

# **Growlrr Foods**

Pilot Binder

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*Formulations and Standard Operating Procedure for Pilot Run*

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# Abstract

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Growlrr Foods pioneers the future of pet nutrition with biologically appropriate, human-grade balanced and complete meals built on evolutionary science and rigorous safety systems. Our structured rotation model delivers balance, variety, and long-term vitality while preserving the simplicity pet parents need, while every formulation is regulatory compliant with AAFCO and FEDIAF standards. Our interlocking products are designed with a systems approach, formulated from first principles, engineered with modularity, anchored by compliance discipline, validated by clinical nutritionists, tested in accredited labs, and finally approved by the only ones that matter: cats and dogs themselves.

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# Preface

This binder describes the Growlrr pilot formulations, standard operating procedures for building the product, bill of materials, incoming and outgoing QC, regulatory framework, nutritional audits for formulation and appendices. Values are design assumptions for pilot runs and are intended to be validated by finished-product assays. Standards and raw-ingredient data are cited in the bibliography. All SKUs meet baseline nutrient standards for labeling.

The present pilot study has been designed as a **60 kg retort validation run** with **6 distinct recipes 10 kg each**, retort stabilised and packed into standardized **100 g pouches**. We deliberately use **pouches rather than cans** at this stage, since pouch retort facilities are cost-accessible, and they provide sufficient resolution to measure our primary objectives. The learnings from pouches are fully translatable to cans for subsequent scale-up.

## Objectives of the Pilot Run

1. **Nutrient assays:** Verify macro- and micro-nutrient retention post-retort against AAFCO/FEDIAF floors and ceilings.
2. **Shelf-life testing:** Establish accelerated shelf life values with rancidity, oxidation, and microbial profiles.
3. **Structural integrity:** Assess gel matrix stability, phase separation, and form factor.
4. **Palatability:** Track voluntary intake, preference, and tolerance in animals across SKUs.
5. **Ingredient validation:** Confirm that each SKU's ingredient design performs as expected under thermal processing.
6. **Process validation:** Confirm reproducibility of SOP steps (solid prep, blanch, liquid assembly, premix dosing, sealing, retort profile).
7. **Sub-optimisation testing:** Fine-tune gel matrix, chelators, palatants, tocopherol distribution, and retort curve.
8. **Credibility:** Generate assay-backed evidence that Growlrr's rotation logic, premix dosing, and paired-SKU genome strategy are regulator-ready and consumer-safe.

This pilot is therefore not only a technical validation but also a credibility-building exercise. It demonstrates the safety, stability, and innovation of Growlrr's formulations under real-world processing conditions, bridging design assumptions to empirical data.

# Executive Summary

Growlrr Foods is a pet nutrition start-up pioneering a new standard in companion animal feeding: human-grade, biologically aligned, rotation-based meals delivered in retort pouches. By applying evolutionary nutrition science, rigorous formulation, and food-safety systems from human FMCG, Growlrr delivers meals that are simultaneously safe, compliant, and innovative.

The model is revolutionary in three ways. First, it positions whole-protein organ blends and fish as the nutritional core, respecting the biology of obligate carnivores. Second, it introduces a structured **rotation system** across multiple SKUs, ensuring balanced micronutrient intake, reduced dietary monotony, and better long-term health outcomes. Third, it uses **human-grade sourcing and processing**: retort sterilisation for ambient safety, alginate-stabilised broth for texture and nutrient stability, and premix formulations designed to meet regulatory nutrient floors without dangerous excesses.

Growlrr is innovative yet safe. Innovative because it proves pet food can be designed as a system, not just a flavour choice, and shows that transparency and whole-food integrity can scale commercially. Safe because every formulation is locked by SOPs, nutrient budgets, and conservative safety margins, ensuring compliance with FEDIAF/AAFCO standards while respecting vitamin A limits, retort stability, and trace mineral balance.

What makes Growlrr unique is this fusion of **science, care, and operational discipline**. It doesn't just promise "better food" — it gives pet parents confidence that every meal is worthy of the bond they share with their animals. The rotation system turns feeding into a rhythm of health and variety, ensuring pets thrive while their owners feel assured they are doing right by them.

Growlrr Foods is more than a brand; it is the **future of companion animal nutrition** — human-grade, scientifically precise, and emotionally resonant. It addresses today's frustrations while setting tomorrow's standard, with defensibility built on proprietary feeding methodology, robust formulation IP, and a transparent brand promise that redefines trust in the category.

# Chapter 1

## Why Growlrr Exists

### 1.1 The Problem with “Complete & Balanced”

Humans and wild predators — including the ancestors of our household cats and dogs — thrive on dietary variety. In nature, no two meals are identical; there is a cadence to days, seasons, and life stages across every species’ lifetime.

Now imagine this: as a human, you are required to eat finely milled corn and soy sprayed with emulsified fat, fortified with a pharmacist’s list of minerals, vitamins, and amino acids — every day, three meals a day, for the rest of your life, because it is labelled “*Complete & Balanced*.”

Sure, you would survive. But would you *thrive*? Would you feel alive, or simply *fed*?

Or imagine being served a boiled gruel of discarded bird carcasses — bones intact — topped with pharmaceutical additives and labeled “*Atlantic Salmon Extracts*” despite containing only traces. Would you find joy in that? Would you reach your full potential, or merely avoid starvation while accumulating hidden deficiencies, obesity, kidney disease, and chronic inflammation?

This is precisely what the modern pet food industry offers our companions: survival dressed up in shiny packaging and backed by targeted advertising. What cannot be packed into the bag is sold separately through an exploding supplements market — proof that the base diet is fundamentally inadequate.

