The Connecticut Agricultural Experiment Station, New Haven

Feed Products and Pet Foods Inspected 1990

BY LESTER HANKIN

Bulletin 890

May 1991

Results of chemical analyses of 388 official samples of feed products and pet foods collected during 1990 by inspectors of the Connecticut Department of Agriculture are presented in this Bulletin. Feeds for farm animals as well as for pets, including caged and wild birds, were tested.

Table 1 shows individual samples from 48 manufacturers. In the Table the brand name for individual products from each manufacturer is followed by the percentage guarantee for the nutrients, protein, fat, fiber, and ash. For example, the numbers 10, 8, 4, 2 indicate that a minimum of 10% protein, a minimum of 8% fat, a maximum of 4% fiber, and a maximum of 2% ash are guaranteed. The analyses are then shown with deficiencies in protein and fat followed by a dash (-).

Table 2 summarizes the number of samples from each manufacturer and the number of guarantees for ash. The number of guarantees for protein, fat, and fiber is the same as the number of samples. The average percentage for each nutrient for each manufacturer is then shown.

Two types of variability affect feed and pet food analysis and must be considered in judging deficiencies. The first is the variability among different batches of the same product. This variability can be noted by examination of the results of analyses of the same product from the same manufacturer. The second type of variability is among duplicate analyses on the same product. This variability is shown by the statement: the mean difference between duplicates for protein, fat, fiber, and ash is about three-tenths percent.

Feed and pet foods are deemed deficient in protein and fat and excessive in fiber and ash if the analysis is not within analytical variations recommended by the Association of American Feed Control Officials. For all samples, only nine, or 2.3%, were found to be deficient in protein content, and eight samples, or 2.1%, were deficient in fat. No samples contained an excess of fiber or ash.

Analyses were by Mamie Pyles, Craig Musante, and David Stilwell. Samples were collected by Melanie Attwater, Raymond Weller and Alton VanDyke under the direction of Alton VanDyke, Feed Control Official of the Department of Agriculture. Feed laws are administered by the Commissioner of the Connecticut Department of Agriculture.

Lester Hankin
Chief, Analytical Chemistry

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
AGWAY, INC.								
Agway Choice for Horses	12	2	20		13.6	4.0	13.5	
Agway Choice Horse Food	12	2	20		13.6	4.3	12.2	
Agway Country Chicken Grower	14.5	3.5	4		15.1	3.8	3.4	
Agway Country Chicken Grower (med)	14.5	3.5	4		16.9	3.2	2.8	
Agway Country Chicken Starter	18	3	4		18.1	4.8	3.6	
Agway Country Egg Layer	16	3	4		16.5	4.3	4.2	
Agway Country Egg Layer	16	3	4		16.0	3.9	2.7	
Agway Country Egg Layer	16	3	4		16.6	3.7	3.2	
Agway Country Egg Layer	16	3	4		17.4	3.6	2.8	
Agway Country Game & Turkey Breeder	18	3	4.5		19.1	2.8	1.6	
Agway Country Poultry Finisher	16	3	8		16.9	3.5	3.1	
Agway Crunchy Pro Right 16 for Ruminants	16	3	7		15.4	6.1	5.2	
Agway Early Market Lamb Pellets	14	2	18		14.3	2.5	16.4	
Agway Gro Pak (med)	10	1	9		12.9	3.7	4.1	
Agway Gro Right Complete Calf 1	15	2	23		15.2	4.1	14.4	
Agway Gro Right Complete Calf 1 (Bov)(med)	15	2	23		16.1	2.1	16.7	
Agway Hi Energy Lamb Pellets	16	3.5	9		16.2	4.1	6.6	
Agway Hi Energy Lamb Pell (B.U.) w/Fish Meal (med)	16	3.5	9		18.1	3.2	8.0	
Agway Llama Pellet	13	2.5	17		14.1	3.7	12.7	
Agway Mare 'N' Foal	18	2.5	7.5		19.5	3.9	5.8	
Agway Milk Right 16 (N.U.)	16	2.5	12		16.6	3.9	5.2	
Agway Milk Right 20 (N.U.)	20	2.5	12		19.8	3.7	6.2	
Agway Nu-Cashmaker 18 for Laying Chickens	18	3	4		19.9	3.8	3.6	
Agway Performance for Horses	14	3	10		15.4	3.1	5.7	
Agway Pro Lean 14% Hog Feed	14	3	5		14.9	5.3	2.9	
Agway Pro Lean 16% Sow & Pig Feed	16	3	5.5		17.4	3.2	2.5	
Agway Pro Lean 42% Hog Concentrate	42	2	5		40.9	2.9	3.3	
Agway Pro Lean Pig Starter Plus (MX)(med)	18	4.5	4.5		20.4	4.1	2.0	
Agway Pro Lean Squealer Pellets (MX)(med)	18	4	3		18.9	6.1	1.4	
Agway Pro Right 40 for Ruminants	40	0.75	5		40.3	1.7	3.6	
Agway Pro Right RC 20	20	3	6.5		20.6	3.7	3.8	
Agway Ratio Right 16	16	3	7		16.6	3.4	6.5	
Agway Ratio Right 16	16	3	7		15.5	5.1	5.7	
Agway Ratio Right 16 for Ruminants	16	3	3		16.6	2.8	4.8	
Agway Ratio Right 20 for Ruminants	20	3	7		21.9	4.9	6.2	
Agway Super Fit-N-Fresh	13	3	8.5		15.4	5.6	5.2	
Agway Trim	14	2.5	10		15.9	3.6	5.3	
Agway Trim for Horses	14	2.5	10		15.3	3.9	5.6	
ALLIED FOODS, INC.								
Calo Complete Original Flavor Cat Food	8	2	1.5		8.5	3.4	0.8	
Calo Complete Original Flavor Dog Food	8	1.5	1.5		8.3	8.4	0.9	
ALPO PET FOODS, INC.								
Alpo Beef & Cheese Dinner for Dogs	9	5	1.5		9.6	5.8	0.9	
Alpo Beef Chunks Dinner for Dogs	9	6	1.5		13.1	5.8	0.4	
Alpo Chicken Dinner for Dogs	9	7	1.5		9.9	7.1	0.5	
Alpo Horsemeat Chunks & Beef By-Prod Dinner Dogs	9	5	1.5		10.8	7.5	0.4	
Alpo Premium Cat Food Beef and Liver Banquet	11	5	1	2.5	12.1	7.2	0.4	2.8
Alpo Premium Cat Food Beef and Liver Prime Banquet	11	5	1	2.5	11.8	5.4	0.3	2.6

