

EVALUATION OF THE DIGESTIVE TOLERANCE AND NUTRITIONAL VALUE ASSESSMENT OF A NEW EXTENSIVELY HYDROLYZED POULTRY FEATHER PROTEIN-BASED DIET FOR ADULT CATS: A 6 MONTHS FEEDING TRIAL.

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INTRODUCTION

Adverse food reactions (AFR) are a common problem that may cause severe cutaneous and/or gastrointestinal signs in cats. After the diagnosis, clinical management involves identification and avoidance of the offending foods. The **long-term management requires finding a diet that is the sole source of nutrition and to secure the compliance & animal well-being** it must be well accepted and tolerated by the cat. Long term feeding of a specific diet should only be recommended if the diet is known to be complete and balanced, which can be demonstrated by evaluation of published analyses of the ingredients, chemical analysis of the diet, or through a feeding trial.

The American Association of Feed Control Officials* (AAFCO) has well established protocols for conducting feeding trials, and diets that have been subjected to these can be held to be truly complete and balanced.

The aim of this study was to evaluate the adequacy between nutritional requirement of adult cats in maintenance and a new extensively hydrolysed poultry feather protein source diet (Ultamino™ feline Royal Canin®) using a study design based on the AAFCO cat food feeding protocol for providing an adult cat maintenance claim.

MATERIALS AND METHODS

ANIMALS

AAFCO maintenance trial demands the inclusion of 8 adult cats minimum.

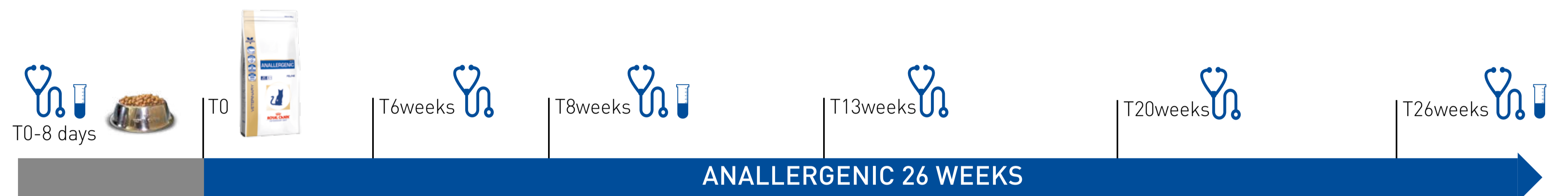
The trial performed here involved 10 adult domestic shorthair cats (4.5 ± 0.5 y.o) and of optimal body weight (BW) prior to start the test (Mean BW of 3.8 ± 0.2 kg, Body condition score of 4.3 ± 0.5 on a 9-point scale) To not unbalanced their previous habit, they were remained housed in a panel with 7 other cats also fed with the same diet but not included in the trial.

This 26-week trial was performed in Royal Canin R&D Cattery in LEWISBURG (Pennsylvania, USA).

DIET

Ultamino™ Feline, Royal Canin®: an extensively hydrolyzed poultry feather protein-based diet: metabolisable energy (ME) (NRC 2006) 393 kcal/100g dry matter (DM), protein 24.5% ME, fat 17% ME.

