1010.9.9

PO BOX 474 ROZELLE 2039 NSW

Dr Dick James Veterinary Surgeons Board Locked Bag 21 Orange NSW 2800



Dear Dick,

I would like to register a complaint against Dr Tom Lonsdale of Riverstone Veterinary Hospital. I am concerned about Dr Lonsdale's recent media attack on processed pet foods.

- 1. The statements made by Dr Lonsdale are his opinions and not supported nor concluded by the recent report into the link between diet and periodontal disease. It appears he has misquoted the results of the report and misconstrued them to support his own argument. As such some statements are false and misleading.
- 2. Dr Lonsdale implies he is an authority on companion animal nutrition, however he is not recognised by the veterinary profession as an authority
- 3. Dr Lonsdale implies he is an authority on periodontal disease in companion animals however he is not recognised by the veterinary profession as an authority

His statements in the media directly undermine the professionalism and credibility of practitioners who recommend processed foods to pet owners.

4. As a direct result of his media campaign and wild claims, pet owners may feel guilty and concerned about their current feeding of processed foods when there is no scientific evidence to suggest processed foods are detrimental to the health of their pets. Dr Lonsdale is causing a public mischief with his anecdotal story, assumptions and questionable science.

I agree with Dr Lonsdale that raw bones are beneficial to oral health as is teeth brushing and other forms of oral hygiene but I don't believe bones are a panacea nor do they provide the foundation for sound nutrition. In fact in the analysis of raw chicken wings there are excesses of calcium and numerous vitamin and mineral deficiencies (see attached tables).

I also agree that soft foods (raw meat, table scraps, canned food etc) are associated with increased severity and incidence of periodontal disease when dental hygiene is ignored. However most veterinarians would detect any dental disease on routine examination and attend to it. Dr Lonsdale's proposition that periodontal disease leads to the ultimate death of pets implies veterinarians are not routinely checking dental health. He is therefore

making public the assumption that veterinarians are not performing routine dental checks.

I believe a suitable resolution to this complaint would be the prevention of further publicity of Dr Lonsdale unless authorised by the veterinary surgeons board. This would permit checking of Dr Lonsdale's material for suitability and whether the information was correct and complied to current scientific evidence.

I would also ask the Dr Lonsdale supply his "evidence" for peer review before continuing to use it as the basis for his argument; that he undertake to perform an AAFCO protocol on his feeding regime under strict supervision so that if he wishes to offer it publicly as an alternative to complete and balanced diets then at least it has undergone the same rigours as good quality pet foods. In addition I would like to see the statistics to support his claims that processed foods are killing pets if he does not have them then he should make a public apology.

Good quality petfoods have undergone AAFCO protocols for suitability as a solus diet. They provide a complete and balanced ration. I believe it is the responsibility of veterinarians in consultation with pet owners to advise on dental hygiene (raw bones being one of the options) and diet by assessing individual pets. I personally resent Dr Lonsdale overriding the credibility and professional advice afforded by veterinarians in practice, including myself as a part time practitioner.

I have underlined in red the attached media articles to support my concerns, I look forward to your response.

Thankyou

Yours sincerely

Barbara Fougere BSc BVMS (Hons)

Barbara Youque

Grad Dip Bus Mgt.

Processed food killing pets, say vets

By science and technology writer JULIAN CRIBB

PROCESSED pet food is killing many liver, kidneys, skin and joints, Dr Lons cats and dogs, according to evidence as sembled by two Sydney vers and an expert committee from the this attack on their immune system that

peak veterinarians' body has concluded there is evidence to "incriminate an association between diets of predominantly soft consistency" and severe mouth disease leading to other forms of pet

The claims, which have sparked con-troversy in the veterinary profession over its close links to the pet food industry, will be scrutimised at the Austral ian Veterinary Association conference in Canberra tomorrow.

Sydney vets Dr Tom Lonsdale and D: Michael Scasny said yesterday there was strong cyldence that processed and can ned toods caused extensive bacterial in fection in animals, which could ultimately undermine their immine system

The effect of prolonged infection, bac terral toxins and the animal's own mimuoe reaction also attacked the heart

"Animals are so seriously affected by this attack on their immune system that it leads to chronic ill-health, ultimately surfacing as disease in particular organs or what appears as premature old-age

But switch the animal to its natural mostly raw, meaty bones - and the effect was dramatic.