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Alpo Premium Cat Food Beef Prime Banquet	11	5	1	2.5	11.1	10.2	1.3	2.1
Alpo Premium Cat Food Ocean Whitefish Treat	11	4	1	3	12.8	4.9	0.4	3.2
Alpo Premium Cat Food Prime Captain's Table	11	4	1	3	13.1	6.4	0.4	2.5
Alpo Premium Cat Fd Prime Liver & Chick Banquet	11	5	1	2.5	12.7	9.9	0.6	2.0
Alpo Premium Cat Food Prime Ocean Whitefish Treat	11	4	1	3	13.5	7.6	0.4	2.9
Alpo Premium Cat Fd Prime Salmon & Shrimp Treat	11	4	1	3	12.3	5.1	0.4	1.9
Alpo Premium Cat Food Prime Savory Grill	11	5	1	2.5	11.2	7.0	0.8	1.9
Alpo Premium Cat Food Robust Stew	10	4	1	2.5	13.3	6.3	1.3	2.3
Alpo Premium Cat Food Salmon and Shrimp Treat	11	4	1	3	13.1	9.0	0.5	2.1
Alpo Premium Cat Fd Turkey & Giblets Prime Banquet	10	6	1	2.5	11.5	7.6	0.4	1.8
Alpo Snaps	19	2.5	2.5		24.5	3.4	2.1	
BAY-MOR PET FEEDS								
Bay Mor YC 250	12	2	5		12.8	3.6	2.2	
Bay Mor YC 450	14	2	5		15.1	2.9	2.9	
Bay-Mor PC-800 Pigeon Feed	13	2	5		13.3	2.9	3.4	
Bay-Mor YC 450 Pigeon Feed	8	2	1.5		8.0	5.8	0.9	
Bay-Mor YC-150 Pigeon Feed	10	2	5		9.6	3.4	2.3	
BEST FEEDS & FARM SUPPLIES								
Joy Dog Food Special Meal	26	10	4	10	27.6	9.6	1.8	7.0
BLUE SEAL FEEDS								
Blue Seal A-1 Pigeon Feed	12	2	5		12.4	2.5	5.1	
Blue Seal Avi Pel for Zoo Avians	20	4.5	4		21.6	5.3	4.3	
Blue Seal Beet Pulp Pelleted	7	0.3	22		10.1	0.8	20.0	
Blue Seal Broiler Crumbles CB	21	6.5	3		23.8	7.5	3.1	
Blue Seal Broiler Crumbles-CB Medicated	21	6.5	3		21.1	6.0	3.0	
Blue Seal Bunny 16 Rabbit Pellets	16	2.5	18		19.6	3.8	17.0	
Blue Seal Bunny 16 Rabbit Pellets	16	2.5	18		17.3	4.4	16.3	
Blue Seal Contender Horse Feed Pellets	16	3	7.5		16.4	3.8	7.1	
Blue Seal Contender Horse Feed Pellets	16	3	7.5		17.0	4.3	7.0	
Blue Seal Demand Horse Pellet w/High Fat	16	6.5	6.5		18.3	6.6	6.5	
Blue Seal Dog Biscuits Assorted Small	24	7	3		26.7	9.3	1.5	
Blue Seal Fat & Finish Pellets	18	4.5	3.5		18.4	5.1	3.7	
Blue Seal Fat & Finish Pellets	18	4.5	3.5		19.8	4.6	3.3	
Blue Seal Game Bird Crumbles	20	4.5	4		20.4	5.3	4.2	
Blue Seal Game Bird Crumbles	20	4.5	4		20.3	5.0	3.0	
Blue Seal Gentry	30	20	4		29.3	19.3	2.0	
Blue Seal Gentry Premium Formula Dog Food	30	20	4		30.0	18.4	4.0	
Blue Seal Grower-Cal Mash	15	3	4		17.1	3.2	3.5	
Blue Seal Grower-Cal Pellets	15	3	4		16.1	2.8	2.7	
Blue Seal Guinea Pig Pellets w/added Vit. C	20	4	16		21.8	4.4	14.5	
Blue Seal Hi-Pro 20 Pel Rabbit Pellets	20	2.5	12		22.1	4.0	9.5	
Blue Seal Horse 1 Horse Feed	10	2.5	7		11.6	4.8	4.6	
Blue Seal Hutch 18 Pels Rabbit Feed	18	2.5	15		19.1	4.0	14.5	
Blue Seal Kat Kare Cat Food	30	9	3.5		30.1	11.6	1.4	
Blue Seal Kat Kare Cat Food	30	9	3.5		31.5	9.4	1.8	
Blue Seal Kat Krunchies Cat Food	30	9	4		30.3	11.3	1.7	
Blue Seal Krunchies Dog Food	21	8	4		21.7	7.3	2.8	
Blue Seal Lamb BT Pellets Medicated	18	3.5	7		18.8	3.5	6.2	
Blue Seal Lamb BT Pellets Medicated	18	3.5	7		18.3	3.5	3.5	