STUDY DESIGN & RECORDED PARAMETERS



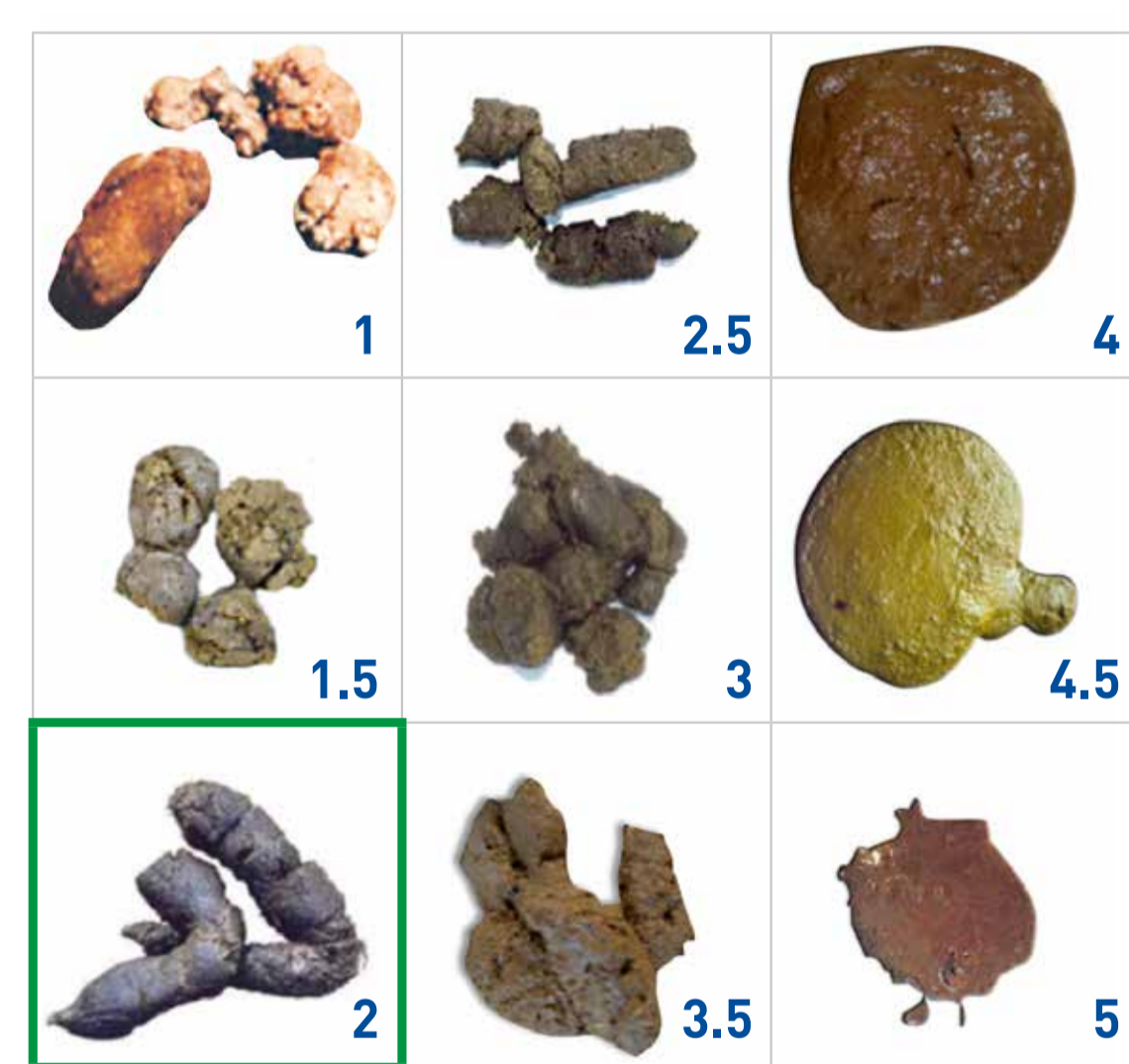
- WEEKLY DAILY**
- Individual daily food consumption
 - Fecal scores (global) & any potential digestive issue
 - Body weight & Body Condition Score (BCS)
 - Complete physical examination (general health, body & coat condition) by veterinarian
 - Blood analyses: CBC, Hb, PCV, ALP & Alb
 - whole blood taurine

The test diet was fed once a day and was **the sole source of nutrients during the study**. A dietary transition of 7 days was performed from the previous diet (Iam's multicat) to the test diet. Cats were fed separately, and rations made based upon their energy needs. Fresh, clean drinking water was provided at will.

RESULTS

DIGESTIVE TOLERANCE

- Daily average fecal scoring for the complete panel
- Scoring chart: 9-point scale (from 1 (dry) → 5 (liquid)). The scale used here, detailed to .5, is shown in the pictures below:



- Average fecal score before trial = **2,09**
- Average fecal score during the 7 days of dietary transition = **2,16** (details in fig.2)
- Average fecal score during 26-week trial period = **2,12**