"Owners are amazed at the change The animals stops sleeping all day, it becomes much more active," Dr Lonsdale

This is undoubtedly the biggest animal welfare issue in Australia today because it affects millions of pets.

The research manager for leading pet tood manufacturer Uncle Bens, Mr Syd Lukins, rejected the claims

"In terms of mamal health, the incidence of disease has reduced since manufactured pet toods have been around," he said vesterilay.

Our products are designed to provide

a complete and balanced diet to enable animals to sustain a healthy lifestyle but there is no harm in feeding them a bone or two with a manufactured product to help control periodontal disease."

The AVA expert committee headed by

Associate Professor David Watson found the concerns over processed pet food required urgent attention and more research.

It recommended pets be given a diet that had adequate nutritional and physical qualities to maintain oral health and warned that soft diets could lead to dis-

"Raw, meaty bones have good physical characteristics to promote oral health but ... other items are needed to provide essential nutrients," it said.

Because dogs and cats were competitive carnivores, when sick their metabolism worked harder to suppress the out ward signs of ill health. This was why atfected animals slept most of the time and lacked energy

Pet owners killing dogs and cats softly, yets warn

DOG and cat food should be banned because it causes "shocking tooth and gim disease in 85 per cent of pets, a vet-

warned yesterday.

The processed food is noy chewy enough and instead pets should be eating kangaroo and or tall lamb flaps and shanks or whole naw chickens. Sydney veterinarian Joint Consider said Partiy on the Imgins of Dr Lonsdale since 1991, the Australian Veterinary Association undertook a study on the possible link between diet and disease and it has just completed its report.

its report.

It found sufficient evidence to incriminate an association between sliets of predominantly soft consistency and periodontal

Dr Lonsdale said commercial pet food had vicusally no posinye health autributes

7—THE DAILY T

Emplies without on

Good gravity pot foods are the foundation ut hereta contany to tenseases classes

Tele/Mirror 10/3/94

PET FOOD IS JUNK: VET

DOG and cat food caused shocking tooth and gum disease in 85 per cent of pets, and should be banned, a Sydney veterinarian said yesterday.

Mr Tom Lonsdale said commercial pet food had virtually no positive health attributes.

He said the immune systems of animals were under great stress because they had to deal with toxins in the mouth and "inappropriate" chemicals in the gut.

Dogs would have a much healthier life if they were fed kangaroo and ox tail, lamb flaps and shanks, and the odd whole raw chicken.

TEACHER ATTACKS COLLEAGUE

STUDENTS at a Canberra high school yesterday were evacuated to their gym after one teacher tried to stab another.

A police spokesman said the teacher assaulted the other teacher at Wanniassa High School because he thought he had done something wrong.

Police were called to the school just after 8am when a man carrying a knife was seen fighting with another staff member.

A Queanbeyan man, 53, later appeared in court charged with assault and threat to kill.

! anger Dr Mahathir, who last month ordered that British firms miss out on Malaysian Government contracts over reporting about the country in British newspapers.

Vet condemns unhealthy cat and dog food

Dog and cat food should be banned because it caused "shocking" tooth and gum disease in 85 per cent of pets, a vet said yesterday.

A Sydney veterinarian, Dr Tom Lonsdale, said 75 per cent of the income vets earned from treating cats and dogs was derived from ailments caused by an inadequate diet. Commercial pet food had virtually no positive health attributes, he said.

"Primarily it's a function of the physical form of the food," Dr Lonsdale said. "The processed food suffers two problems — there's a problem in that the stuff sits around the teeth and gums and feeds the bacteria that inhabits that area, and in that it doesn't do the proper cleaning."

He said animals' immune systems were under stress because they had to deal with toxins in the mouth and inappropriate chemicals going through the gastro-intestinal tract.

Dingoes had an ideal diet — of wallaby, goanna, small marsupials, and the occasional sheep — but in an urban environment kangaroo and ox tail. lamb flaps and shanks, and whole raw chickens would suffice, he said.