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Blue Seal Lamb Finisher Pellets	15	3.5	7		16.5	4.0	6.6	
Blue Seal Lamb Starter-Grower Pellets	18	3.5	7		20.3	4.1	3.5	
Blue Seal Layer Mash	15	3	4		16.4	5.8	3.6	
Blue Seal Layer Pellets	15	3	4		16.4	4.0	4.1	
Blue Seal Milk Maker 16 Dairy Pellets	16	3	8.5		16.7	4.5	8.3	
Blue Seal Milk Maker 16 Dairy Pellets	16	3	8.5		17.3	4.9	8.9	
Blue Seal Milk Maker 20 Dairy Pellets	20	3	8.5		20.2	4.4	7.5	
Blue Seal Natural 26 Dog Food	26	10	4		25.9	9.7	2.6	
Blue Seal Natural 26 Dog Food	26	10	4		25.5	11.5	2.4	
Blue Seal Nip 'N' Tuck	18	6	7		20.1	5.5	4.7	
Blue Seal Pig & Sow Pellets	15	3.5	7		16.6	3.5	6.0	
Blue Seal Pig & Sow Pellets	15	3.5	7		16.3	4.5	6.7	
Blue Seal Scratch Feed	9	2.5	5		9.3	5.0	2.9	
Blue Seal Songmaker	11	8	10		11.1	8.0	6.2	
Blue Seal Strider Horse Feed Pellet	11	2.5	7		11.5	3.2	7.0	
Blue Seal Trotter Complete Horse Ration Pellets	14	2	20		16.1	3.7	20.6	
Blue Seal Trotter Complete Pellets	14	2	20		16.1	3.4	9.5	
Blue Seal Turkey Grower Pellets (med)	20	4.5	4		20.2	5.0	4.0	
Blue Seal Turkey/Game Bird Starter Crumbles (med)	28	4.5	4		30.3	4.5	3.0	
Blue Seal Turkey/Game Bird Starter Crumbles (med)	28	4.5	4		27.2	5.6	2.3	
Blue Seal Ultra 27 Dog Food	27	15	4		27.3	16.2	1.9	
Blue Seal Ultra 27 Dog Food	27	15	4		27.3	14.7	3.2	
Blue Seal Veal Formula	20	20	0.2		21.9	18.0	0.1	
BUMBLE BEE SEAFOODS, INC.								
Figaro Cat Food Tuna	18	2	1	3	19.1	7.3	0.3	1.6
CADILLAC PET FOODS, INC.								
Special Diet Formulation O Dietary Pet Food	7	2	5	2.5	6.8	2.6	4.3	2.4
CARGILL, INC.								
Nutrena 18% Rabbit Pellets	18	2.5	17		18.8	4.2	16.5	
Nutrena Bloomfield 16% Dairy Feed	16	3	8		17.1	3.0	5.3	
Nutrena Chick Starter (ABF) Medicated	20	3	4	7	20.0	2.9	2.9	5.6
Nutrena Egg Producer Meal	16	3	4.5		16.6	4.0	4.1	
Nutrena Excel 16 Dairy	16	2.5	10		15.8	5.3	9.1	
Nutrena Gold Flake Calf Starter (BLP)	18	3	7		18.4	3.6	3.2	
Nutrena Horse Kwik Ration w/Roughage Pellets	12.5	2	20		14.3	4.3	12.6	
Nutrena Pig & Hog (T20) Pellets	15	2.5	7		15.4	4.4	3.5	
Nutrena Pig & Hog Feed	15	2.5	7		14.7	5.8	5.0	
Nutrena Triumph 12 Horse Feed	12	2.5	13	8	12.3	4.1	6.8	6.2
Nutrena Triumph 14 Horse Feed	14	2.5	12.5		14.1	3.9	4.5	
Nutrena Vitality 12 Sweet Feed	12	3	7		12.7	3.0	2.8	
Nutrena Vitality 14	14	3	6		14.8	4.1	4.7	
Nutrena Vitality Horse Kwik Ration	12.5	2	20		17.5	5.8	17.8	
Nutrena Vitality Pellets Milk Plus	28	3	3		30.0	2.8	1.7	
CARNATION CO./PET CARE PRODUCTS DIV.								
Bright Eyes Beef & Chicken Flavor Cat Food	9	3	1	2.3	9.9	7.6	0.3	2.8
Bright Eyes Seafood Flavor Cat Food	9	3	1	2.5	10.8	7.1	0.3	2.7
Friskies Buffet Mariner's Catch for Cats	12	5	1	3	12.8	5.7	0.2	2.1
Friskies Buffet Prime Entree for Cats	11	5	1	2.5	12.9	5.2	0.2	2.8

