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PRESS RELEASE

Natural fuel for functional beverages: Study shows water-soluble Zynamite® delivers strong cognitive benefits

A new double-blind, placebo-controlled clinical study shows the water-soluble form of Nektium's Zynamite® can significantly improve cognitive performance in beverages and beyond.

Zynamite® is a patented mango leaf extract produced in Spain by Nektium, using a proprietary process that ensures the highest levels of purity and efficacy. Studies have already shown that the award-winning mangiferin ingredient provides fast-acting non-stim mental energy without side effects and it has been used successfully in a range of supplements.¹

However, mangiferin's naturally low solubility had limited its potential for energy drinks and other beverage applications. In addition, higher dosages were previously required due to the impact of the low solubility on bioabsorption.

Using in-house proprietary smart delivery technology, Nektium recently developed a water-soluble version of Zynamite®. It has a neutral taste and is optimized for use in beverage applications, maintaining the level of mangiferin absorbed to ensure its efficacy even at low dosages.

New research published in *Pharmaceuticals* now confirms that the water-soluble version of Zynamite® (Zynamite S) maintains its beneficial effects on cognitive performance and mood at a lower dose.² The acute study on university students demonstrated that participants taking a single dose of Zynamite® saw significant improvements in performance across a wide range of tests including processing speed, complex task handling, and mental flexibility.

Study results

¹ Wightman, E., et al. Acute Effects of a Polyphenol-Rich Leaf Extract of *Mangifera indica* L. (Zynamite®) on Cognitive Function in Healthy Adults: A Double-Blind, Placebo-Controlled Crossover Study. *Nutrients* (2020)

² Castellote-Caballero, Y et al. Acute Supplementation of Soluble Mango Leaf Extract (Zynamite® S) Improves Mental Performance and Mood: A Randomized, Double-Blind, Placebo-Controlled Crossover Study. *Pharmaceuticals* 2025, 18, 571.

The randomized, double-blind, placebo-controlled crossover study evaluated the efficacy of a single dose of water-soluble Zynamite® on comprehensive cognitive function, mental energy, and mood. It featured 120 healthy university students, who were each given 100mg or 150mg of Zynamite® – standardized to contain at least 60% of mangiferin – or a placebo.

A series of cognitive performance tests were evaluated, including executive functions with the Trail Making Test (TMT), processing speed with the Digit Symbol Substitution Test (DSST), and selective attention with the Stroop Color and Word Test. Assessments were made before taking the product and then at 30 minutes, three hours, and five hours after consumption.

Highlights from the study include:

- *Psychomotor attention and speed improved by 11.5% in the 100mg group and by 13.4% in the 150mg group after five hours compared to placebo*
- *Executive function improved by 12.3% in the 100mg group and by 16.3% in the 150mg group after five hours compared to placebo*
- *Processing speed improved consistently across all time points in the 100mg and 150mg groups compared to baseline. In the 100mg group, scores were 8.8% higher than placebo at three hours and 9.7% higher at five hours*
- *Selective attention significantly improved at 30 minutes, three hours, and five hours in the 150mg group, and at five hours in the 100mg group, compared to baseline*
- *Cognitive flexibility was significantly better than placebo from 30 minutes to five hours for the 150mg dose, and at five hours the 100mg dose was 8.38% better than placebo*

In addition, the Profile of Mood States (POMS) test was used to evaluate tension, depression, confusion, anger, fatigue, vigor, and total mood disturbance.

Those taking Zynamite® recorded superior scores on multiple areas including confusion, depression, and overall score dimensions compared to placebo. Confusion perception was significantly reduced among those taking a 100mg dose at three hours and five hours (37.9% and 61.48%) while general mood improved around 20% at three hours for both doses. Tension scores also improved by 35.4% in the 100mg group and by 52.3% in the 150mg group at five hours post-consumption.

Dr. Laura Lopez, Head of Product Research, Development & Innovation at Nektium, said: “Mangiferin’s low solubility has always presented a challenge for beverage applications. The results of this new study provide compelling scientific evidence that low dosages of our water-soluble Zynamite® deliver significant improvements to cognitive function while also reducing perception of stress.”

Application possibilities

Zynamite® has already been used successfully in many supplements targeting sports and nootropic applications. The water-soluble version now opens up new possibilities. It is easy

to integrate at a low dose in a wide range of products, including RTDs, shots, and shakes as well as gummies and powder sticks.

Bruno Berheide, Nektium's Commercial and Partnership Director, said: "Zynamite® is an experiential ingredient that delivers fast-acting support for clarity, focus, and concentration for up to five hours. It's perfectly suited to today's busy consumers who want natural alternatives to sugary and caffeinated energy drinks. From working professionals to stressed-out students to e-gamers, it helps them stay sharp and keep their cool with just a single dose."

Vitafoods Europe

Nektium will present a range of Zynamite® samples at Vitafoods Europe 2025 (20-22 May, Barcelona).

Based at stand 3K89, the company will offer visitors the chance to try a lime-flavored RTD energy drink as well as powder sticks and gummies powered by Zynamite®. The Zynamite® beverages will also be available to sample at the Vitafoods tasting center.

The Nektium team will be available throughout the event to discuss the unique science-backed benefits of Zynamite® and how it can be easily integrated into different application types.

Diana Roldan, Scientific Product & Communication Manager at Nektium, said: "We'll be demonstrating how brands can incorporate Zynamite® into beverages and other product formats. It offers a natural way to tap into current trends in the functional hydration and energy drink markets and help consumers perform at their best."

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About Nektium

Based in Gran Canaria, Spain, Nektium is a global leader in premium branded botanical extracts that deliver proven benefits for cognitive health, stress reduction, physical performance, weight management, and more. With an unshakeable commitment to quality and safety, Nektium monitors and controls every link in its supply chain, sourcing raw materials only from reliable, trusted, sustainable growers and producing the finished ingredients in its own world-class manufacturing facilities. Nektium's portfolio of branded botanicals includes Rhodiolife®, Zynamite®, Vanizem™, and Xanthigen®, all of which deliver on-trend health benefits supported by multiple gold-standard clinical studies.