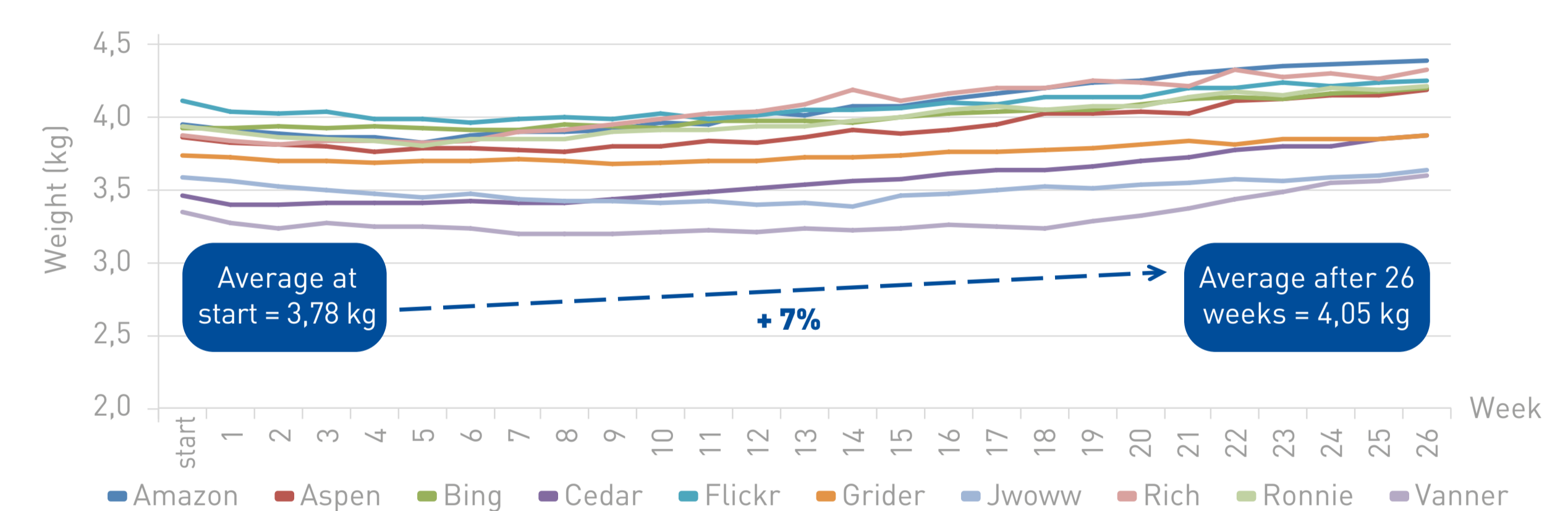
Digestive tolerance on the global panel (n= 17 cats, 182 days) was **excellent, very stable over the study** and feces well formed (mean fecal score during the test: 2,1 (± 0,1) (fig.2)

CONSUMPTION, WEIGHT & BODY CONDITION FOLLOW-UP

The test diet was **very well consumed** over the 26 weeks: mean daily intake was 48,8±3,3g/cat. No remaining food in the bowls throughout the study (26 weeks) for the 10 followed cats. None of the 10 cat showed clinical or pathological signs.

Following the AAFCO interpretation guidelines, no individual cat lost more than 15% of its initial body weight and the average percent BW change (final compared to initial) was not less than -10%.

FIG.2 Body weight evolution throughout the 26-week AAFCO trial



Mean BW at the beginning was 3,8 ± 0,2 kg and 4,1 ± 0,3 kg at the end, and the **average percent body weight change was +7 ± 2%**.

BLOOD PARAMETERS

TABLE 1: Value of each blood parameter at different time points

		Blood parameters				
		PCV (%)	Hemoglobin (g/dL)	Whole blood Taurine (nmole/mL)	Serum alkaline phosphatase (U/L)	Albumin (g/dL)
Before dietary transition (-10 days)	Mean	41	12,2	346	28	3,0
	SD	4	0,7	49	5	0,1
	Smaller individual value	38	11,4	285	18	3,2
	Higher individual value	51	14,1	457	35	2,8
At 6 weeks	Mean	40	11,9	421	33	3,0
	SD	2	0,8	50	9	0,2
	Smaller individual value	37	10,7	362	47	2,7
	Higher individual value	44	13,4	503	18	3,5
At 26 weeks (= end of the study)	Mean	39✓	11,✓	437✓	2✓	2,5✓
	SD	3	0,7	62	8	0,2
	Smaller individual value	36✓	10,✓	311✓	13	2,5✓
	Higher individual value	44	12,8	527	40✓	3,0
Recommended AAFCO average final blood value (after 26 weeks of feeding)		Average ≥30% [And no individual <24%]	Average ≥ 10,0 g/dL [And no individual <8,0 g/dL]	Average ≥ 300 nmole/mL [And no individual <200 nmole/mL]	Average ≤ 100 U/L [And no individual >200 U/L]	Average ≥ 2,8 g/dL [And no individual <2,4 g/dL]

CONCLUSION: This extensively hydrolysed protein based test diet was well tolerated by the 10 cats, as well as the complete cat panel.

- Daily food consumption ✓
- Physical examination (Body condition, skin & coat condition) – initial & at the end ✓
- Individual Body weight (weekly) ✓
- Hemoglobin ✓
- PCV ✓
- Serum alkaline phosphatase ✓
- Serum albumine ✓
- Whole blood taurine ✓

On the basis of the data collected in this study and in accordance with the AAFCO* Minimum Feeding Protocol for proving an Adult Maintenance claim, it was found that Ultamino™ Feline diet, Royal Canin® is a complete and balanced diet for feline adult maintenance and could be recommended for long-term cat feeding.

REFERENCES.

* AAFCO Official Publication of the Association of American Feed Control Officials. Atlanta, GA, USA

** Idexx Reference Laboratory, 6100 East Shelby Drive Memphis, TN 38121, USA.

Ultamino™ Feline is the American commercial name of Anallergenic™ Feline, Royal Canin®

Conflict of interest statement: Boutigny.L & Lesponne.I are employees of Royal Canin SAS. • Author contact information: laure.boutigny@royalcanin.com