#### The Inconvenient Truth

“Complete & Balanced” sounds authoritative. But the uncomfortable truth is this: *complete by what standards, and balanced by whose measure?*[\[ref64\]](#)

For over half a century, companion animal nutrition has been dictated not by independent science, but by industry lobbies — chief among them the **Pet Food Institute**[\[ref71\]](#), the trade arm of multinational kibble conglomerates. These same corporations, implicated in climate change, water pollution, and global ecological destruction, sit alongside regulators to shape definitions that protect profit margins through cheap fillers and mass-produced chemicals.

Meanwhile, in Europe and North America, nutritional guidelines were drafted by committees dominated by these same conglomerates. The standards trace their lineage not to predator biology, but to **livestock feed protocols** — guidelines written for cattle, poultry, and animals destined for slaughter[\[ref70\]](#), not for companions meant to thrive across decades of life.

The bar was set at mere survival, not vitality[\[ref59\]](#). Chronic diseases — kidney failure, obesity, diabetes, cancer — were never part of the compliance equation[\[ref41\]](#). What should have been shaped by good faith science was instead skewed by supply-chain logistics and profit maximization.

The result: a half-century of lobbying, subsidies, and papered-over standards[\[ref71\]](#) — an agro-industrial legacy borrowed wholesale from slaughterhouse feed.

## 1.2 Our Approach

The Growlrr system is built to reflect biology while meeting the discipline of modern science. We did not set out to make another “flavor range” of pet food; we built a nutritional architecture.

At its core, the system is **organ-forward and bone-broth based**. Organs, yolks, and muscle meats are balanced with natural hydration and collagen-rich broth to deliver the nutrients of real prey in their most bioavailable form. This avoids the filler-heavy, starch-padded formulas that dominate conventional products.

Our SKUs are **species-segregated** — poultry, mammal, and fish are kept hermetically separate, never cross-contaminated. This mirrors natural feeding lanes, reduces the risk of allergen over-exposure, and preserves the diversity of amino acids across species. The SKUs are not random flavors: they are color-coded units designed to fit together like a puzzle. Each pouch is compliant on its own, but when paired daily and rotated weekly, they complete the whole-prey model, ensuring both safety and resilience.

We use **precision premixes** — CatPro, DogPro, and Pluto calcium — only where reinforcement is essential. Heat-labile nutrients, trace minerals, or regulatory minima are addressed surgically. Supplementation is never a crutch; it is a guardrail. This keeps the food clean, while still guaranteeing compliance.

Sourcing is **human-grade, antibiotic-free, and traceable**. Poultry comes from spent layers raised without antibiotics, fish are chosen for low heavy-metal risk, and every lot is matched against supplier COAs. This sourcing integrity, combined with minimal-step SOPs and post-retort validation, ensures both nutritional adequacy and consumer trust.

Beyond ingredient quality, Growlrr’s operational framework prioritizes traceability and reproducibility. Every supplier delivers Certificate of Analysis documentation matched against our specifications for moisture, protein content, heavy metal limits, and microbiological safety. Our standard operating procedures lock in precise sequences—from blanching times for organ meats to retort temperature curves—ensuring that nutritional integrity survives thermal processing. This discipline transforms artisanal quality into scalable manufacturing without sacrificing the whole-food principles that define our approach.

But the real revolution is not only in the pouch — it is in how the food is used. The **Growlrr Web App** generates a customized **rotation diet chart** for every animal, taking into account breed, age, growth stage, activity level, and any veterinary advisories. Owners are guided meal by meal, week by week, with no guesswork. A built-in **Vet Chat feature** allows owners to consult nutritionists, track progress, and adjust feeding as needed, ensuring pets receive age- and size-appropriate nutrition throughout their lives.

The Growlrr system also addresses a fundamental oversight in conventional pet nutrition: the assumption that one formula can serve all life stages and activity levels. Our web application generates individualized feeding plans that account for breed-specific metabolic rates, growth phases in puppies and kittens, reproductive demands, and senior nutritional needs. This personalization, combined with veterinary oversight through our consultation platform, ensures that rotation diversity translates into real-world health outcomes rather than merely checking regulatory boxes.



In short, Growlrr delivers **safety in every pouch, resilience in rotation, and precision in practice** — a system designed not as marketing, but as engineering for biology and care.

## 1.3 Our Values

At Growlrr, we believe the values we hold true will ultimately determine the health and joy of millions of companion animals who depend on us to feed them right. These are our values. They are not flexible. We do not compromise.

### Our Core Principles

- **Safety First.** Every pouch must be nutritious and safe on its own and resilient in rotation.
- **Biology Above Convenience.** Cats and dogs are descendants of predators, not livestock. Their diets must reflect physiology, not the economics of grain or extrusion.
- **Whole Food Integrity.** Organ meats, bone broth, yolks, and hydration form the foundation. Premixes are used sparingly — to reinforce, never to replace.
- **Rotation as Principle.** Variety is structural, not decorative. Rotation prevents monotony, reduces allergen risks, and builds resilience.
- **Transparency Always.** Color-coded SKUs, app-guided diet charts, full traceability. Nothing hidden, from source to shelf.
- **Quality Without Compromise.** Human-grade inputs, antibiotic-free poultry, traceable fish, documented SOPs. Trust is built into process, not added in marketing.
- **Compliance is Baseline.** We meet AAFCO/FEDIAF benchmarks for every pouch. However, since our pouches are strictly species segregated, we use our Growlrr model comprising of color-coded daily SKU pairing and full weekly rotational diet chart customized freely on our website. This way the diversity of nutrition is met from mammal, bird and fish species making it truly “Balanced and Complete.”
- **Engineering Meets Veterinary Science.** Designed with a systems approach, formulated from first principles, engineered with modularity, anchored by compliance discipline, validated by clinical nutritionists, tested in accredited labs, and finally approved by the only ones that matter: cats and dogs themselves.