Partly on the urging of Dr Lonsdale, the Australian Veterinary Association undertook a study on the possible link between diet and disease. The committee found "there is sufficient evidence to incriminate an association between diets of predominantly soft consistency and periodontal disease", and that veterinarians "need to be concerned about the relationship between diet and health".

The report recommended that pet food should be nutritionally adequate and have physical qualities of texture, abrasiveness and chewiness.

— AAP

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19/3/94



1S this pet cat eating properly?

Vet cans pet food

CANBERRA: Dog and cat food should be banned because it caused shocking tooth and gum disease in 85 percent of pets, a Sydney veterinarian said yesterday.

Tom Lousdale said commercial pet food had was not chewy enough and did not clean animals' mouths properly.

He said the immune systems of animals esting commercial food were under great stress.

Dr Lonsdale said city people should feed their pets with kangaroo and ox tail, lamb flaps and DATE TIME STATION PROGRAMME

DURATION ORDER NO

0309 1600 4QR

LATE EDITION 00:00:00 L0432670 HONG HONG PUPPIES ARE A STATUS SYMBOL OR DESIGNER ACCESSORY AND THERE ARE CALLS FROM AUST. TO STOP EXPORTING PUPPIES TO HONG KONG BECAUSE THEY OFTEN END UP BADLY NEGLECTED. INT. DR HUGH WORTH - RSPCA'S NATIONAL PRESIDENT

0310 0900 3LO MELB.

RANALD MACDONALD 00:00:00 L0432671
INTV: HUGH WIRTH, R.S.P.C.A. DISCUSSING
THE CLAIMS OF TWO SYDNEY VETS THAT
PROCESSED PET FOOD IS KILLING A NUMBER
OF CATS AND DOGS, CASE TO BE ANALYSED
BY THE AUSTRALIAN VETERINARY ASSOC
CONFERENCE TOMORROW, QUITE A SERIOUS
CLAIM; ARGUMENT IS THAT PREPARED FOODS
TAKE AWAY THE NATURAL PROCESSES OF
TEETH CLEANING FROM BONES, RESULTS OF
DECAY ARE SWALLOWED INJURES KIDNEYS,
LIVER AND HEART.

0310 1030 3AW MELB.

NEIL MITCHELL 00:00:00 L0432672
INTV: DR TOM LONSDALE, SYDNEY
VETERINARIAN; DISCUSSING REFORTS THAT
SUGGEST COMMERCIAL CANNED DOG AND CAT
FOOD COULD BE DISADVANTAGEOUS FOR PETS,
CONSISTENCY OF CANNED PET FOOD BAD FOR
SMALL ANIMALS WE KEEP AT HOME; BAD FOR
DENTAL HYGENE OF ANIMALS; DOGS AND CATS
REQUIRE BONES IN THEIR DIET TO KEEP
TEETH HEALTHY.

DATE TIME STATION PROGRAMME DURATION ORDER NO

0309 1730 5AN

MURRAY NICOLL 00:00:00 L0432608
NICOLL TALKS TO JULIAN CRIBB ABOUT PET
FOOD. CRIBB SAYS PET FOOD IS KILLING
PETS. A VET CALLED DR TOM LONSDALE HAS
CLAIMED A MAJOR SOURCE OF PREMATURE
DEATH OF PETS IS THE FOOD WE FEED THEM
IT RELATES TO THE UNDERMINING OF THE
IMMUNE SYSTEM

0310 0700 1323

NEWS 00:00:00 L0432609
THERE'S NEW CRITICISM OF CANNED PET
FOOD. A SYDNEY VET HAS SUGGESTED IT
SHOULD BE BANNED BECAUSE IT CAUSES
TOOTH AND GUM DISEASE IN 85% OF PETS.
MOST VET TREATMENTS ARE LINKED TO POOR
DIETS

ANALYSIS OF RAW CHICKEN WINGS.

Attached are results of that analysis. I have provided assessments for dog (adult maintenance and growth) and cat (adult maintenance and growth). I summarise the finding as follows (relative to WCPN guide-lines):

Dog

Cat

Adult Maintenance Deficiencies: Potassium, copper, manganese, iodine, vitamin A,

vitamin E, riboflavin, folic acid, vitamin B12 and

choline

Excesses: Calcium

Growth Deficiencies: Potassium, iron, copper, manganese, iodine,

vitamin A, vitamin E, riboflavin, folic acid,

vitamin B12 and choline.