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Friskies Buffet Tuna & Kidney Dinner for Cats	12	4	1	3.5	12.8	8.7	0.3	2.1
Grand Gourmet London Grill for Dogs	10	2	1		11.3	3.6	0.4	
Grand Gourmet with Chunky Beef for Dogs	10	2	1		13.7	3.2	0.5	
Mighty Dog Sliced Beef in Gravy	12	2	1		12.9	3.9	0.2	
Mighty Dog Sliced Turkey in Gravy	12	2	1		12.5	3.5	0.3	
New Friskies Kitten Formula Beef Formula	12.5	4.5	1	3	13.4	12.8	0.6	2.2
New Friskies Kitten Formula Mixed Grill Formula	12	5	1	2.5	14.3	8.1	0.1	2.4
New Friskies Kitten Formula Seafood Formula	14	3	1	3.5	16.4	5.6	0.3	3.0
DERBY FEED CO.								
Country Pride Deluxe Blend Wild Bird Food	10	3	17		13.7	17.6	9.0	
Country Pride Finch Mix	15	10	17		15.6	15.1	6.4	
Country Pride Standard Mix Wild Bird Food	10	3	14		11.8	6.3	12.1	
Snow Bird Wild Bird Feed	9	3	9		10.3	5.1	2.7	
DOANE PRODUCTS CO.								
Promark Professional Cat Diet Formula 3010	30	10	4	5.5	30.2	9.3	1.8	5.5
Promark Professional Dog Diet Formula 3020	30	20	3	8.5	30.0	17.4-	2.8	8.0
Promark Professional Puppy Diet Formula 2710	27	10	4		27.4	10.5	2.4	
H. K. WEBSTER CO., INC.								
Blue Seal Bunny 16 Pellets	16	2.5	18		17.9	3.7	14.9	
Blue Seal Bunny Pel 16	16	2.5	18		19.4	4.3	13.9	
Blue Seal Calf Starter	19	3	8		20.9	3.8	4.9	
Blue Seal Coarse Cracked Corn	8.5	2.5	2.5		9.0	5.2	1.5	
Blue Seal Contender Horse Feed	16	3.5	7.5		16.6	4.2	6.4	
Blue Seal Game Bird Crumbles	20	4.5	4		19.2-	4.7	3.2	
Blue Seal Gentry Dog Food	30	20	4		31.5	17.9-	2.6	
Blue Seal Grower Cal Mash	15	3	4		16.3	4.4	3.4	
Blue Seal Hi Pro 20 Pellets Rabbit	20	2.5	12		20.9	3.4	11.3	
Blue Seal Lamb Starter Grower Pellets	18	3.5	7		18.8	3.9	3.0	
Blue Seal Layer Mash	15	3	4		15.3	3.1	3.8	
Blue Seal Layer Pellets	15	3	4		16.2	3.1	4.1	
Blue Seal Milk Maker 16 Dairy Pellets	16	3	8.5		18.7	3.9	8.8	
Blue Seal Natural 40 Dairy Pellets	40	1	5		37.2-	2.7	3.7	
Blue Seal Pig/Sow Pellets	15	3.5	7		14.8	3.9	5.0	
Blue Seal Pork Maker Mash	13	3.5	7		14.7	4.0	5.5	
Blue Seal Puppy Food Formula 28	28	10	4		30.4	10.4	3.1	
Blue Seal Scratch Feed	9	2.5	5		10.4	4.1	3.9	
Blue Seal Smith 14 Horse Feed	14	2.5	12.5		15.8	3.2	10.4	
Blue Seal Trotter	14	2.5	20		18.2	4.1	10.3	
Blue Seal Trotter Horse Pellets	14	2.5	20		16.0	6.4	11.6	
Blue Seal Turkey Game Bird Starter Crumbles	20	4.5	4		28.8	5.7	2.7	
Blue Seal Wheat Bran	14	3.5	12		16.6	3.6	12.1	
HEINOLD FEEDS, INC.								
Square Deal 15-20 Show Formula Rabbit Food	15	3	20		17.6	3.7	13.1	
Square Deal 16% Sheep Pellet	16	4	5.75		17.3	4.2	6.4	
Square Deal 17-17 Family Formula Rabbit Feed	17	2.5	17		18.8	2.9	12.3	
Square Deal 38% Dairy Supplement	38	1.75	8		40.1	2.8	5.3	
Square Deal Chunk Style Dog Food	21	8	4.5		22.4	9.3	2.8	

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
HEINZ PET PRODUCTS CO.								
9 Lives Ground Cat Food Salmon Supreme Entree	10	4.5	1	3.5	14.4	9.1	0.3	3.2
9 Lives Morsels Cat Food Chicken Dinner	10	3.5	1	2.5	11.9	6.8	0.4	1.9
9 Lives Morsels Cat Food Liver Entree	10	2	1	2	10.9	5.2	0.1	1.6
9 Lives Morsels Cat Food Ranch Supper	10	3	1	2.5	13.7	3.8	0.1	2.3
9 Lives Morsels Cat Food Sea & Shore Supper	10	2	1	3	11.7	2.9	0.4	1.6
9 Lives Morsels Cat Food Tender Veal & Cheese Dinner	10	3	1	2.5	11.1	4.1	0.4	2.2
Amore Braised Liver Dinner for Cats	11	2	1	2.5	17.5	4.2	0.2	3.4
Amore Diced Veal Dinner for Cats	10	2	1	3	11.7	4.2	0.1	1.7
Amore Flaked Salmon Dinner for Cats	15	5	1	3	15.6	5.2	0.1	1.7
Amore Ocean Whitefish & Tuna Dinner for Cats	17.5	3.5	1	3	20.8	3.5	0.2	2.9
Amore Seafood & Chicken Platter Dinner for Cats	12	6	1	4	12.2	8.4	0.2	1.9
Amore Simmered Beef Dinner for Cats	10	2	1	2.5	10.6	5.7	0.3	1.7
Kozy Kitten Cat Fd Ctry Mix/Chick/Meat/Milk Flavor	30	8	4.5		32.1	8.4	3.5	
New Skippy Premium Poultry Grill for Dogs	8	3	1.5		11.1	2.7	0.9	
New Skippy Premium Smoky Beef Dinner for Dogs	8	3	1		8.6	2.9	0.9	
New Skippy Premium Turkey & Bacon Dinner for Dogs	8	3	1.5		10.3	3.9	1.0	
Recipe Chicken & Cheese Dinner for Dogs & Puppies	8	5	1.5		9.9	5.2	0.8	
Recipe Chunky Turkey Dinner for Dogs & Puppies	8	5	1.5		10.5	5.3	0.6	
Recipe Hearty Meat Dinner for Dogs & Puppies	8	5	1.5		9.8	5.0	0.7	
Vets Braised Liver Flavor Dog Food	8	2	1.5		8.0	5.8	0.9	
HILL'S PET PRODUCTS								
Hill's Science Diet Canine Growth	26	17	2	5	27.3	16.0	1.9	7.3
Zu/Preem Primate Dry	20	5	2.5	5.5	23.8	6.3	2.1	4.7
JOHN RENICK CO.								
Magna Elite 30/20 Professional Canine Diet	30	20	3		32.9	18.7	1.9	
K & L FEED MILL CORP.								
Arbor Acres Custom 20% Lite Breeder Crumbles					21.7	3.8	2.7	
K & L 16% Dairy Ration Pellets	16	3	8		17.1	3.8	5.3	
K & L 16% Layer	16	3	4		17.6	3.5	3.7	
K & L Avian Quick Grower Pellets	18	3	4		21.2	3.5	3.3	
K & L Broiler Finisher	18	4	3		19.2	4.2	2.4	
K & L Chick Grower	13.5	3	4.5		14.8	3.6	2.9	
K & L Chick Starter	19.5	3	4		21.2	3.1	3.2	
K & L Custom Blend					25.1	6.3	5.7	
K & L Duck Developer Pellets	15	3	4		18.1	2.7	3.8	
K & L Energizer Horse Feed Pellets	11.5	4.5	8		14.7	4.6	5.7	
K & L G2175 Custom					18.1	3.5	2.5	
K & L Goat 13% Pellets	13	3	9		15.9	4.3	7.7	
K & L Pig Grower Pellets	15	3	4		15.1	2.8	2.7	
K & L Sow Feed Pellets	12	3	5		13.1	3.3	2.9	
K & L Turkey Finisher	13	3	4.5		14.5	3.1	2.2	
K & L Turkey Grower	18	3	4		19.5	3.8	3.2	
KAL KAN FOODS, INC.								
Kal Kan Pedigree Stew with Chunky Beef	8	6	1.5		9.1	8.6	0.5	
Kal Kan Whiskas Catfish Dinner	8	5	1.5	3	9.0	9.5	0.3	2.2
Kal Kan Whiskas Salmon Dinner	8	5	1.5	3	11.8	9.1	0.4	2.4
Kal Kan Whiskas Seaside Supper	8	5	1.5	3	9.7	8.7	0.2	3.3