These values transform every design aspect of Growlrr into an act of trust-building. When we share complete ingredient lists down to the microgram, when we publish our pairing logic and rotation methodology, when we explain why food is nutrition and feeding is love not just a chore. We’re inviting pet parents into a partnership where knowledge replaces blind faith, where understanding breeds confidence, and where every meal becomes a deliberate choice rather than a default compromise. This transparency doesn’t just differentiate Growlrr in the market; it redefines what the market can become. Our values aren’t principles we uphold—they’re the revolution we’re living.

### Time to Redefine

**Variety is the essence of life. Balanced variety is life..** If “Complete & Balanced” is repeated like gospel, yet defined by standards written for slaughter animals and lobbied for profit by Global Conglomerates complicit in ecocide, then it fails our pets and betrays our values. Our animal companions are not livestock. They are descendants of apex predators — mini lions and tigers and wolves who share our homes, our lives, and our love[[ref1](#)]. It is time to redefine the standards for those we care for most and for those who depend on us to do the right thing. It is time to **Growl**.

# Chapter 2

## Introduction to CatCore

### Introduction to CatCore

Welcome to the Growlrr universe: a unique, modular, rotational feeding system built on species-appropriate, whole natural ingredients. Each recipe is organ-forward, balanced with muscle and supportive tissues, and carefully fortified to safely meet AAFCO/FEDIAF compliance. There are no grains, no fillers, no gimmicks — only biologically aligned formulations rooted in whole-prey logic, adapted for everyday feeding convenience across all life stages.

### The Six CatCore SKUs

Growlrr's feline system is expressed in six locked SKUs, each a distinct organ-forward recipe. They are paired into bonded “base pairs” using a light–dark color code system, ensuring owners always feed one light + one dark pouch per day. This makes compliance foolproof at the consumer level.

To make this simple for owners, every SKU is **color-coded and named** by its anchor ingredient:

-  Chicken Heart (Light Blue)
-  Sardine (Dark Blue)
-  Chicken Liver (Light Red)
-  Chicken Gizzard (Dark Red)
-  Goat Kidney (Light Brown)
-  Goat Spleen (Dark Brown)

The Growlrr app translates this into daily diet charts — easy to follow at a glance, backed by clinical rigor.

### Example: Meet Bella the Cat (4.0 kg, indoor, adult)

Bella thrives on rotation. Her **weekly chart** is shown in Table 2.1.

Each pouch delivers full compliance; the rotation ensures diversity of proteins, amino acids, and micronutrients, with no monotony.

Each pair balances nutrients in a complementary way: heart and sardine pair balance taurine and phosphorus loads over the day; liver and gizzard pair smoothens out vitamin A and taurine peaks; kidney and spleen are both non-poultry hypoallergenic pairs with mineral rich high quality protines. Individual SKU is designed to meet Ca:P ratio of 1.1 or greater. This “nutritional genome” framework encodes safety into packaging, without owners needing spreadsheets or nutritional degrees.

### Why Rotation?

Why do we design this way, instead of offering one fixed “complete” SKU or a rack of multiple, non-interlocking flavors as most brands do? Because animals do not thrive on monotony, nor on randomized variety. Rotation allows for[[ref3](#), [ref12](#), [web6](#), [web75](#)]:

- Natural smoothing of nutrient peaks and valleys across days.
- Exposure to different organ and muscle profiles, reducing allergen risk[web27, web32, web76, web77, web83] and avoiding chronic overload of any single nutrient.
- Built-in behavioral enrichment — meals taste different, but within a consistent logic that keeps nutrition safe.
- A regulator-ready compliance story: daily safety, weekly completeness, minimal SKU proliferation.

Growlrr’s system is not “flavors.” It is a structured code, a genome of nutrition, where pairs interlock like base-pairs in DNA. The result: biological precision with consumer simplicity. Pet owners can generate their free customized diet chart[ref10] from our website ([www.growlrr.com/diet/](http://www.growlrr.com/diet/)), schedule online chat or call with a pet nutritionist or vet, interact with our trained AI to learn more about each ingredient in our pouch, source, traceability and quality.

Table 2.1: Bella’s Weekly Rotation Chart (4 kg cat, indoor adult)

Day	Morning (AM)	Evening (PM)
Mon	Heart	Sardine
Tue	Liver	Gizzard
Wed	Kidney	Spleen
Thu	Heart	Sardine
Fri	Liver	Gizzard
Sat	Kidney	Spleen
Sun	Liver	Gizzard


## Chapter 3

# Introduction to DogCore

### From Cats to Dogs — The DogCore Extension

Growlrr's system begins with cats — obligate carnivores, finely tuned to high-protein, organ-forward diets. From this foundation, we extend the same genome logic to dogs, but adapted for their physiology. Dogs are facultative omnivores[ref2]: they can synthesize certain essential nutrients, they tolerate carbohydrates well, and they thrive across a wider range of macronutrient profiles.

