



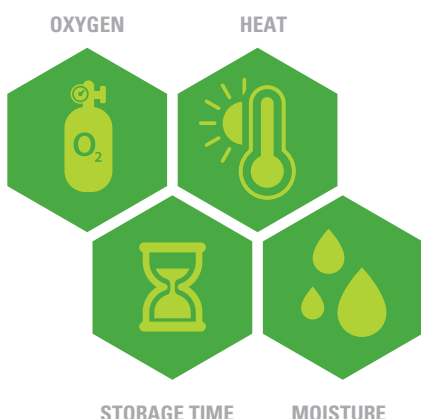
GUT HEALTH
SOLUTIONS
CLEAN UP

RENDOX[®] Liquid Antioxidants

Oxidation – a major source of decreased fat and oil quality – not only reduces the energy value of lipids but can also have harmful effects on livestock and poultry growth performance.^{1,2}

FACTORS INFLUENCING OXIDATION OF FATS AND OILS INCLUDE:

ENVIRONMENTAL:



BIOCHEMICAL:



**ONCE OXIDATION
STARTS IT CANNOT
BE UNDONE.**

Unfortunately for producers, lipid sources used in feed formulations today are not all created equal. Worse yet, a one-fits all solution to oxidation management does not exist.

ABOUT RENDOX

The RENDOX[®] Liquid Antioxidant product line provides research-backed synthetic antioxidant systems designed to stabilize the diverse fats and oils used in feed formulations today.

FEATURES AND BENEFITS:

- Antioxidant blends specifically formulated to stabilize a variety of animal fats and vegetable oils
- Synergistic blend of synthetic antioxidants to absorb free radicals before they destroy fatty acids
- Metal chelators to bind metal ions, which may promote free radical oxidation
- Oil-based carrier to better mix with fat molecules
- Ethoxyquin and non-ethoxyquin products available

**Proper Blend of
Antioxidants**

➔ Substrate specific
Quench free radicals

Chelators

➔ Bind metal ions
Act as oxygen scavengers

Oil Based Carriers

➔ Ensure mixing
in matrix

STABILIZING YOUR FAT SOURCE WITH RENDOX

Not all fats are created equal. Animal fats, vegetable oils, blended fats and byproduct oils each have a unique fatty acid profile,³ which require different formulations and oxidation control solutions. When treating ingredients, identifying the correct antioxidant to stabilize your fat source can be the difference between success and failure.

RENDOX Liquid Antioxidants offer producers research-backed synthetic antioxidant solutions designed to CLEAN UP and stabilize the diverse fats and oils used in feed formulations today. Each RENDOX antioxidant contains a unique, synergistic blend of antioxidants, metal chelators and oil-based carriers to match the unique fatty acid profile of commonly-used rendered fats and vegetable oils.

RENDOX LIQUID ANTIOXIDANT SYSTEMS

Product	Standard Inclusion Rate	No Ethoxyquin Added	Animal Fats	Vegetable Oils	Blends
RENDOX® AET	2 lb./ton		×		×
RENDOX® AT 20	1 lb./ton	×	×		
RENDOX® CQ	2 lb./ton	×		×	
RENDOX® RG	0.5-1 lb./ton				×
RENDOX® AC	1-2 lb./ton	×	×		
RENDOX® EQ	0.8-2 lb./ton		×		

CLEAN UP YOUR FATS AND OILS WITH RENDOX

Managing oxidation in fats and oils is critical for optimal livestock and poultry health and performance. With more than 50 years of research and development experience in antioxidant formulation, RENDOX Liquid Antioxidant systems are designed to meet each customer's unique oxidation control needs.



A COMPREHENSIVE APPROACH TO GUT HEALTH

Our Gut Health Triple Check program serves as a support system to **CLEAN UP** contaminants in feed and water prior to animal exposure, **BUILD UP** intestinal strength to reduce leaky gut and **KNOCK OUT** harmful pathogens for healthier livestock and poultry.

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References:

1. Shurson, J. and B. Kerr. Fat, oxidation and the swine diet. National Hog Farmer. July 18, 2018.
2. Hung, Y.T., et al. 2017. Peroxidized lipids reduce growth performance of poultry and swine: A meta-analysis. Animal Feed Science and Technology, 231:47-58.
3. Sienkiewicz Sizer, F. and Whitney, E. (2012) Nutrition: Concepts and Controversies (12th ed.). Thomson Wadsworth.

