MediaRoom

# Kemin Study Offers Clean Label Alternative to Synthetic Antioxidants in Cooked Frozen Meat

**DES MOINES, Iowa** (November 28, 2018) – Kemin Industries, a leading provider of shelf-life extension and food safety solutions that help manufacturers protect their food and beverage products, shared results of a recent study that evaluated the effectiveness of natural plant extracts in comparison to synthetic antioxidant options in protecting foods from oxidation.

The study examined lipid oxidation and off-flavor development in cooked frozen pork sausage patties over a period of 12 months. Results demonstrated that clean label alternatives such as FORTIUM® RGT12, a blend of rosemary and green tea, prevent oxidation as effectively as synthetic options, while maintaining higher scores with sensory panelists.

Manufacturers are being challenged as they reformulate many food and beverage products in response to consumer demand for clean, simple labels. While consumers seek products that are free from ingredients such as artificial preservatives, convenience remains a driver of purchase decisions. Frozen and prepared meals provide convenience to fit consumers' busy lifestyles, and manufacturers want to offer quality products to capture retail sales.

Many of these products contain cooked pork-sausage-style components, such as breakfast sausage, that can be quickly and safely reheated before consumption. However, the process of cooking meat, freezing, exposure to oxygen during storage, and reheating make cooked, frozen meat products very susceptible to oxidation and warmed-over flavor development during shelf life. Artificial preservatives such as butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT), propyl gallate and citric acid have traditionally been used to delay oxidative rancidity in cooked frozen pork sausages but are being removed from labels. Manufacturers are faced with challenges as they seek solutions that will best protect their brands' quality and reputation.

"Kemin has been helping processors understand the need to replace synthetic preservatives with clean label alternatives—and not just remove unwanted ingredients such as BHA or BHT," said Amanda King, Ph.D., Technical Manager – Proteins, Kemin Food Technologies. "This study is helpful because it examines the effects of oxidation and rancidity of reheated cooked frozen meat over time. It compares meat that has been treated with traditional synthetic antioxidants and natural plant extracts, such as rosemary/green tea blends, as well as untreated meat. Results demonstrate that Kemin's rosemary and green tea blend prevents oxidation as effectively as synthetic antioxidants. In fact, the sensory panelists preferred the flavor of the sausage that contained our FORTIUM® RGT12 Plus Dry over both synthetically treated and untreated products. We hope manufacturers will be encouraged by these results and seek clean label solutions that will protect their brands and meet consumer expectations."

**Study highlights include:**

- Natural plant extracts, specifically rosemary extract, can be used as clean label alternatives to synthetic antioxidants to help prevent deterioration in product quality.
- While this study showed that FORTIUM® R10 Dry rosemary extract delayed oxidation as compared to the untreated pork patties, the unique blend of rosemary and green tea extracts in FORTIUM RGT12 Plus Dry was more effective throughout the full 12-month shelf life.
- As compared to a blend of synthetic antioxidants, FORTIUM RGT12 Plus Dry provided a similar delay in lipid oxidation but maintained higher sensory scores during one year of frozen shelf life.
- FORTIUM RGT12 Plus Dry should be considered for cooked pork sausage applications as a clean label solution to protect product quality during long-term frozen storage.

Click here for more information on the Kemin portfolio of plant-based extracts, antioxidants and antimicrobials available to provide shelf-life, flavor and color and food safety solutions. The highly experienced technical team at Kemin understands how ingredients work together, helping processors determine whether they need simple, single-ingredient formulas or customized blends or extracts designed to solve difficult, specific technical challenges with cost-effective solutions.

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**About Kemin Industries**

**Kemin Industries** (www.kemin.com) is a global ingredient manufacturer with a focus on improving the quality of life for over 3.8 billion people each day with more than 500 specialty ingredients made for the human and animal health, pet food, nutraceutical, food technology, crop technologies and textile industries.

For over half a century, Kemin has been dedicated to using applied science to address industry challenges and offers product solutions to customers in more than 120 countries. Kemin provides ingredients to feed a growing population with its commitment to the quality, safety and efficacy of food, feed and health-related products.

Established in 1961, Kemin is a privately-held, family-owned and operated company with more than 2,500 employees globally and operations in 90 countries, including manufacturing facilities in Belgium, Brazil, China, India, Italy, Russia, Singapore, South Africa and the United States.

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