Excesses: Calcium and calcium:phosphorus

Adult Maintenance

Deficiencies: Potassium, iron, copper, manganese, iodine,

thiamin, riboflavin, pyridoxine, folic acid, vitamin

B12 and choline.

Excesses:

Calcium

Growth Deficiencies:

Potassium, iron, copper, manganese, iodine,

thiamin, riboflavin, pyridoxine, vitamin B12 and

choline.

Excesses:

Calcium and calcium:phosphorus

I trust you find it interesting reading. If you have any questions, please contact the writer.

PRODUCT CODE: BRAND: #N/A
OTHER DETAILS: Whole tresh chicken wings - cat assessment

VARIETY: DATE CODE: 20/9/93

#N/A

LIFESTAGE: Adult Maintenance LAB No: 3976

		UNITS /	UNITS !	WCPN	WCPN	NRC '86
	UNITS	100 g	400 kcal	min (1)	max (1)	REQT(1)
PROTEIN	g	17.7	41.8	25	-	17.66
FAT	g	12.5	29.5	9		
MOISTURE	9	63.2	***	建筑		THE REAL PROPERTY.
PREDICTED M.E.	kcal	169.3	No.	新教	有其是	建设建设
PREDICTED M.E.	kcal/g DB	4.6	1			THE COL
DIETARY FIBRE - total	g	0,1	0.2			l .
- solubje	g		建加州			ALC: U
- Insoluble	g	0.1	用金属值		13. Marian	
ASH	9	3.6		200		1000000
pH .		6.76	學所能的	等	原放阿藤 鄉	我們鄉鄉

	UNITS	UNITS /	UNITS /	WCPN	NRC '86
AMINO ACIDS		100 g	400 kçal	min (1)	REQT (1)
Aspartic Acid	g				-
Giutamic Acid	9		100		-
Serine	g		1.		
Glydna	g	1	100	1	-
Histidine	g	100		1	0.22
Taurine	g			0.26	0.03
Arginine	g		1		0.03
Threonine	9				0.74
Alanina	g	100			0,52
Proline	g		100		- A
Tyrosine	9		100		-
Valine	g			1	-
Methionine	g .	1		0.32	0.44
Cystine	g	100			0.29
tsoleucine	g				
Leucine	g		100		0.37
Phenylalanine	. g	1		1	0,88
Lysine	g		1	100	0.29
Tyr + Phe	g				0.59
Meth + Cys	g			i i	0,63
Tryptophan					0.55
Total A.A.'S					
Total Dispensible AA's			1		

	UNITS	UNITS!	UNITS/	WCPN	WCPN	NRC '86
MINERALS		100 G	400 kcal		max (1)	REQT (1)
Calcium	9	1.50	3.54	0.65	3	0.59
Phosphorus	9	0.87	2,06	0.6	1 4	0.44
Ca / P ratio	_		1.72	0.5	2	-
Potassium	9	.0,20	0.47	0.6	-	0.29
Sodium	9	0.11	0,26	0.04	1.6	0.04
Chloride	9	0.09	0.21			0.14
Magnesium	g	0.05	0.12	0.03	0.17	0.03
Iron	mg	2.10		6.4	140	5.9
Copper	mg	0.09	0.22	0.4	4	0.37
Manganese	mg	0.06	9.11	0.4	28	0.37
Zinc (4)	mg	2.60	5.91	4	28	3.7
lodine	ИB	12.00				25.8
Selenium	<u>µg</u>	13,00	31	8	57	7.4
VITAMINS	l	į .				
Vilamin A	mg	0.04	0.10	0,09		0.1
Vitamin D	μg			1	5.675	9.0
Vitamin E	mg	1.20	2.84		•	2.2
Vitamin K	μg			10	-	7.4
Thiamin	mg	0.05			-	0,4
Riboflavin	mg	0.06				0.3
Pantothenio Acid	mg	0.60			-	0.4
Niacin	mg	3.50	8.27	3.2		2.9
Pyridoxine	mg	0.11	0.26			0.8
Folic Acid	μg	2.30	5			58,9
Vitamin B12	μд	0,07	0.17			1.5
Choline	mg	.33.00	7.6	200		176.6
Blotin	μд			7	-	5.2
FATTY ACIDS						
Linoteic Acid	g	1.31	3.10	, i		0.4
Linolenic Acid	9	0.20	0.47	4 .		
Arachidonic Add		0.08	0.12	0.016		- 0.018
Lingleic + Arachidonic Acids	g	1.362				1

⁽¹⁾ WCPN guidelines and NRC regirements are units / 400 kcal. See WCPN "Nutrient Requirements of Dogs" table for notes relating to those guidelines.

