DSM, Kemin and University of Georgia GLARE2 study reveals how lutein and zeaxanthin enhance visual performance in younger consumers

The results of a study sponsored by DSM and Kemin to show how FloraGLO® Lutein and OPTISHARP® Zeaxanthin supplementation can improve the ability to see under glare conditions have been published in Investigative Ophthalmology & Visual Science1. The randomized, double-blind and placebo-controlled study took place at the University of Georgia in Athens over the course of 12 months. The results of the study indicate that the regular intake of lutein and zeaxanthin can be beneficial for improving vision in young, healthy people and will be presented in DSM’s upcoming webinar on 17th March 2015 at both 9:00CET/16:00SGT/17:00JST and 9:00PST/12:00EST/18:00CET.

“The global market for eye health ingredients is projected to increase at a compound annual growth rate (CAGR) of 6 per cent until 2019,” said Jens Birrer, Global Marketing Manager at DSM. “Eye health supplements containing lutein and zeaxanthin have typically been aimed at older consumers, with age-related eye conditions identified as a major health concern. The GLARE2 study has been conducted in a younger, healthier population, opening up new markets to the industry as people look to enhance their visual performance and comfort through the consumption of nutritional ingredients from an early age.”

“FloraGLO and OPTISHARP are the most clinically researched lutein and zeaxanthin brands in the world,” adds Anita Norian, President for the Human Nutrition and Health division at Kemin. “The brands were chosen by the US National Eye Institute for use in its prestigious second age-related eye disease study (AREDS2)4. GLARE2 is another example of how Kemin and DSM are committed to working in partnership to support ongoing research into the role of lutein and zeaxanthin in visual performance and eye health.”

In the GLARE2 study, approximately 100 young and healthy subjects were assessed and received daily dosage levels of 10mg of FloraGLO Lutein and 2mg of OPTISHARP Zeaxanthin, or a placebo over a one year supplementation period. Macular pigment optical density (MPOD) and serum levels of lutein and zeaxanthin increased significantly in the supplemented group, while no changes were noted in the placebo group. The macula is the yellow spot in the central retina that is responsible for detailed central vision and the yellow color is the result of high concentrations of lutein and zeaxanthin. Macular pigment optical density is a measure of the amount of macular pigment present in the macula and has been shown to have a major impact on visual performance.

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The study looked at three aspects of visual performance: glare disability, photostress recovery time and contrast enhancement. Glare disability is the amount of glaring light that can be tolerated by a person before vision is severely impaired. A good example of this is when a person is driving a car and encounters glare from the sun that shines directly through the windshield. Photostress recovery time determines how fast the eye can recover sight after experiencing a flash of bright light; similar to when sunlight or headlights of an approaching car suddenly impair vision while driving. Contrast enhancement is the ability to detect chromatic borders that allow discrimination of an object from its colored surroundings, which is important in sport activities such as baseball. The results of the study demonstrate significant improvement in these aspects of visual performance and add to the growing body of evidence to support the role of lutein and zeaxanthin in helping to achieve optimal visual performance and comfort.

“The scientific community has known for a long time that increasing macular pigment density can improve many aspects of visual function and the GLARE2 study provides important further confirmation,” adds Billy R. Hammond Jr., Ph.D., the principal investigator of the study, which was conducted at his Vision Sciences Laboratory, University of Georgia in Athens. “Showing lutein and zeaxanthin improve function in normal healthy individuals widens its applications, as we continue to investigate the potential of nutrition to support both eye health and visual performance.”

Lutein and zeaxanthin cannot be synthesized by the body but rather are contained naturally in green, leafy vegetables, such as kale and spinach and obtained through the human diet. It can be difficult to achieve sufficient intake through the ingestion of such foods, however supplementation appears to be an effective way to ensure optimum levels among people of all ages.

DSM’s upcoming webinar on the GLARE2 study will highlight benefits of lutein and zeaxanthin supplementation in enhancing visual performance and comfort in younger consumers. The webinar will take place on 17th March 2015 at both 9:00CET/16:00SGT/17:00JST and 9:00PST/12:00EST/18:00CET.

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Kemin - Inspired Molecular Solutions™ Kemin (www.kemin.com) provides “inspired molecular solutions” specifically developed to provide nutrition and health benefits for humans and animals. Committed to feed and food safety, Kemin maintains top-of-the-line manufacturing facilities where approximately 500 specialty ingredients are made for the global feed and food industries as well as the health, nutrition and beauty markets. A privately held, family-owned and operated company, Kemin has nearly 2,000 employees and operates in 90 countries with manufacturing facilities in Belgium, Brazil, China, India, Italy, Singapore, South Africa and the United States.
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