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
New Whiskas Cat Food Chunks in Gravy with Beef	8	3	1		11.8	3.1	0.3	
New Whiskas Fd Cats Chunks in Gravy w/Beef & Liver	8	3	1		13.8	3.0	0.2	
New Whiskas Fd Cats Chunks in Gravy w/Turkey	8	3	1		10.4	4.3	0.3	
Pedigree Kal Kan Stew with Chunky Beef	8	6	1.5		8.5	7.3	0.9	
Sheba Chicken Entree Tender Meaty Chunks for Cats	11	5	1	3	11.4	4.7	0.4	1.7
Sheba Salmon Entree Tender Moist Chunks for Cats	11	5	1	3	14.6	7.6	0.5	2.7
Sheba Whitefish Entree Tender Moist Chunks for Cats	11	5	1	3	12.9	4.6	0.4	3.3
KELLY FOODS CORP.								
Bil-Jac Cat Food	31	18	3.5	6.5	31.4	22.6	2.3	3.9
Bil-Jac Lite Dog Food	17	10	5		19.1	12.7	2.3	
Bil-Jac Puppy Food	28	18	4		30.0	18.2	2.3	
Bil-Jac Select Dog Food	27	17	4		27.8	21.2	2.9	
LICK YOUR CHOPS, INC.								
Lick Your Chops for Kittens & Cats	31	15	4	4.5	32.7	14.4	2.8	4.6
MANNA PRO CORP.								
Manna Pro Calf-Manna Conc Ration for All Animals	8	1.5	1.5	10	8.3	8.4	0.9	1.6
Manna Pro Classic Adult Dog Food	22	10	3.5		23.5	10.0	2.2	
Manna Pro Elite 14	14	8	7.5		15.5	9.9	7.0	
Manna Pro Small World Smorgasbird Wild Bird Feast	10	3	1		11.1	5.4	0.2	
Manna Pro Trip-L-Duty All Purpose Poultry Feed	15	3	10		16.4	4.6	9.4	
MARTHA WHITE FOODS, INC.								
Bonkers Cat Treats Real Chicken	25	10	1		26.4	16.2	1.0	
Bonkers Cat Treats Real Seafood	25	10	1		27.7	16.8	1.1	
MIDWESTERN PET FOODS								
Pro Pac 22 Total Fitness Diet for Dogs	22	11	5		24.3	11.0	2.4	
Pro Pac 26 Kennel Pack Diet for Dogs	26	15	4		27.4	16.0	2.1	
Pro Pac 28 Super Premium Puppy Food	28	20	4	8	31.2	18.4	2.2	8.0
Pro Pac 30 High Performance Diet for Dogs	30	20	3		31.7	19.1	2.1	
MURRAY ELEVATOR								
Silver Cup Soft Moist Fish Fd Trout/Salmon Fry No. 1	44	16	3	12	47.5	20.5	0.2	9.4
Silver Cup Soft Moist Fish Fd Trout/Salmon Fry Starter	44	16	3	12	50.3	19.4	0.2	9.8
NATURAL LIFE PET PRODUCTS, INC.								
Natural Life Adult Dog Formula	26	12	3.5		28.9	11.9	2.0	
Natural Life Condition Dog Formula	28	18	3.5		28.4	16.0-	2.3	
Natural Life Puppy Dog Formula	28	15	3.5		32.6	14.4	2.2	
Natural Life Puppy Dog Formula	28	15	3.5		31.6	14.1	2.6	
Natural Life Senior Dog Formula	18	8	4		21.4	8.3	2.1	
Natural Life Senior Dog Formula	18	8	4		20.5	8.2	1.3	
NATURES RECIPE								
Natures Recipe Lamb and Rice Kibble Dog Food	20	10	4.4		20.7	10.3	4.3	
Natures Recipe Optimum Feline Diet	30	10	4	6	30.0	11.0	2.1	6.3
Natures Recipe Puppy Performance & Lactation Diet	25	15	4.5		26.3	16.7	3.2	
NUTRO PRODUCTS, INC.								
Nutro Max Cat Lite	32	12	6	6.5	31.6	13.0	2.9	6.6
Nutro Max Kibble Puppy Food	28	17	4		29.8	16.0	4.3	
Nutro Max Kitten	34	20	3	7	37.3	17.4-	1.7	6.2