### The Golden Mean (DogCore + DogPro)

Instead of proliferating dozens of dog SKUs across breed sizes, Growlrr encodes a single core dog pouch with high quality and highly digestible proteins — **DogCore SKU7**, color-coded  golden orange, designed as the “Golden Mean.” It was engineered to meet the nutritional needs of a Golden Retriever — the prototypical mid-sized dog — and then scales seamlessly up or down for other breeds.

### Why this design?

- **Dense protein base:** DogCore combines soy protein isolate, whey protein concentrate, egg yolk powder, egg white powder and functional lecithin. This leverages both animal and plant proteins, aligned to canine physiology.
- **Omnivore flexibility:** Dogs can derive energy safely from carbohydrate staples. Instead of retorting and shipping grain-heavy fillers, we empower owners to add fresh, digestible staples — cooked rice and probiotic curd/yogurt — from their own kitchens.
- **Balanced micros:** DogPro premix delivers a robust, conservative baseline of vitamins (A, D, E, B-complex) and trace minerals (Ca, Fe, Zn, Cu, Mn, Se, I), ensuring every lane clears AAFCO/FEDIAF floors without drifting into excess.

### Why Not Ship Carbohydrates?

We believe hauling vast quantities of rice or curd through retort packaging, warehousing, and delivery is unnecessary — every pet-owning household already has access to these staples. By leaving energy carriers to the home, Growlrr minimizes shipping weight, maximizes freshness, and keeps costs fair. Instead, our pouches carry the critical load: proteins and micronutrients, precisely balanced to regulatory standards.

### Scaling Across Breeds and Sizes

With CatCore, every 100 g pouch was standardized to  $\approx 100$  kcal. DogCore follows the same unit logic. Scaling across breeds becomes a matter of meals/day and rice+curd quantities:

This modularity means a single DogCore SKU, paired with CatCore and scaled via pantry staples, can safely feed a 4 kg cat or a 40 kg bulldog — without exploding SKU counts or compromising nutrient safety.

**Example: Ringo the Golden Retriever (28 kg, active adult)**

Meet Ringo, a healthy and happy Growlrr who follows his diet chart and enjoys his 3 meals per day . Ringo follows his breed appropriate **DogCore lane** (see overleaf), paired with fresh pantry staples available at home. Each meal = 1 Catcore pouch + 1 DogCore pouch + Fresh Curd rice (250g) + 20g boiled vegetable. See Table 3.1.

Table 3.1: Ringo’s Daily Dog Bowl (per sitting)

Day	AM	PM
Mon	Chicken Heart + DogCore + Curd Rice	Sardine + DogCore + Curd Rice
Tue	Chicken Liver + DogCore + Curd Rice	Chicken Gizzard + DogCore + Curd Rice
Wed	Goat Kidney + DogCore + Curd Rice	Goat Spleen + DogCore + Curd Rice

Color Key: CatCore + DogCore + Home staples (curd + rice)

**Feeding Rules**

Growlrr’s modular CatCore + DogCore pairing supplies the full amino acid and micronutrient spectrum. Non-poultry days de-sensitises immune system and reduces allergens Curd rice + veg delivers easily accessible fresh and digestible carbohydrate, calcium, and probiotics. Use fresh or refridgerated 4%-fat whole-milk curd and plain cooked rice. Avoid lentils, spice, salt or butter. Feed as per diet chart with daily pairings and weekly rotation. Ensure constant access to clean water. Consult our Vet on growlrr.com for any prior lactose/dairy allergy or other intolerances.

**Growlrr Dog Feeding Lanes — Canonical Advisory**

Each pouch (100 g) supplies about 120 kcal. Curd + rice mix (150 g rice + 100 g curd ≈ 300 kcal) forms the fresh staple. Feeding pattern scales by body weight and activity.

**In short:** With 6 CatCore SKUs and 1 DogCore SKU, Growlrr encodes a complete nutritional system, scaling safely across species, breeds, sizes, and life stages — delivering physiology-first nutrition with pantry-level practicality.

Table 3.2: Growlrr Dog Feeding Lanes by Breed Size

Lane	Breeds	Wt (kg)	kcal /day	Meals	Feeding Advisory per meal
1 — Toy/Mini	Chihuahua, Pomeranian, Toy Poodle	2–5	250–350	2	½ CatCore + ½ DogCore + 120 g curd-rice + 10 g veg per meal
2 — Small	Beagle, Cocker Spaniel, French Bull-dog	6–10	400–550	2	1 CatCore + 1 DogCore + 150 g curd-rice + 15 g veg per meal
3 — Medium	Indie, Border Collie, Shiba Inu	11–20	600–900	2	1 CatCore + 1 DogCore + 200 g curd-rice + 20 g veg per meal
4 — Large	Labrador, Golden, Boxer	21–35	1000–1500	3	1 CatCore + 1 DogCore + 200 g curd-rice + 20 g veg per meal
5 — X-Large	Rottweiler, GSD, Husky	36–50	1600–2000	3	1 CatCore + 1 DogCore + 300 g curd-rice + 25 g veg per meal
6 — Giant	Great Dane, Mastiff, St Bernard	50+	2200–2800	3	1 CatCore + 1 DogCore + 350 g curd-rice + 30 g veg per meal

With easily available kitchen staples like fresh rice, oats, curd, yogurt and vegetables, Growlrr is able to scale from 4.0 Kg cat diet to 40 Kg Rotweiller with just 7 variants and customised diet charts. This is possible because unlike other brands Growlrr does not package and ship carbohydrates and vegetables which are available for cheap in every kitchen. Instead we focus on nutrient rich proteins and organs and precise vitamin and mineral balance and a diet chart that is customised for every animal's dietary needs.