TO: ***

PRODUCT CODE: BRAND: #N/A
OTHER DETAILS: Whole fresh chicken wings - cat assessment

VARIETY: DATE CODE: 20/9/93 #N/A LIFESTAGE: Growth LAB No: 3976

		UNITS/	UNITS /	WCPN	WCPN	NRC '86
	UNITS	100 g	400 kcal	mln (1)	"max (1)	REQT (1)
PROTEIN	g	17.7	41.8	26	-	17.66
FAT	g	12.5	29.5	9		
MOISTURE	g	63.2				
PREDICTED M.E.	keal	169.3				
PREDICTED M.E.	kcal/g DB	4.6	1000		新聞鄉灣灣	THE SECTION SE
DIETARY FIBRE - total	g	0.1	0.2	-		-
- soluble	g					
- Insoluble	g	0.1		1000		100
ASH	g	3,6			A Little	100
pH		6,76	4	100	SECTION SECTION	

	UNITS	UNITS /	UNITS /	WCPN	NRC '86
AMINO ACIDS		100 g	400 kcal	min (1)	REQT (1)
Aspartic Acid	g				-
Glutamic Acid	g				-
Serine	g				
Glydne	g	k in			
Histidine	g	1			0.22
Taurine	g	100		0,25	0.03
Arginine	g				0.03
Threonine	g				0.74
Alanine	g	100			0.62
Proline	g	100		1 .	
Tyrosine	i g			1	
Valine	g				
Methionine	g		100	0.32	
Cystine	g	1		1	0.29
Isoleucine '	g	l.	1.0	1	1 .
Leudne	g	100		100	0.37
Phenylalanine	g	1	1		0.88
Lysine	g	I .	1		0.29
Tyr + Phe	- g		100	1	0.59
Meth + Cys	g	1			0.6
Tryptophan	g				0.5
Total A.A.'S					
Total Dispensible AA's	1				

	UNITS	UNITS!	UNITS/	WCPN	WCPN	NRC '86	
MINERALS		100 G	400 kcal	mln (1)	max (1)	REQT (1)	
Calcium	g	1,50	3.54	0.65	2	0.59	
Phosphorus	a	0.87	2.06	0.5	-	0.44	
Ca / P ratio	_		1.72	0.8	. 1.5	-	
Potessium	g	0.20	0.47	0.5		0.29	Ė
Sodium	ğ	0.11		0.2	1.6	0.04	
Chloride	g	0.09	0.21	١.		0.14	
Magnesium	g	0.05	0.12	0.03	0.17	0.03	
lron	mg	2,10	4,96	6.4	140	5.9	
Copper	mg	0.09			4	0.37	
Manganese	mg	0.05			28	0.37	
Zinc (4)	mg	2.50		1 4	28	3.7	1
Indine	μg	12.00	28	30	4500	25.8	4 :
Selenium	μg	13.00			57	7.4	ď.
VITAMINS							Ŀ
Vitamin A	mg	0.04	0.10	0.09			
Vitemin D	pg		ŀ	'	5.675	0.9	1
Vitamin E	mg	1.20	2.84	2.4	4	2.2	
Vitamin K	μg		Ì	11	o .	7.4	
Thiamin	mg	0.05				0.4	
Riboflavin	mg	0.08				- 0.3	
Pantothenic Acid	mg	0,80				- 0.	
Niacin n	mg	3.50				- 2.9	
Pyridoxine	mg	0.11				- O.:	
Folic Acid	pg	2.30		5 6		- 58.	
Vitamin B12	þд	0.0				- 1.	
Choline	mg	33.00	7	20		- 176,	
Blotin	μд				7	- 5.	2
FATTY ACIDS		1					
Linoleio Add	g	1,3			•	· 0.	4
Linotenic Add	g	0.2			1	-	1
Arachidonic Acid	g	0.0				- 0.01	5
Linoleic + Arachidonic Acids	g	1.36	2 3.2	2 1.0	10		٠

⁽¹⁾ WCPN guidelines and NRC regirements are units / 400 kcal. See WCPN "Nutrient Requirements of Dogs" table for notes relating to those guidelines.

