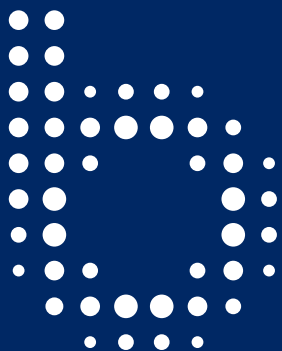
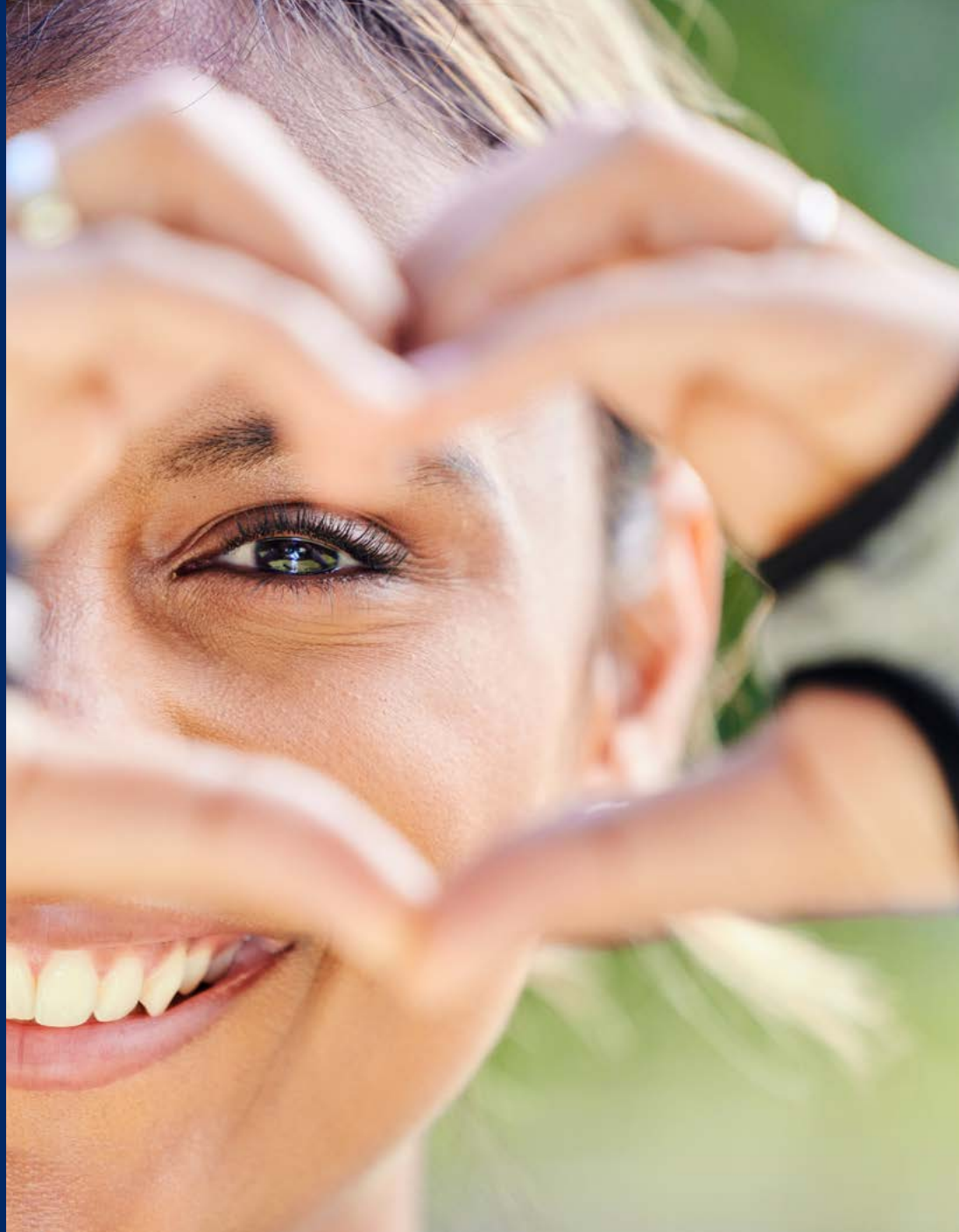


The Balchem Beat

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Editor's Note

Dear Balchem Community,

In this edition we explore Balchem's unwavering commitment to innovation across various sectors. From beauty solutions to nutritional ingredients, Balchem provides a comprehensive range of high-quality products.