**Approved Vegetable Add-ins for Dogs**

Boiled vegetable option per meal	Portion (g)	Home Measure	Notes
Carrot	20	¼ medium carrot, cubed	Beta-carotene
Green peas	20	2 tbsp, mashed	Mild protein + fiber
Zucchini	20	¼ cup slices	Low-oxalate filler
Spinach / Kale purée	20	1 heaped tbsp	Iron + antioxidants —Max once per week
Green beans	20	3–4 beans, chopped fine	Safe fiber
Sweet potato	20	1 tbsp mash	Slow carbs
Pumpkin	20	2 tbsp mash	Gut motility
Banana (fruit)	15	2–3 slices	Occasional dessert/treat — Max once per week

**Feeding Notes**

Pick any one vegetable per meal. Use rotation across meals to avoid monotony. All vegetables are boiled or lightly steamed, unseasoned, and unsalted. Avoid onions, garlic, broccoli, cauliflower, or starchy fillers. Keep total vegetable content near 20g/meal or as noted.

**Growlrr Dairy & Carbohydrate Advisory — EU / US (Oats + Greek yogurt option)**

This adaptation is the Growlrr equivalent of the Indian *curd + rice* staple, tailored for EU / US kitchens where rolled oats and plain cultured Greek yogurt are more common. The objective is identical: provide readily accessible, digestible carbohydrates and live probiotic cultures in addition to Growlrr's protein and nutrient dense packs.

**Handling, Safety & Freshness**

- Use only **pasteurised** Greek Yogurt labelled with live cultures for probiotic benefit. Avoid sweetened, flavoured, or fruit-added products.
- Store cultured dairy at  $\leq 4^{\circ}\text{C}$  (40 °F). Discard if discolored, odour becomes sour, or if abnormal whey separation occurs (large pools of discoloured liquid).
- Boil oats and vegetables together where possible to retain nutrients.
- If using Greek yogurt that is highly s
- Always introduce dairy gradually if new. Watch for signs of lactose intolerance. Consult our vet at [www.growlrr.com](http://www.growlrr.com) if needed.



Table 3.3: EU/US Dairy &amp; Carbohydrate Options

Component	Qty per meal	Guidance and Notes
Rolled oats	150 g (or ½ cup)	Cook rolled oats until soft; mix with yogurt while warm
Unsweetened Greek yogurt (live cultures)	100 g	Preferred EU/US substitute for full curd. Must be <b>unsweetened, plain, full-fat</b> , and labelled “live active cultures” (or equivalent). Greek yogurt is often strained; if texture is extremely thick, add 20–30 ml unsalted buttermilk or water to reach spoonable consistency for mixing.
Cultured buttermilk / kefir (backup)	100 ml	Cultured buttermilk or kefir (plain, unsweetened, pasteurised milk origin) are acceptable alternates. Kefir is probiotic-rich but may have stronger flavour; introduce gradually.
Ricotta / cottage cheese (pasteurised)	100 g	Acceptable non-probiotic fallback for short-term when live-culture yogurt is not available. Use plain <b>pasteurised</b> ricotta or low-salt cottage cheese. These supply calcium and proteins but no probiotics.
Plant-based “yogurts” (soy, almond, oat)	—	Do <b>not</b> use routinely unless under veterinary guidance. They lack animal-based amino acids and deliver different mineral profiles; their use may require compensatory formulation adjustments.
Fat correction	—	If using low-fat yogurt, add ½ teaspoon unsalted butter or ghee per ~250 g mix to restore energy density for active dogs. This helps match the caloric role of whole-milk curd.

## Chapter 4

# Formulation Specifications

### Canonical Specification — Growlrr CatCore v5

#### CatCore SKUs 1-6

- All CatCore SKUs follow the canonical format per 100g wet food pouch:
- 65 g wet solids
- 3.0 mg premix packets added to broth as per SOP
- 2.5mg omega-3 fish oil PV<=5 meq/Kg is added to broth phase for omega3:omega6 balance in all SKUs except sardines.
- 1.0mg meat hydrolysant palatant is added to broth phase for umami and flavor.
- 41.5 g  $\pm 0.5$  g broth fill
- Sealed to achieve 112.5 g nominal pre-retort weight. Pre-Fill QC Check.
- Declared 100 g post-retort with  $\approx 10\%$  moisture loss. Post Retort QC Check to 100.5g.

Table 4.1: CatCore Formulation — Heart (H) SKU

Ingredient	Mass (g)	Nutrient role and rationale
Chicken Heart	24.0	High taurine and heme iron source for cardiac health and taste; taurine partner for Sardine in PM.
Chicken Muscle Cuts	16.0	High-quality amino acid source forming the protein base.
Chicken Frame Mince	15.0	Provides bone-derived minerals; improves Ca:P ratio; source of condroitin for joint stability
Egg yolk powder	4.0	Choline and fat-soluble vitamins; improves emulsion stability and mouthfeel.
Pumpkin puree	4.0	Fibre; enhances stool quality and regularity.
Chicken Liver	2.0	Provides vitamin A; limited to prevent excess while complimenting premix micronutrient completeness.
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Chicken Bone Broth	41.5	Broth allocation per pouch pre-retort.

### Composition for CatCorePro

#### Composition Notes:

- **CatCore:** Provides high quality muscle, organ, skeletal and fish meat proteins. Primary source of proteins, fats, vitamins, minerals.