TO:

PRODUCT CODE: BRAND: #N/A
OTHER DETAILS: Whole fresh chicken wings - dog assessment

VARIETY: DATE CODE: 20/9/93 #N/A

LIFESTAGE: Growth LAB No; 3976

		UNITS /	UNITS!	WCPN	WCPN	NRC '85
	UNITS	100 g	400 kcst	min (1)	max (1)	REQT (1)
PROTEIN	g	17.7	39.6	22	-	-
FAT	9	12.5	28.0	5.5	-	5.4
MOISTURE	9	63.2				80 Mg
PREDICTED M.E.	kcal	178.7				
PREDICTED M.E.	kcel/g DB	4,9			1	
DIETARY FIBRE - total	9	0,1	0.2		-	
- soluble	9		ALC: N		機能	建心
Insoluble	a ·	* 0.1			数额	
ASH		3.6		100	1	4
pH	_	6,76	117			A DE LA COLOR

	UNITS	UNITS/	UNITS /	NRC '85
AMINO ACIDS		100 G	400 kcal	REQT (1)
Aspartic Acid	9			-
Glutamic Acid	g		1 1	
Serine			l	
Glydine	a		i	
Histidine		1	100	0.119
Taurine			4.0	
Arginine				0.113
Threonine	1 .			0.237
Alanine			1.1	
Proline				٠.
Tyrosine		1.0	3.4	Ι.
Valine			100	0.323
Methionine	a a			0.020
Cystine	g			
Isoleucine				0.259
Leucine	9		1	0.453
Phenylalanine		1		0.453
	8	1	1	
Lysine	8			0.27
Tyr + Phe	g		4 7	0.464
Meth + Cys	0 1	i		0.162
Tryptophan	9			0.07
Total A.A.'S				
Total Dispensible AA's	1			

	UNITS	UNITS /	UNITS /	WCPN	WCPN	NRC '85
MINERALS		100 G	400 kcal	min (1)		REQT (1)
Calcium	9	1.50	3,36	0.8	1.5	0,64
Phosphorus	g	0.87	1,95	0.5	-	0.48
Ca / P ratio			1.72	. 1	1.5	
Potassium	9	0.20	0.45	0.5	-	0.48
Sodium 🔗 🎏	g	0.11	0.25	0.08	1.2	0.00
Chloride	g	0.09	0.20		-	0.0
Magnesium · · ·	9	0.05	0.11	0.04	-	0.0
Iron	mg	2.10	<u>5</u>	8	140	3.4
Copper	mg	0.09	0.21			0,3
Manganese 🐃	mg	0.05	0.10		26	0.5
Zinc	mg	2.50	5.60	5	28	3.8
lodine	μg	12.00				64
Selenium	µд	13.00	29	10	57	1
VITAMINS	i					
Vitamin A	mg	0.04	0.09	0.12		0.1
Vitamin D	μg			1.1		1.
Vitamin E	mg	1,20	2.69	-5	-	2.
Vitamin K	μg					
Thiamin	mg	0.05				0.1
Riboflavin	mg	0.06				0,
Pantothenic Add	mg	0.60				0,
Niacin	mg	3.50				0,
Pyridoxine	mg	0.11	0.25			0.1
Folic Acid	μg	2.30				1.
Vitamin B12	νg	0.07	-			
Choline	. mg	33	7.9	125	i : -	10
Biotin	þВ	L		<u> </u>	·:	
FATTY ACIDS						
Linoleic Acid	g	1.31			· ·	1.0
Linolenic Add	g	0.20	0.45		- ·	
Arachidonic Acid	g	0.05	0.12			4
Linoleic + Atachidonic Acids	a	1.362	3.05	1.1	4	

⁽¹⁾ WCPN guidelines and NRC regirements are units /400 kcal. See WCPN "Nutrient Requirements of Dogs" table for notes relating to those guidelines.

