, %	0.63	0.60	0.60	0.60	0.93	0.50	0.75	0.56	0.54	0.60
Sodium, %	0.30	0.25	0.30	0.26	0.26	0.44	0.26	0.23	0.23	0.25
Magnesium, %	0.22	0.16	0.21	0.15	0.22	0.16	0.24	0.18	0.17	0.20
Potassium, %	1.07	0.70	1.04	0.65	0.66	0.81	0.91	0.51	0.51	0.64
Vitamin A, IU/gm	15	15	15	30	8.0	18	29	18	18	15
Vitamin D ₃ , IU/gm	2.2	3.3	2.2	3.2	3.5	3.3	2.4	2.3	2.3	2.2
Vitamin E, IU/kg	99	57	100	66	38	66	75	100	100	70
Thiamin, ppm	17	15	16	15	24	13	10	18	18	12
ENERGY										
Physiological fuel value, kcal/gm	3.41	3.75	3.42	3.77	3.47	3.81	3.46	3.50	3.68	3.47
Metabolizable energy, kcal/gm	3.07	3.56	3.10	3.64	3.17	3.70	3.20	3.27	3.49	3.23
APPROPRIATE FOR:										
Rats	•		•	•	•		•	•		•
Mice	•	•	•	•	•	•	•	•	•	•
Hamsters	•		•	•			•	•		•
PRODUCT FORM										
Cylinder Pellet: 10 x 19 mm					•					
Oval Pellet: 10 x 16 x 25 mm	•	•	•			•	•	•	•	•
Meal (ground pellets)	s/o	s/o	s/o	•	s/o	s/o	s/o	s/o	s/o	s/o
Vacuum packaged	5 lb (5061)	5 lb (5062)		5 lb	5 lb (5LL4)		5 lb (5P75)			
Package Size	25 lb (5053)	25 lb (5058)	25 lb		25 lb (5LG4)	25 lb	25 lb (5P76)	25 lb	25 lb	25 lb (2ton min)

I = Nitrogen-Free Extract by difference

s/o = Special Order

TestDiet® products are available as standard or prescription diets in the irradiated form.

The following are available upon request (Minimum orders required): 5L24–PicoLab Rabbit Diet HF, 5L25–PicoLab Rabbit Diet, 5L26–PicoLab Guinea Pig Diet

ANALYTICAL DATA

Vitamin and microbiological assays were performed on PicoLab® Rodent Diet 20 5053 before and after irradiation. As the results indicate, irradiation achieved excellent reduction of the microbial load while having minimal effects on the vitamin content of the product. PicoLab® products are formulated to provide optimal vitamin levels after irradiation.

VITAMIN	% RETAINED AFTER IRRADIATION
Vitamin A	94
Vitamin D	91
Vitamin E	100
Thiamin	100
Riboflavin	100
Pyridoxine	100
Pantothenic Acid	98
Choline Chloride	94
Folic Acid	100
Biotin	100
Vitamin B ₁₂	92

MICROBIOLOGICAL ASSAY	UNITS	CONTROL	IRRADIATED
Total aerobic plate	CFU/g ¹	51667	<1
Total yeast	CFU/g	1	<1
Total mold	CFU/g	417	<1
Total mesophilic anaerobic spores	MPN/g ²	1100	<3
Mesophilic aerobic spores	CFU/g	41500	<1
Thermophilic anaerobic spores	MPN/g	1100	<3
Total thermophilic aerobic spores	CFU/g	6167	<1
Total flat sour spores	CFU/g	2802	<1

The level of irradiation was less than 2.5 Mrads. The lower limit of detection for Total Aerobic Plate, Total Yeast, Total Mold, Mesophilic Aerobic Spores, Total Thermophilic Aerobic Spores and Total Flat Sour Spores is less than one colony forming unit per gram (CFU/g).

The lower limit of detection for Total Mesophilic Anaerobic Spores and Thermophilic Anaerobic Spores is less than three most probable number per gram (MPN/g).

¹ CFU/g = Colony Forming Units per gram

² MPN/g = Most Probable Number per gram

The data above shows a typical microbiological profile of an animal feed before and after irradiation. While there is microbial contamination in the feed before irradiation, no aerobic bacteria, yeast, mold or spores were found at a detection level of 1 organism per gram (or 3 per gram in the case of mesophilic and thermophilic anaerobic spores) in the feed after irradiation.

Absolute sterility is difficult to define. However, PicoLab® products are guaranteed to contain less than 10 organisms per gram of total aerobic bacteria, yeast, molds, and thermophilic aerobic and thermophilic anaerobic spores.

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