Table 4.2: ■ CatCore Formulations — Sardine (S) SKU

<b>Ingredient</b>	<b>Mass (g)</b>	<b>Nutrient role and rationale</b>
Sardine	52	Marine protein high in EPA and DHA; core omega-3 source. Calcium, Iodine and phosphorus per in-bone sardine meat [ <b>sardinecap</b> ].
Fish Bone Meal (micronized, particle size $\leq 150 \mu\text{m}$ )	9.00	Pet Food Grade; Natural calcium and phosphorus source to balance Ca:P ratio.
Pumpkin Puree	4.0	Fibre; enhances stool quality and regularity
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Purified Water	43.5	Purified Water allocation per pouch pre-retort.

Table 4.3: ■ CatCore Formulation — Liver (L) SKU

<b>Ingredient</b>	<b>Mass (g)</b>	<b>Nutrient role and rationale</b>
Chicken Muscle Cuts	28.0	High-quality amino acid source forming the protein base.
Chicken Frame Mince	15.0	Provides bone-derived minerals improving Ca:P ratio; natural chondroitin and glucosamine
Chicken Heart	10.0	Taurine and palatability enhancer balancing liver micronutrient load.
Chicken Liver	4.0	Primary vitamin A and iron contributor; controlled for safety.
Chicken Egg yolk powder	4.0	Choline and lipid source; supports emulsification.
Pumpkin puree	4.0	Fibre; enhances stool quality and regularity
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Chicken Bone Broth	41.5	Broth allocation per pouch pre-retort.

Table 4.4: ■ CatCore Formulations — Gizzard (G) SKU

<b>Ingredient</b>	<b>Mass (g)</b>	<b>Nutrient role and rationale</b>
Gizzard	24.0	Structural organ supplying connective tissue and natural taurine; defines chew texture.
Chicken Muscle Cuts	16.0	High-quality amino acid source forming the protein base.
Chicken Frame Mince	15.0	Provides bone-derived minerals improving Ca:P ratio;natural chondroitin and glucosamine
Chicken Heart	10.0	Taurine and palatability balance; complements high-connective gizzard meat.
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Chicken Bone Broth	41.5	Broth allocation per pouch pre-retort.

Table 4.5: ■ CatCore SKU Formulations — Spleen (M) SKU

<b>Ingredient</b>	<b>Mass (g)</b>	<b>Nutrient role and rationale</b>
Goat Spleen	29.0	Rich in heme-iron and taurine; moderates phosphorus while enhancing natural palatability.
Goat Frame and Trotters Mince	20.0	Adds collagen,natural chondroitin and glucosamine, rich marrow minerals and natural ca:p balance
Goat muscle cuts	10.0	High-quality amino acid source forming the skeletal protein base.
Pumpkin puree	4.0	Fibre and beta-carotene; enhances stool quality and regularity.
Goat Liver	2.0	Trace vitamin A and B complex inclusion for completeness.
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Goat Bone Broth	41.5	Broth allocation per pouch pre-retort.

Table 4.6: ■ CatCore SKU Formulations — Kidney (K) SKU

Ingredient	Mass (g)	Nutrient role and rationale
Goat Kidney	29.0	Rich in B vitamins, essential minerals; Pairs with Lamb Spleen for a poultry-free hypoallergenic day
Goat Frame and Trotters Mince	20.0	Adds collagen, natural chondroitin and glucosamine, rich marrow and natural ca:p balance
Goat Heart	14.0	Adds taurine and flavour, balancing mineral density of kidney.
Goat Liver	2.0	Minor vitamin A and iron contribution.
<i>Solids subtotal</i>	65.0	Fixed solids per pouch.
Goat Bone Broth	41.5	Broth allocation per pouch pre-retort.

Table 4.7: CatCorePro Composition per 10 kg run (or 100 pouches)

Component	Dose per 10 kg	Per pouch
CatCore Fresh Meat Protiens	6500g	65g
Omega-3 Fish Oil PV<=5.0meq/Kg	250ml	2.50ml
CatPro Premix	100 g	1.0 g
Mixed tocopherol liquid premix	100 ml	1.0 ml
Palatant Liquid Premix	100ml	1.0ml
Alginate gel - Ca Premix	100g	1.0g
Rendered Bone Broth	4150g	41.5g
Nett Weight per pouch	112.5g pre-retort	101.5g $\pm$ 0.50; declared weight 100.00g

- **Catcore Usage:** 6.5 Kg Fresh meat blends per 10 kg production run of CatCore or 65.0 g per 100 g wet food pouch.
- **CatPro Premix:** Complements CatCore Protein-Ca Premix with complete essential vitamins, minerals and chelators and adequate retort loss overage.
- **AAFCO Compliance:** Together CatCore and CatPro meets AAFCO requirements for complete and balanced nutrition when paired per diet chart.
- **Design Overages:** Enhanced taurine formulation for cardiac health support. Vitamin A is balanced carefully with daily 4.0g fresh liver from 2 CatCore pouches to avoid stacking. Ca:P  $\geq$ 1.1:1 within AAFCO recommended limits when paired as per diet chart.
- **Antioxidant Premix:** Provides Primary Vitamin E (dl- $\alpha$ -tocopheryl) and mixed antioxidants for enhanced oxidative stability.
- **Alginate Gel - Ca Premix:** Alginate gel forms cross-link chain with Calcium under retort heat. Source of 80mg dietary calcium per 100g wet food. Maintains Ca:P ratio.
- **Omega-3 Fish Oil Blend:** Provides functional Omega-3:Omega-6 fatty acids balance.
- **Palatant Premix:** Meat Hydrolysants for palatability.