OTHER DETAILS: Fresh whole chicken wings - dog assessment

VARIETY: DATE CODE: 20/9/93

#N/A

LIFESTAGE: Adult Maintenance LAB No: 3976

and the second		UNITS/	UNITS /	WCPN	WCPN	NRC '85
	UNITS	100 g	400 kcal	min (1)	max (1)	REQT (1)
PROTEIN	g	17.7	39.6	16		
FAT .	9	12.5	28.0	5,5		5,4
MOISTURE	9	63.2		100	A STATE OF	A PARTY
PREDICTED M.E.	koal	178.7		100	1	
PREDICTED M.E.	kcal/g DB	4.9			建	A STATE OF
DIETARY FIBRE - total	g *	0.1	0.2			-
- soluble	9		海滨海滨	地位的	爆炸	FREE PROPERTY
- Insoluble	ā	0.1			No.	
ASH	9	3.6		TIME		PER 10
pH	1	6.76	THE REAL PROPERTY.			一种

	UNITS	UNITS /	UNITS /	NRC '85
AMINO ACIDS		100 G	400 kcal	REQT (1)
Aspartic Acid	g	1		
Glutamic Acid	g	1		
Serine	9	1		
Glydne	9		1.5	
Histidine	9	1	3.00	0.119
Taurine	8	1.7		
Arginine	8			0,113
Threonine	9		5.3	0.237
Alanine	8			
Proline	8.			
Tyrosine	8	100		
Valine	g.	1 .		0.323
Methionine	g		9.7	
Cystine	g		17	
Isoleucine			100	0.259
Leucine	l 8	1		0.453
Phenylalanine	g	1		
Lysine	9	1.	1 1	0.27
Tyr + Phe	i ē			0,464
Meth + Cys	g			0.162
Tryptophan	9			0.07
Total A.A.'S				
Total Dispensible AA's	1			

	UNITS	UNITS /	UNITS!	WCPN	WCPN	NRC '85
MINERALS		100 G	400 kcal	min (1)	max (1)	REQT (1)
Calcium	g	1.50	3.36	0.65	3	0.64
Phosphorus Phosphorus	9	0.87	1.95	0.5	-	0.48
Ca / P ratio			1.72	0.5	2	-
Potassium	9	0.20	0.45	0.5		0.48
Sodium	0	0.11	0.25	0.06	1.2	0,06
Chloride	9	0.09	0.20	-	-	0.09
Magnesium	a	0.05	0.11	0.04	-	0.04
Iron	mg	2.10	5	4	140	3.5
Copper	mg	0.09	0.21	0.5	4	0.32
Manganese	mg	0,05	0,10	0,5		0.54
Zinc	mg	2.50	5.60	5		3.88
lodine	Вų	12.00	27.	70		64.7
Selenium	μg	13,00	29	10	57	11.9
VITAMINS					l	
Vitamin A	mg	0,04	0.09	0.12		0.12
Vitamin D	μв			1.1	5,675	1.1
Vitamin E	mg	1,20	2.69	3	-	2.45
Vitamin K	μg			٠	-	-
Thiamin	mg	0.05	0.11	0,1	٠	0.11
Riboflavin	mg '	0.06	0.13	0.25	-	0,27
Pantothenic Acid	mg	0.60	1.34	1.1	-	1.1
Niacin	mg	3.50	7,83	1.2		1.2
Pyridoxine	mg	0.11	0.25	0.12	-	0.12
Folio Acid	μg	2.30	5.15			21.6
Vitamin B12	μg	0.07	0.16			2.7
Choline	mg	33	74	125	-	135
Biotin	μg					-
FATTY ACIDS						
Linoleic Acid	0	1.31	2.93			. 1,08
Linolenic Add	9	0.20	0,45			
Arachidonic Acid	9	0.05	0.12			
Linotelo + Arachidonic Acids	9	1,362	3,05	1.1	4	

⁽¹⁾ WCPN guidelines and NRC regirements are units / 400 kcal. See WCPN "Nutrient Requirements of Dogs" table for notes retailing to those guidelines.