


**Introduction:**

Exposure to Oxygen and sunlight, sensitive to photo-oxidation are the two main factors in the oxidation of food. Oxidation is a natural chemical process where Oxygen of air interacts with any elements. Through this chemical interaction, elements become oxidized and convert into a new molecule, so the prime element changes into other one and losses its character, quality, value, everything. Oxidation reaction transfers electrons from a substance to an oxidizing agent. Oxidation also produces free radicals as a bye product which irreversibly starts chain reaction and damage cells of the elements. Irreversible reaction of oxidation process affects the quality of feed and raw materials, vitamins, etc. in total. At the same time, it also creates favorable situation for E. Coli and pathogenic bacterial in gestation, causing disease condition. Oxidative free radicals react with live tissues and disrupt cellular integrity of the gut membrane. Oxidative stress contributes to the development of a wide range of diseases.

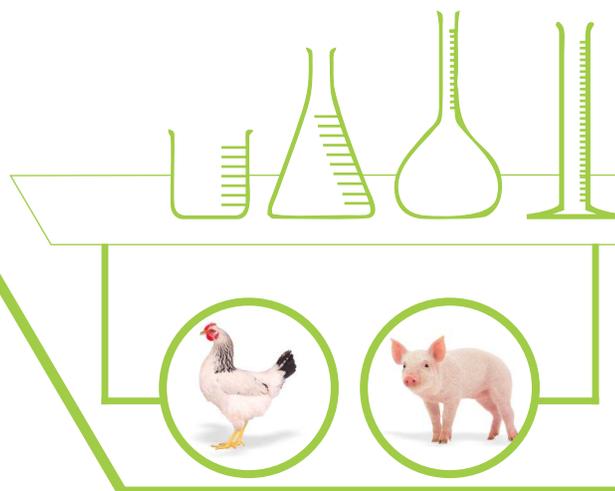
Hence, to ensure the feed quality, nutrient values and to maintain optimum immuno competence, oxidation must be checked and controlled. Antioxidants can save feed from this auto oxidation.

Antioxidant is a molecule capable of inhibiting oxidation of other molecules, save them from oxidation being oxidised themselves. Some antioxidants can terminate chain reaction of free radicals scavenging them before they damage the cell.

**Active Ingredients & Mode Of Action:**

R&D Team of Advanced Biotechnologies, after a series of trials, developed ADDGuard a combination of antioxidants of having best synergistic effects of BHA, BHT and Ethoxyquin further enhanced by the biological chelating agent Citric Acid and proven surfactant of Lecithin and Orthophosphoric Acid. It is a blend of selective and superior quality ingredients.

AddGuard is a synergistic blend of antioxidants BHA, BHT, Ethoxyquin, Citric Acid, Lecithin and Orthophosphoric Acid. Oxygen reacts preferentially with BHA & BHT rather than oxidizing fat, oil, there by protecting them from spoilage. These are mainly used to preserve food, odour, colour and flavour. Ethoxyquin control oxidation particularly in propagation phase scavenging / removing free radicals. It also takes care of colour, less due to oxidation of the natural carotenoid pigments. Citric Acid is a weak organic acid acts as a natural preservative. It involved in the physiological oxidation of fat, proteins and carbohydrates.



Citric acid checks oxidation particularly in initiation phase through its metal chelating properties. It chelates metal ion capable of catalyzing the chain reaction. Further, the potent antioxidant activity is enhanced by the inclusion of lecithin and orthophosphoric acid. They have emulsification and lubricants properties, good dispersing agent, helps in homogeneous mixing of antioxidants, and prevent them from sticking. Moreover, Lecithin enriches fat and protein and improves pelletisation. It also improves shelf life of feed.

**BENEFITS:**

- Binds oxygen and prevents oxidation
- Prevents free radicals formation and scavenge free radicals
- Protects nutrient values of feeds, improve shelf life
- Retains freshness & palatability
- Thermostable and suitable for any ingredients
- Reduces oxidative stress and maintain health
- Dry and Free flowing helps in homogeneous mixing
- Enhances efficacy increasing the surfactant area of the molecules
- Totally metabolizable and non toxic

**DOSAGE:** 75gm to 125gm per ton of feed

**SHELF LIFE:** AddGuard is stable for 24 months from the date of manufacture.

**STORAGE:** AddGuard should be stored in a cool dry place away from sunlight.

**PACKAGING:** AddGuard is available in 25 kg Paper Bag.

The information and data contained herein has been compiled based on information we believe reliable. Users should thoroughly test all applications and independently conclude satisfactory performance before commercializations, as these recommendations are non-binding. User's assume all liabilities for use of the Products. We are not liable for any advice which we may have failed to give.

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