- **Rendered Bone Broth:** Solvent base for retort processing; improves hydration, adds collagen, chondroitin and other bone joint stability nutrients.
- **Low Sodium:** Sodium Alginate Gel provides  $\approx 65$  mg Na per 100g wet food. Palatant Premix provides additional 47.0mg Na to meet electrolyte balance requirements ( $\approx 0.15\%$  Na w/w) as per AAFCO.

# Chapter 5

## DogCore Specifications

### Canonical Specification — Growlrr DogCore v5 (YELLOW Sticker)

#### DogCore SKU7 — Premix Formulation; MOQ 6500g per 10Kg production run

- All DogCore SKUs follow the canonical format per 100 g wet food pouch:
- 65 g dry solid powders
- 5.5 mg premix packets added to broth as per SOP. No Alginate Gel in this SOP.
- 42.0 g  $\pm$ 0.5 g broth fill. Slurry consistency.
- Sealed to achieve 112.5 g nominal pre-retort weight. Pre-Fill QC Check.
- Declared 100 g post-retort with  $\approx$  10% moisture loss. Post-Retort QC Check to 100.5 g.

### Composition for DogCorePro

### Composition for DogCorePro

#### Composition Notes:

- **DogCore Premix:** Provides high quality protein powders and Calcium to be paired 1:1 with CatCorePro meat pouches.
- **DogCore Premix Usage:** 6.5 Kg per 10 kg production run of DogCore or 65.0 g per 100 g wet food pouch.
- **DogPro Premix:** Complements DogCore Protein-Ca Premix with complete essential vitamins, minerals and chelators and adequate retort loss overage.
- **AAFCO Compliance:** Together DogCore and DogPro meets AAFCO requirements for complete and balanced nutrition when paired with CatCore and CatPro as per diet chart.
- **Design Overages:** Enhanced taurine formulation for cardiac health support. Vitamin A is balanced carefully with daily 4.0g fresh liver from 2 CatCore pouches to avoid stacking. Ca:P  $\geq$  1.4:1 within AAFCO recommended limits when paired with CatCorePro pouches as per diet chart.
- **Antioxidant Premix:** Provides Primary Vitamin E (dl- $\alpha$ -tocopheryl) and mixed antioxidants for enhanced oxidative stability.
- **Omega-3 Fish Oil Blend:** Provides omega 3:omega 6 balance
- **Palatant Premix:** Meat Hydrolysates for enhanced palatability.
- **Rendered Goat Bone Broth:** Solvent base for retort processing; improves hydration, adds collagen, chondroitin and other bone joint stability nutrients.
- **NO Alginate Gel - Ca Premix:** No alginate gel in this SKU. Forms slurry consistency.
- **Low Sodium:** DogCore provides  $\approx$  14.0 mg Na per 100g wet food. Palatant Premix provides additional 47.0mg Na to meet electrolyte balance requirements ( $\approx$  0.061% Na w/w) as per AAFCO when paired with CatCorePro pouches as per diet chart.

Table 5.1: ■ DogCore SKU Formulations (Three Column Format)

Ingredient	Mass (g)	Nutrient role and r
Whey protein concentrate	30.0	Highly digestible co essential amino ac adds solubility.
Egg white powder	22.0	Lean, functional pr structure; natural completeness.
Soy protein isolate	4.0	High-protein, high ancing amino acid ture and consisten
Egg yolk powder	4.0	Natural choline a source; enhances r tion.
Lechitin	2.5	Phospholipid emul persion and oxidati mogeneity in slurry
Non-encapsulated Calcium Lactate (20 % Ca)	2.0	Dietary calcium at friendly; Essential I
Sodium Chloride (Common Salt, NaCl)	0.035	Dietary Sodium, Es ance
Mixed tocopherols ( $(\alpha : \beta : \gamma : \delta) = 1.0:0.3:6.0:2.0$ 50% active powder)	0.300000	Antioxidant for sh not full dietary E
Anti-Caking Carrier (q.s)	0.165	q.s and flow aid.
<i>Protein base subtotal</i>	65.00	Fixed solids mass p
MOQ	6500.00 $\pm 0.10$	6500g DogCore Pr duction run.
Broth	42.5	Broth phase per po solved premixes pe consistency.
Premixes	5.5g	Added seperately t See table below
Alginate Gel is omitted from this SKU to ensure tight slurry consistency.		



Table 5.2: DogCorePro Composition per 10 kg run (or 100 pouches)

<b>Component</b>	<b>Dose per 10 kg</b>	<b>Per pouch</b>
DogCore Premix	6500g	65g
Omega-3 Fish Oil PV≤5.0meq/Kg	250ml	2.50ml
DogPro Premix	100 g	1.0 g
Mixed tocopherol liquid Premix	100 ml	1.0 ml
Palatant Liquid Premix	100ml	1.0ml
Rendered Bone Broth	4200g	42.0g
Nett Weight per pouch	112.5g pre-retort 101.5g ±0.50; declared weight 100.00g	

## Chapter 6

# Premix Formulations

### CatPro v5 Premix (100 g packet per 10Kg Retort Run) RED Sticker

All weights are expressed in grams (g) per 100 g premix formulation. Carrier (q.s.) to reach 100 g

Table 6.1: Catpro Premix Composition (per 100 g premix)