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Nutro Max Special	16	8	4.5		19.7	8.3	2.6	
Nutro Maximum Nutrition Kibble Dog Food	26	16	4		27.5	17.0	4.2	
Nutro Nat Choice Lamb Meal & Rice Form Dog Food	21	12	5		22.3	12.5	3.0	
Nutro Premium Nutrition Kibble Dog Food	25	12	4.5		26.1	12.5	3.1	
PET NUTRITIONAL SYSTEMS								
Nutrix Lite Cat Blend	30	6	4	7	41.0	8.3	3.0	8.7
Nutrix Lite Dog Blend	22	8	5		22.9	10.3	1.9	
Nutrix Performance Blend	30	20	4		30.4	15.0-	3.2	
Nutrix Performance Blend	30	20	4		31.7	16.1-	3.4	
Nutrix Puppy Blend	28	18	4		30.5	13.4-	3.2	
Nutrix Puppy Food	28	18	4		28.1	13.6-	2.7	
PET SPECIALTIES, INC.								
ANF 24 Adult Formula Dog Food	24	13	2.5	8.5	25.0	12.7	1.3	6.7
ANF 30 Performance Formula Dog Food	30	18	3.5	9	32.0	16.7	2.1	7.9
ANF M Maintenance Formula Dog Food	22	13	2.5	8.5	23.7	12.0	1.8	7.0
PRO PET, INC.								
Big Red Nuggets for Dogs	21	8	5.5		21.3	7.6	3.9	
Big Red Producer's Choice 18	18	2	15		18.8	4.1	14.6	
Big Red Rabbits Choice	15	2	18		15.4	3.6	19.1	
QUAKER OATS CO.								
Gaines Beef Flavor Cycle 1 Dog Food	10	6	2		11.2	5.6	0.5	
Gaines Chicken Flavor Cycle 2 Dog Food	9	4	2		10.7	5.5	0.6	
Gaines Chicken Flavor Cycle 3 Dog Food	7	2	5		7.7	2.1	1.8	
Gaines Chicken Flavor Cycle 4 Dog Food	5	3	5		5.8	2.7	2.5	
King Kuts Premium Dog Food with Real Beef & Liver	10	3	1		11.8	5.7	0.4	
RALSTON PURINA CO.								
AVN Parrot Formula	20	7	4	6	20.1	7.3	2.9	6.3
Pro Plan Dog Food Lite Formula	14	8	5.5		14.7	8.8	3.3	
Pro Plan Dog Food Lite Formula (Dry)	14	8	5.5		14.7	9.2	0.6	
Purina Bird Chow	8.5	2.5	3	2.5	12.0	5.8	0.5	2.4
Purina Bird Mix	8	1.5	4.5		9.4	2.1	1.9	
Purina Goat Chow	16	2.5	9		18.6	4.0	5.0	
Purina Grain Land Alfalfa Cubes	15	1.5	30		19.1	2.8	18.7	
Purina Grain Land Coarse Cracked Corn	8	3.5	3		11.3	9.0	0.3	
Purina Horse Chow #100	10	2	30		15.7	3.5	23.5	
Purina Horse Chow #200	14	2	25		15.9	3.8	19.9	
Purina New England Pride Horse Pellet 16	16	2.5	10		16.3	2.7	10.3	
Purina Premium Beef 'N Bacon Platter for Cats	11.5	3	1	3	14.6	8.9	0.2	1.8
Purina Premium Chicken & Liver Dinner for Cats	11.5	4	1	3.5	12.8	6.2	0.2	2.1
Purina Premium Country Dinner for Cats	11	3	1	4	12.3	8.5	0.4	3.0
Purina Pro Plan Dog Food	28	18	3		28.8	18.5	3.0	
Purina Pro Plan Dog Food Blend Adult Formula	25	15	3		25.8	14.4	1.9	
Purina Pro Plan Dog Food Blend Growth Formula	28	18	3		28.6	17.3	3.2	
Purina Pro Plan Dog Food Growth Formual (Dry)	28	18	3		28.4	17.3	1.1	
Purina Pro Plan Dog Food Performance Formula	30	20	3		31.2	18.7	11.1	
Purina Puppy Chow	27	9	5		28.2	10.5	2.2	
Purina Pure Pride Horse Feed 100	10	2.5	12		13.8	4.3	9.6	
Purina Pure Pride Horse Feed 200	14	2.5	8		14.3	4.1	8.1	

