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The Natural Shift: Navigating the Transition to Natural Colors and Flavors in Pet Food

Learn how regulatory changes and retailer mandates are reshaping pet food manufacturing and the strategies facilities can use to transition to natural additives.

Executive Summary

The pet food industry is undergoing a significant transition. Federal mandates, state-level legislation and growing demand for clean-label products are accelerating the phase-out of synthetic additives.

Manufacturers now face compressed timelines to reformulate products while maintaining quality, safety and visual appeal. This paper outlines the regulatory landscape, highlights market leaders driving change and provides technical guidance for facilities adapting to natural alternatives.

The Regulatory Catalyst

Regulatory activity in the United States is shaping both domestic and global supply chains. While international standards remain fragmented, federal and state actions are setting clear expectations.

- The U.S. Food and Drug Administration revoked approval of FD&C Red No. 3, effective Jan. 15, 2027
- Federal agencies are coordinating with industry to eliminate Red 40, Yellow 5, Yellow 6, Blue 1, Blue 2 and Green 3 by the end of 2026
- As of February 2026, manufacturers can claim "no artificial colors" when using natural sources such as beet or spirulina

State-Level Legislation

- California's Food Safety Act prohibits the manufacture or sale of food containing Red Dye 3 beginning Jan. 1, 2027
- West Virginia enacted legislation in March 2025 banning the sale of products containing the seven primary synthetic dyes
- New York and Illinois have introduced similar legislation targeting Red 3 and additional additives

These actions collectively reduce the viability of synthetic additives across the market.

Market Leadership and Commitments

Retailers and major brands are accelerating the transition through internal policies and product reformulation.

RETAILER INFLUENCE

Petco removed all dog and cat food containing artificial colors, flavors or preservatives from its shelves. This decision required many brands to reformulate in order to maintain distribution.

BRAND COMMITMENTS

Purina (Nestle)

- Committed to removing artificial flavors and preservatives across its portfolio by 2025
- Core product lines already feature no artificial colors or flavors
- Completed removal of artificial colors in EU markets by 2023

Mars Petcare

- Brands such as CRAVE and NUTRO are positioned as fully natural
- PEDIGREE is reformulating dry kibble, though some wet products still require updates to meet 2027 regulations

Blue Buffalo (General Mills)

- Maintains a longstanding policy of excluding artificial additives
- Already aligned with emerging retailer and regulatory requirements

Conversion Challenges and Solutions

Replacing synthetic additives introduces formulation and processing challenges. Manufacturers must maintain product appearance and palatability while ensuring stability.

Examples of current solutions include:

- **Red replacements:** Carmine for heat-stable applications, beetroot for dry kibble
- **Brown tones:** Caramel color or burnt sugar replacing synthetic blends
- **Blue and green hues:** Butterfly pea flower and spirulina enabled by recent approvals

2. LOW-HEAT PROCESSING METHODS

- **Freeze-drying:** Preserves full color and flavor through sublimation
- **Cold-pressing:** Maintains temperatures below 120°F for ingredient stability
- **Air-drying:** Uses controlled heat to protect structure and palatability

3. STABILITY AND QUALITY CONTROL

- Use encapsulated color systems to protect pigments during processing
- Integrate natural antioxidants during cooling to reduce oxidation

The Natural Toolkit

KEY ALTERNATIVES AND SUPPLIERS

CATEGORY	SYNTHETIC TARGET	NATURAL REPLACEMENT	KEY SUPPLIERS
Colors	Red 3, Red 40	Beetroot, Carmine, Anthocyanins	Sensient, Oterra, ROHA
Colors	Yellow 5, Yellow 6	Turmeric, Annatto, Beta-Carotene	ADM, IFC Solutions
Flavors	Artificial Meat Flavors	Bone Broth, Hydrolyzed Liver	AFB International, Kemin
Preservation	BHA, BHT, TBHQ	Mixed Tocopherols, Rosemary	Scoular, Darling Ingredients

STRATEGIC WATCHOUTS

- **Heat stability:** Standard natural colors degrade under extrusion. Use retort-stable or encapsulated formulations
- **Carrier ingredients:** Some natural additives rely on synthetic carriers. Verify compatibility with clean-label claims
- **Species safety:** Not all human-grade ingredients are safe for pets. Confirm AAFCO or GRAS status
- **Oxidation risk**: Natural flavors require integrated antioxidant systems to maintain shelf life

Technical Recommendations for Manufacturers

Transitioning to natural additives requires process adjustments to protect ingredient integrity.

1. POST-EXTRUSION APPLICATION

Applying natural additives after extrusion improves performance.

Recommendation:
Move color and flavor application to coating systems where lower temperatures preserve functionality and allow better absorption.

Conclusion: Engineering the Future with Haskell

The shift to natural colors and flavors is no longer optional. Regulatory requirements and retailer expectations have made it a baseline standard.

Successfully navigating this transition requires more than reformulation. It requires alignment between product development, process engineering and facility design.

Haskell brings an integrated approach to this challenge:

- **Design-build delivery:** Supporting installation of coating systems, cold-processing equipment and drying technologies within existing operations
- **Process engineering:** Optimizing handling and dosing of temperature-sensitive ingredients
- **Future-ready facilities:** Incorporating packaging and environmental controls that protect product integrity from production through distribution

By aligning facility capabilities with evolving product requirements, manufacturers can meet regulatory deadlines and position themselves for long-term growth in clean-label pet nutrition.