Component	Quantity (g)	Function / Notes
Choline chloride (60% assay)	32.00000	Primary methyl donor and carrier base
Taurine	15.00000	Essential amino sulphonate for cats; heat-labile overage included
Magnesium gluconate (USP grade)	10.00000	Primary chelator; provides stable Mg source
L-Carnitine (as L-carnitine tartrate )	9.000000	Supports fat metabolism, essential with cooked meat and oil fishes
Inulin (chicory root powder, FOS)	8.000000	Prebiotic fibre; improves gut flora stability and stool quality
Betaine (Trimethylglycine)	6.000000	Hepatic methyl donor and osmolyte; supports liver fat metabolism and hydration balance
Potassium Citrate (Tripotassium citrate, food grade)	5.000000	Secondary chelator; critical for cat urinary health reducing struvite crystal risk
DL-Methionine (USP grade)	3.500000	Urinary health support; maintains healthy urine pH; Sulfur for protein metabolism
Ascorbic acid (fine powder)	2.000000	Antioxidant cofactor for metal complex stability
Vitamin K <sub>2</sub> (Menaquinone-7, 1% assay)	1.700000	Provides $\approx 17 \mu\text{g}$ MK-7 per pouch; aids calcium utilization and bone health
L-Cysteine (USP grade)	1.500000	Complements DL-methionine to balance sulfur amino acids and strengthen coat/keratin
Zinc bisglycinate chelate (25% Zn)	1.100000	Chelated zinc to meet AAFCO limits
Calcium pantothenate (Vitamin B <sub>5</sub> )	0.800000	Coenzyme—A precursor; supports fatty-acid metabolism and adrenal function
Iron proteinate (20% Fe)	0.750000	Chelated iron to meet target

Component	Quantity (g)	Function / Notes
Selenium yeast (0.20% Se)	0.550000	(delivers target $\approx 11 \mu\text{g}$ selenium per 100g wet food pouch)
Niacin ( $\text{B}_3$ )	0.250000	Metabolic cofactor
Copper proteinate (10% Cu)	0.300000	Trace mineral meets requirements
Thiamine ( $\text{B}_1$ )	0.190000	Highly heat-labile B vitamin; ample overage applied
Manganese proteinate (10% Mn)	0.150000	Trace mineral meets requirements
Riboflavin ( $\text{B}_2$ )	0.050000	Energy cofactor
Pyridoxine ( $\text{B}_6$ )	0.050000	Amino-acid metabolism cofactor
Vitamin D <sub>3</sub> (cholecalciferol, 100000 IU g <sup>-1</sup> )	0.035000	(provides approximately 35 IU per 100 g wet food pouch)
Vitamin A (retinyl palmitate, 320000 IU g <sup>-1</sup> )	0.015000	(provides approximately 50 IU per 100 g wet food pouch)
Potassium iodate ( $\text{KIO}_3$ )	0.010000	$\approx 60 \mu\text{g}$ Iodine per 100g wet food pouch. Sardine SKU provides additional $\approx 20 \mu\text{g}$ <b>[sardinecap]</b>
Biotin (Vitamin B7), Pharma Grade D-Biotin	0.008000	Skin/coat support; very low inclusion, provides 80 $\mu\text{g}$ biotin per 100g wet food pouch
Mixed tocopherols ( $(\alpha : \beta : \gamma : \delta) = 1.0:0.3:6.0:2.0$ 50% active powder)	1.000000	Antioxidant for premix shelf-life stability (not primary source of dietary vitamin E)
Anti-caking carrier (q.s)	1.042000	q.s to 100.000000 g per premix packet
<b>Total</b>	<b>100.000000</b>	Use one 100 packet per 10 kg run. MOQ 10 Packets.

## Composition for CatCorePro

### Composition Notes:

- **CatCore:** Provides high quality muscle, organ, skeletal and fish meat proteins. Primary source of proteins, fats, vitamins, minerals.
- **Catcore Usage:** 6.5 Kg Fresh meat blends per 10 kg production run of CatCore or 65.0 g per 100 g wet food pouch.
- **CatPro Premix:** Complements CatCore Protein-Ca Premix with complete essential vitamins, minerals and chelators and adequate retort loss overage.
- **AAFCO Compliance:** Together CatCore and CatPro meets AAFCO requirements for complete and balanced nutrition when paired per diet chart.

Table 6.2: CatCorePro Composition per 10 kg run (or 100 pouches)

Component	Dose per 10 kg	Per pouch
CatCore Fresh Meat Protiens	6500g	65.0g
Omega-3 Fish Oil PV<=5.0meq/Kg	250ml	2.50ml
CatPro Premix	100 g	1.0 g
Mixed tocopherol liquid premix	100 ml	1.0 ml
Palatant Liquid Premix	100ml	1.0ml
Alginate gel - Ca Premix	100g	1.0g
Rendered Bone Broth	4150g	41.5g
Nett Weight per pouch	112.5g pre-retort 101.5g $\pm$ 0.50; declared weight 100.00g	

- **Design Overages:** Enhanced taurine formulation for cardiac health support. Vitamin A is balanced carefully with daily 4.0g fresh liver from 2 CatCore pouches to avoid stacking. Ca:P  $\geq$ 1.1:1 within AAFCO recommended limits when paired as per diet chart.
- **Antioxidant Premix:** Provides Primary Vitamin E (dl- $\alpha$ -tocopheryl) and mixed antioxidants for enhanced oxidative stability.
- **Alginate Gel - Ca Premix:** Alginate gel forms cross-link chain with Calcium under retort heat. Source of 80mg dietary calcium per 100g wet food. Maintains Ca:P ratio.
- **Omega-3 Fish Oil Blend:** Provides functional Omega-3:Omega-6 fatty acids balance.
- **Palatant Premix:** Meat Hydrolysants for palatability.
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- **Rendered Bone Broth:** Solvent base for retort processing; improves hydration, adds collagen, chondroitin and other bone joint stability nutrients.