One of our highlights is a new white paper on the synergistic benefits of OptiMSM® and collagen for skin health. This dynamic duo offers enhanced results when combined, making it an asset for beauty supplements.

We also shed light on an issue of concern in the vitamin K2 market. Our research has revealed that many supplements fall short of their label claims. Balchem's K2VITAL™ ingredient is a reliable choice for those seeking a quality product.

Choline research remains a key focus. Balchem continues to support studies on its importance for maternal and infant health, and cognitive function in adults. Additionally, we have contributed to educational resources on this essential nutrient.

For those in the food industry, Balchem offers innovative solutions for bakery and frozen dessert applications. Our recent participation in IFT showcased the latest protein products and nutritional ingredients, aligning with current trends such as plant-based options and sugar reduction.

Our science update features exciting research on choline presented at NUTRITION2024. Studies highlight its benefits for brain health in children and adults. Balchem's VitaCholine® is a bioavailable option for mothers and babies.

Finally, we share market trends from IFT and NBJ, forecasting continued growth in the food and supplement industries. Balchem is well positioned to meet these evolving demands with our diverse product offerings.

Balchem's dedication to innovation and quality makes us a valuable partner for companies seeking high-quality ingredients and solutions.

Warm regards,
The Balchem Beat Editorial Team



Unlocking Beauty from Within: **The Power of OptiMSM® and Collagen Synergy**

The beauty industry is increasingly embracing holistic approaches, recognizing the connection between nutrition and skin health. **Nutricosmetics, supplements that enhance beauty from within, are gaining popularity as consumers seek solutions beyond superficial beauty.**



The market for these products is expanding rapidly, with estimates projecting growth from \$8.09 billion in 2023 to \$11.91 billion by 2028 (Mordor Intelligence).

Collagen is particularly prominent in this trend, having experienced significant growth due to its structural importance in skin and its ability to counteract natural aging and environmental damage.

Alongside collagen, methylsulfonylmethane (**MSM**) is another popular ingredient, known for its complementary benefits and potential synergies with collagen. Together, these substances offer a unique approach to supporting skin health by aiding collagen formation and bolstering the body's defenses against oxidative stress and aging.

We are thrilled to unveil our latest breakthrough in beauty from within: The release of our comprehensive [new white paper on OptiMSM and collagen synergy!](#) This groundbreaking publication dives deep into how these two powerhouse ingredients work together to unlock greater benefits for your skin than when used individually.

Discover the science behind their synergistic effects, unveiling a new era of skincare nutrition. We're not just sharing insights—we're making waves with extensive media coverage and exclusive interviews. **Get ready for a journey that will establish us firmly at the forefront of the beauty from within market.**

Stay tuned for more updates, interviews, and insights that will redefine your skincare routine. **Together, let's unleash the power of [OptiMSM](#) and collagen for radiant, healthy skin from within!**

Contact us for more information.



Beauty from Within: **The Power of Collagen and MSM**

Jessica Arnaly, Senior Marketing & Business Development Manager at OptiMSM®, recently took center stage at the Summit of Future Nutrition, a prestigious event held during Food Ingredients South America (FiSA) in São Paulo, Brazil. The summit, which attracted over 150 industry professionals, explored the latest trends and innovations in the food and supplement sectors.

In her presentation, Jessica delved into the growing popularity of “Beauty from Within” supplements and highlighted the synergistic benefits of collagen and MSM for improved synthesis. Her insights were part of a dynamic program featuring renowned experts, solidifying our team’s position as leaders in the industry.

