

# Natural pigments Bioavailable source of carotenoids and xanthophylls



- → Egg yolk and broiler skin color are important "value" indicators for consumers;
- Desirable hue and intensity of color is frequently managed with pigment feed additives;
- Natural alternatives to synthetic pigments are increasingly preferred due to regulations and consumer demands;
- → The carotenoids and xanthophylls found in certain pigments deliver additional benefits directly to birds.

# PHYSIOLOGIC ROLES OF CAROTENOIDS

- ✓ Support vision and ocular health
- Reduce oxidative stress
- ✓ Immunomodulation
- ✓ Neuroprotective activity
- √ Modulate inflammation
- \* Accumulation in eggs, thus serving as a source of lutein and zeaxanthin in human nutrition.



# Yellow pigment

Marigold meal consists of marigold flower petals, and is rich in xanthophylls, especially lutein and zeaxanthin.

Dietary supplementation of marigold extract is a proven tool for increasing the color intensity of carcasses and egg yolk, and antioxidant capacity and meat quality in broilers.



The so-called 'red xanthophylls' are primarily capsanthin extracted from paprika. Research has demonstrated numerous potential benefits to dietary paprika, including reduced oxidative stress, inflamation, and dyspepsia.

## **AddOro® Pigments**

- Natural, standardized red and yellow pigments made from marigold and paprika peppers;
- Source of lutein and zeaxanthin;
- Highly bioavailable;
- · Extremely stable;
- Fully saponified;
- Stabilized with ethoxyguin-free antioxidant;
- Incorporated in an inert, free-flowing mineral carrier;
- Based on sustainable resources.



# **AddOro**® Backed by global pigment expertise

Innovad's pigment experts have over 20 years of experience in providing natural pigments.

Our state-of-the-art production facility employs the latest technology and know-how in the manufacture of consistent, stable, safe, and effective lutein and capsanthin products.

Quality control begins in the field, with rigorous QC protocols and specifications targeting cultivation, harvest, and raw material processing. Full traceability is maintained from seed to final packaging, and rigorous dioxin and heavy metal controls are in place.



### AddOro®

Natural • Reliable • Bioavailable Stable • Flowable • Sustainable

### **Featured products**

\* AddOro® Y 20 – yellow – 20 g xanthophylls/kg

**AddOro**® **R5** – red – 5 g xanthophylls/kg

#### **Inclusion rate**

0.3 – 4.0 lb/ton 18 month shelf life (stored properly)

#### **PRODUCTION HIGHLIGHTS**

- Full automation through all stages of saponification, homogenization, and stabilization of both liquid and dry products;
- Production line operating under nitrogen to prevent oxidative damage or loss of active components;
- Saponification process that eliminates the chance of alcohol residue, and results in over 98% guaranteed saponification;
- Every-batch testing for xanthophyll and carotenoid content, as well as dioxin, at a dedicated internal laboratory – minimum levels of trans-Lutein (yellow), trans-Capsanthin (red) and total xanthophylls are guaranteed;
- Small final particle size to enhance absorption in the bird;
- No ethoxyquin.



#### To learn more

U.S.: m.collins@innovad-global.com Global: info@innovad-global.com