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Purina Sunflower Blend	15	34	32		19.1	37.9	18.7	
Purina Turkey Grower NT	20	3	5.5		21.3	4.3	4.8	
Purina Wild Bird Chow	10	3	7	2.5	11.3	6.3	0.2	2.6
ROYAL GRAIN CO.								
Handler's Choice Golden Nuggets	21	8	8		21.9	14.9	5.1	
STANFORD SEED CO.								
Lyric Extra Wildbird Food	11	10	10		19.1	14.0	8.0	
Lyric Wild Bird Food Peanut Hearts	20	40	5		32.4	46.4	4.2	
STOP & SHOP								
Stop & Shop Beef & Liver Dinner Cat Food	11	6	1	3	12.2	8.2	0.5	2.5
Stop & Shop Beef Dinner Cat Food	12	5	1	3.2	12.9	10.8	0.5	1.9
Stop & Shop Chopped Grill Dinner Gourmet Cat Food	11.5	6	1	2.7	12.6	8.7	0.6	1.4
Stop & Shop Country Chick Dinner Gourm Cat Fd	12	5	1	3.2	12.9	7.5	0.4	1.8
Stop & Shop Horsemeat & Chunks Dinner for Dogs	11	5	1.5		12.1	6.4	0.4	
Stop & Shop Lamb Chunks Dinner for Dogs	10	6	1.5		11.1	7.6	0.5	
Stop & Shop Seafood Dinner Cat Food	12	5.5	1	3	12.9	6.4	0.3	2.9
Stop & Shop Tuna & Egg Dinner Cat Food	14	2	1	3	17.9	2.8	0.2	1.7
Stop & Shop Turkey & Giblets Dinner Gourm Cat Fd	13	6	1	2.9	13.0	7.3	0.4	1.8
Sun Glory Beef Flavor Dog Food	8	2	1.5		8.9	1.9	1.3	
Sun Glory Chicken Flavor Dog Food	8	1.5	1.5		9.1	1.6	1.3	
Sun Glory Liver Flavor Dog Food	8	2	1.5		9.8	3.6	1.3	
SUN SEED								
Sun Seed Canary Mix	17	12	10		18.0	15.0	5.7	
Sun Seed Rabbit Pellets	18	2	20		21.8	3.4	8.8	
Sun Seed Southern Cockatiel Mix	14	12	20		12.5-	13.0	10.0	
SUNFLOWER, INC.								
Feathered Friend Bird Snack Wild Bird Mixture	11	6	10.5		13.6	8.0	6.8	
Feathered Friend Flyers Choice Wild Bird Food Mix	14	20	12		15.0	24.9	11.0	
Feathered Friend Sunflower Hearts for Wild Birds	22	38	8		25.3	35.5	2.9	
Feathered Friends Favorite Wild Bird Food Mixture	10.5	4	8		12.5	4.4	4.8	
SWEETLIFE FOODS								
Sweet Life Beef Chunks Dinner for Dog	11	5	1.5		12.9	8.0	0.4	
Sweet Life Chopped Chicken Dinner for Dogs	9	8	1.5		10.8	11.4	0.3	
Sweet Life Horsemeat Chunks Dinner for Dogs	11	5	1.5		11.0	7.1	0.6	
Sweet Life Lamb Chunks Dinner for Dogs	11	7	1.5		11.4	6.9	0.2	
THE IAMS CO.								
Eukanuba Adult Maintenance Dog Food Dry	25	16	5		26.3	16.4	2.1	
Eukanuba Dog Food	30	20	4		31.8	20.1	2.2	
Iams Cat Food	32	21	3	6.5	33.4	19.3	3.0	6.2
Iams Chunks Dog Food	26	15	5		26.8	15.0	2.4	
Iams Less Active for Cats	28	14	3	6.5	30.6	14.9	1.4	5.8
Iams Less Active for Cats Cat Food	28	14	3	6.5	30.6	14.5	3.0	5.9
Iams Less Active for Dogs	22	12	5		23.3	12.6	2.5	
Iams Mini Chunks Dog Food	20	15	5		26.3	13.5	2.7	

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
THE ROBERT ABADY DOG FOOD CO., LTD.								
Abady High Stress & Competition Formula	25	19	0.5	10	19.3-	21.3	0.8	8.9
Abady Maintenance & Stress Dog Food	26	15.5	1	10	23.9-	18.2	1.1	10.8
TOPCO ASSOCIATES, INC.								
Mega Dog Food Chicken Flavor	8	1.5	1.5		8.9	1.4	1.0	
Mega Dog Food Liver Flavor	8	1.5	1.5		8.5	1.5	1.1	
Topco Chicken Dinner for Cats	10	9	1	3.5	13.9	10.0	0.1	2.4
Topco Mackerel & Chicken Cat Food	12	6	1	3.5	12.7	8.1	0.1	2.6
Topco Tuna & Kidney Dinner Cat Food	12	5	1	3	13.6	14.2	0.7	2.1
Topco Tuna Cat Food	19	2	1	2.5	21.4	11.0	0.1	1.4
TRIUMPH PET INDUSTRIES								
Triumph Hi-Tor Adult Dog Food (Dry)	26	15	5		22.4-	14.4	4.0	
Triumph Hi-Tor Adult Dog Food (Dry)	26	15	5		22.0-	14.2	3.3	
Triumph Hi-Tor Dog Food (Dry)	25	12	4		27.3	14.2	2.6	
Triumph Hi-Tor Lite Dog Food	21	6	4		21.3	7.4	5.7	
Triumph Hi-Tor Lite Dog Food (Dry)	21	6	4		21.7	6.5	4.3	
Triumph Hi-Tor Puppy Food	28	17	4		29.2	16.3	4.5	
Triumph Hi-Tor Puppy Food (Dry)	28	17	4		28.1	15.8	3.3	
Triumph Hi-Tor Puppy Food (Dry)	28	17	4		27.4	15.3	3.2	
Triumph Supreme Feline Diet	32	20	3	5.25	41.5	21.1	1.6	5.5
Triumph Supreme Feline Diet-Chicken Flavor	32	20	3	5.25	38.5	19.5	1.3	5.5
Triumph Supreme Feline Diet-Seafood Flavor	32	20	3	5.25	39.9	18.2	1.9	5.8
UNITED CO-OPERATIVE FARMERS								
Tizwhiz High Quality Horse Feed	8	2.5	1.5		8.5	3.4	0.8	
UCF Complete Layer Mash	15	3	5		15.6	10.7	4.3	
UCF Complete Layer Pelleted	15	3	9		15.6	5.1	4.5	
UCF Pride Horse Pellets	13	2	15		12.7	5.4	15.1	
UCF Purrsonality Cat Food	30	9	4.5	5.5	32.4	10.5	1.5	4.3
UCF Rabbit Feed Pelleted	17	3	17		17.0	4.9	15.3	
UCF Show 'N Grow Dry Dog Food	27	10	4.5		28.2	10.8	3.3	
UCF Turkey Grower (med.) Pelleted	20	3	5.5		20.6	5.3	2.5	
UCF Turkey Grower Pelleted	20	3	5.5		22.3	2.8	2.4	
UCF Wild Bird Food Original Blend	10	2	4.6		11.4	8.2	4.9	
UCF Wild Bird Food Select Blend	15	15	17		15.1	19.8	9.9	
VENTURA GRAIN CO., INC.								
Every Day Formula 1400 Horse Feed	14	2.5	20		15.5	3.2	11.4	
WAUREGAN GRAIN CO., INC.								
Wauregan	15	3	4		15.9	4.4	4.2	
Wauregan	18	3	9		21.1	3.8	5.7	
Wauregan 16% Pork Maker Plus	16	3	4.5		16.8	4.5	3.1	
Wauregan 16% Pork Maker Plus	16	3	4.5		17.1	4.4	4.5	
Wauregan Calf Starter Texturized	20	3	8		20.1	3.5	5.5	
Wauregan Equine's Choice Complete Horse Feed	14	2.5	20		14.1	3.2	15.7	
Wauregan Equine's Choice Complete Horse Feed	14	2.5	20		14.8	2.7	19.4	
Wauregan Heifer Grower Pellets Medicated	16	3	8		17.1	5.0	6.3	
Wauregan Horse Oats	10	3	12		10.3	4.4	10.6	
Wauregan Layer	15	3	4		16.9	3.7	2.6	