FiSA, the largest trade show of its kind in South America, provided an ideal platform for this high-level exchange of ideas. **By participating in this event, we demonstrated our commitment to staying at the forefront of industry advancements and providing valuable solutions to our customers.**

Contact us for more information.





Over 70% of Vitamin K2 Supplements Fail **Quality Checks**

Balchem has conducted new research with ISO accredited natural product testing laboratory Alkemist Labs, uncovering a staggering quality issue in the United States vitamin K2 supplement market.

The analysis found that over two-thirds of vitamin K2 supplements purchased on one of the biggest e-commerce platforms in the United States fail to meet label claims due to low quality or purity. The notable disparity in quality compromises consumer well-being, diminishes trust, and detracts from the credibility of the dietary supplements industry, revealing that consumers aren't receiving the value they expect for their purchases. Balchem is actively addressing the importance of accuracy, proof, and detailed ingredient information through this initiative, shedding light on the reality behind vitamin K2 label claims to promote transparency in this market.

Uncovering the truth behind the label

In line with the company's commitment to raising standards across the market, Balchem contracted with Alkemist Labs to test 38 vitamin K2 products in various formats and formulations. Among the 38 vitamin K2 supplements procured and subjected to rigorous testing, an alarming 71% fell short of the established quality benchmarks concerning K2 MK-7 content or isomeric purity.

K2VITAL



» As leaders in the vitamin K2 industry, we believe we have a responsibility to meet and maintain benchmarks for quality and transparency. And we're scrutinizing our own ingredients too. We've signed up to the Alkemist Assured™ transparency program to ensure that our K2VITAL™ ingredients are third-party verified to meet the highest quality standards. Through this program, our K2VITAL MCC 1% and MCT 1% solutions are independently tested for assay and isomeric purity – a practice that started two years ago. Our goal is to ensure consumers are given the high-quality, efficacious products they're seeking.

Dominik Mattern, VP Science, Business Development and Marketing Balchem Human Nutrition and Health.

The problem lies at the ingredient level, with a high proportion of vitamin K2 products not meeting their label claims due to excessive cis isomer content. These isomers are not as biologically effective as all-trans MK-7 vitamin K2, and result in products with low isomeric purity. In addition, some multi-vitamin or combination K2-plus-mineral formulations use unprotected forms of vitamin K2, which degrade rapidly when combined with other minerals and vitamins.

As such, out of 38 vitamin K2 supplements analyzed, only 29% met MK-7 content and isomeric purity standards. The significant quality gap jeopardizes consumer health by exposing them to the risk of investing in ineffective solutions, and eroding trust and credibility within the dietary supplements industry.

Setting New Industry Standards for Vitamin K2

Recognizing the critical need to address quality issues in the vitamin K2 market, Balchem has already taken proactive measures to set new industry standards by developing and rigorously testing its own vitamin K2 ingredients.

Results reveal that its all-trans bioactive form of vitamin K2 MK-7, K2VITAL, offers typically 99.7% isomeric purity. Balchem's vitamin K2 portfolio also includes K2VITAL DELTA – the world's only patented double-microencapsulated vitamin K2 for combination with minerals – offering stability and endless formulation possibilities.

Analysis has demonstrated that after three months, 100% of all K2VITAL DELTA-plus-minerals products met label claim, compared to 8% of unprotected vitamin K2-plus-minerals products.^[1]

Regulatory efforts, industry collaboration, and consumer education are all vital components in preventing and combating supplement label fraud, ensuring the safety and well-being of consumers who rely on dietary supplements for their health and wellness.

The collaboration with Alkemist Labs reaffirms Balchem's commitment to providing the highest standard of vitamin K2 health ingredients, and emphasizes the importance of using microencapsulated, all-trans vitamin K2 menaquinone-7 (MK-7) for optimal stability, efficacy, and bioavailability.

For more information about Balchem's vitamin K2 MK-7 solutions, visit: [Kappa BioScience](#)

Source: Kappa Bioscience unpublished study, Stability study: superiority confirmed in over 400 tests. The Kappa method: USP43 NF38 analysis of microencapsulated MK-7.



Balchem Supports **Choline** **Research and Education** at Oregon State's Linus Pauling Institute



We're excited to share our latest announcement, that Balchem Corporation has awarded a grant to Oregon State University's Linus Pauling Institute.

This funding will support essential updates to the Institute's Micronutrient Information Center, reinforcing our commitment to advancing nutrition science and raising public awareness.

The **updated content highlights new findings on the importance of choline during pregnancy**, providing expectant mothers and healthcare professionals **with trusted, evidence-based nutritional guidance.**

Additionally, Balchem's support is facilitating the creation of a new Spanish-language page on choline, broadening access to this valuable information for Spanish-speaking communities worldwide.

The Linus Pauling Micronutrient Information Center is a leading resource for consumers and health professionals on the role of dietary nutrients in health and disease prevention, and is frequently ranked among the top five Google search results for "choline," highlighting its significance as a scientific resource.

To learn more, access the full article as featured in the Financial Post: Balchem Funds Critical Scientific Updates to the Linus Pauling Institute's Micronutrient Information Center | Financial Post.



Capturing Consumer Interest Through Insights & Trends



Find Bliss with Frozen Dessert Solutions

Consumers are looking for familiar, yet new, frozen dessert flavors to try. Happiness, intrigue, and bliss are driving factors in purchases of these products. 2 out of 3 consumers repeatedly consume the same products, but 76% agree that trying a unique flavor is a fun experience.

INjoy™ Flavor Systems by Balchem can provide traditional or unique flavors for ice cream bases. Then, INhance™ Variegates take the frozen dessert and its consumer to a new level of bliss. Add intrigue through textures like crunchy, creamy, or fizzing.

Get inspired by TrenDish™. Discover how our flavor solutions can inspire your next frozen dessert creation. [Schedule a meeting today.](#)

Inspired Bakery

Consumers are looking for new and exciting products, and bakery can deliver. Whether it's sweet goods, breads, tortillas, or pizza crusts, inspirations by Balchem can range from health-conscious to indulgent. The food's emotional connections offer a sense of calm or escapism. Hybrid innovation approaches blend familiarity with novelty.

Elevate any bakery experience with INhance™ Inclusions. Support your leavening and preservation needs with BakeShure®. Be inspired by TrenDish™.

[Schedule a meeting today and ideate about the future of bakery.](#)



Balchem Shines at IFT

(Institute of Food Technologists)
with Innovative Protein Solutions
and Nutritional Ingredients

Balchem made a splash at IFT 2024, showcasing a wide range of protein products and nutritional solutions. From our new cold-water-soluble VitalBlend™ Oat Milk Creamer to our extruded protein line extensions, Balchem demonstrated its commitment to providing cutting-edge ingredients for the food and beverage industry.

One highlight was our Taste of Science demo, which showcased our expertise in cold water solubility and spray dry lipid powders. These versatile ingredients are used in various applications, including beverages, bakery, desserts, snacks, and more.

Our extruded protein line, featuring collagen crisps and Canola-pro crisps, offers clean label and nutritional benefits. Canola-pro is a high-quality protein source with a PDCAAS of ~0.85 and is certified non-GMO, gluten-free, allergen-free, and Kosher/Halal.

Key trends at IFT 2024 included a continued focus on plant-based proteins and the integration of nutrition into food products. Balchem's products align perfectly with these trends, offering a variety of protein options to meet diverse needs.

Whether you're looking for innovative protein sources, clean label ingredients, or nutritional solutions, Balchem has the expertise to help you create successful products.

Contact us today to learn more.



VitalBlend





A Discussion on How **Optifolin[®]** Supports **Prenatal, Brain, and Heart Health**

Balchem's Lauren Eisen and Eric Ciappio teamed up with Nutrition Insight on July 18th for an engaging webinar focusing on how Optifolin⁺, an advanced folate ingredient enriched with choline, supports prenatal, brain, and heart health.