Table 1. Analysis of individual samples.

	Guarantee %				Nutrients found %			
	Prot.	Fat	Fiber	Ash	Prot.	Fat	Fiber	Ash
Wauregan Rabbit Pellets	20	2.5	18		18.6-	4.0	17.8	
Wauregan Trail Ride Horse Feed Pellets	12	3	9		12.8	5.3	7.9	
Wauregan Trail Ride Horse Feed Pellets	12	3	9		12.8	3.0	9.0	
Wauregan Turkey-Game Bird Grower	22	3.5	4.5		22.2	3.7	2.9	
WELLES L. BISHOP CO.								
Suet cakes	8	35	7		6.4-	36.2	7.7	
WELLS PET FOOD CORP.								
Sportmix Chunk Style Dog Food	21	8	5		21.3	9.6	4.0	
ZEIGLER BROS., INC.								
Ziegler CT High Performance 42% Trout Food 3/16"	42	12	4	15	42.3	12.0	1.8	8.1
Ziegler CT High Performance 42% Trout Food 5/32"	42	12	4	15	42.4	12.8	3.7	7.6

Table 2. Summary for each manufacturer of number of samples tested, number of guarantees for ash, and average percentage of guarantee for each nutrient.

Manufacturer	Samples[a] (guarantees for ash)	Average percent of guarantee			
		Protein	Fat	Fiber	Ash
Agway	38(0)	107	148	70	-
Allied Foods	2(0)	105	365	57	-
Alpo Pet Products	17(12)	117	147	56	87
Bay-Mor Pet Feeds	5(0)	103	186	55	-
Best Feeds	1(0)	106	96	45	-
Blue Seal Feeds	52(0)	107	127	80	-
Bumble Bee Seafoods	1(1)	106	365	30	53
Cadillac Pet Foods	1(1)	97	130	86	96
Cargill	15(2)	106	160	67	79
Carnation	12(8)	114	189	31	91
Derby Feed	4(0)	118	279	52	-
Doane Products	3(2)	101	95	66	97
H.K. Webster	23(0)	111	141	77	-
Heinold Feeds	5(0)	110	124	76	-
Heinz Pet Products	20(12)	120	157	39	79
Hill's Pet Products	2(2)	112	110	90	116
John Renick	1(0)	110	94	63	-
K & L Feed Mill	16(0)	112	112	75	-
Kal Kan Foods	11(6)	128	136	33	87
Kelly Foods	4(1)	106	120	60	60
Lick Your Chops	1(1)	106	96	70	102
Manna Pro	5(1)	108	223	66	16
Martha White Foods	2(0)	108	165	105	-
Midwestern Pet Foods	4(1)	108	99	56	100
Murray Elevator	2(2)	111	125	7	80
Natural Life Pet Prod.	6(0)	112	97	58	-
Natures Recipe	3(1)	103	108	74	105
Nutro Products	7(2)	108	101	72	95
Pet Nutritional Systems	6(1)	110	95	71	124
Pet Specialties	3(3)	106	94	61	83
Pro Pet	3(0)	103	160	92	-
Quaker Oats	5(0)	115	123	36	-
Ralston Purina	25(6)	115	157	69	83
Royal Grain	1(0)	104	186	64	-
Standard Seed	2(0)	168	128	82	-
Stop & Shop	12(7)	112	139	51	67
Sun Seed	3(0)	105	134	50	-
Sunflower	4(0)	116	115	63	-
Sweetlife Foods	4(0)	110	136	25	-
The Iams Co.	8(3)	109	100	62	92
Robert Abady Dog Food	2(2)	85	115	135	99
Topco Associates	6(4)	115	212	40	67
Triumph Pet Industries	11(3)	106	101	82	107
United Co-Op Farmers	11(1)	105	194	67	78
Ventura Grain	1(0)	111	128	57	-
Wauregan Grain	14(0)	105	136	83	-
Welles L. Bishop	1(0)	80	103	110	-
Wells Pet Food	1(0)	101	120	80	-
Zeigler Bros.	2(2)	101	103	69	52

[a] Deficiencies for protein are: two samples each from H.K. Webster, Robert Abady, Triumph Pet Industries, and one each from Sunseed, Wauregan, and Welles L. Bishop.

Deficiencies for fat are: one each from Doane Products, H. K. Webster, Natural Life, Nutro Products, and four from Pet Nutritional Systems.

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