The discussion highlighted the importance of folate in prenatal development and its broader benefits across various life stages. Lauren and Eric delve into the science behind Optifolin⁺, emphasizing its potential to enhance dietary supplementation and overall cellular health.

If you didn't catch the webinar event, you can watch it here: [Nutrition Insight Webinar](#).



Optifolin⁺ and Nutrition Insight Team Up for Exciting New Webinar



Exciting New Research Presented at NUTRITION2024



NUTRITION2024 is the annual meeting of the American Society for Nutrition, the globe's largest professional organization for nutrition science, and was held in the vibrant city of Chicago, IL from June 29 – July 2, 2024.

Balchem Nutrition Science experts Rod Benjamin and Eric Ciappio were in attendance and were amazed, soaking in the incredible data presented at the conference. **This was an tremendous year for choline research, with the spotlight on choline for brain health for children and adults.**

Some quick highlights:

Choline for Mom & Baby: Brain's Best Friend

- Maternal VitaCholine® supplementation provided lasting benefits for baby's cognitive function, even up to 14y of age! (Larson E, et al.)
- Higher intakes of folate, choline, lutein, and zeaxanthin during pregnancy were associated with better cognitive outcomes in children at 2y of age (Jiang X, et al.)
- Choline intake among lactating moms is well below the recommendation during the first 6 weeks postpartum (Griebel Thompson, et al.)

Don't forget: VitaCholine supplementation during pregnancy has demonstrated bioavailability and provides lots of benefits - including boosting DHA status, improving baby's cognitive function, and increasing breast milk choline concentrations! It's essential!

Choline for Adults: A Cognitive Powerhouse

- Whole egg intake is linked to greater brain choline concentrations in older adults (Suzuki A, et al.)
- Higher choline intake is linked to greater cognitive function and a reduced risk of cognitive impairment in older adults in Taiwan (Shih HH, et al.)

Friendly reminder: Adults can reap the benefits of choline supplementation too, as research indicates it can improve cognitive function and accuracy in just over an hour!

Spotlight on Folate

But let's not overlook L-5-MTHF:

- Quality Alert: Data from the NIH Office of Dietary Supplements found that 42.5% of dietary supplement products containing L-5-MTHF failed dissolution testing. Shelf-life testing showed that 16% of products on the market were at least 10% below label claims (Pandey D, et al.)

Did you know? Balchem's newest product, Optifolin®^{*}, boasts industry-leading stability and solubility among L-5-MTHF salts to support your product quality!

Want to learn more about the research behind Balchem's products and how they can spark your next innovation?

Contact us today!





IFT and NBJ Reports Highlight Growth in Food and Supplement Industries

IFT Show Highlights Food Industry Trend

The recent IFT Annual Expo showcased the latest innovations and trends shaping the food industry. Key takeaways from Innova Market Insights include:

- **Technological Advancements:** Technology, such as AI (Artificial Intelligence) and advanced product processes, is revolutionizing food production and formulation.
- **Expanded Plant-Based Options:** Plant-based food and beverages are going beyond traditional protein and fiber sources to incorporate more parts of the plant, offering improved taste, nutrition, and functionality.
- **Sugar Reduction:** Consumers' focus on holistic health is driving innovation in sugar reduction, with new approaches like filtration, natural sweeteners, and fermentation.
- **Holistic Health Focus:** Consumers are seeking products that align with their desire for health and wellness, demanding ingredients like non-GMO, organic, and natural options.

These trends underscore the ongoing evolution of the food industry as it responds to changing consumer preferences and technological advancements.

Source: Innova Market Insights Show Review IFT FIRST 2024 - Global

NBJ Report Forecasts Continued Growth in Supplement Industry

- **The Nutrition Business Journal (NBJ)** has released its annual supplement business report, projecting steady growth in the coming years. After experiencing a turbulent post-COVID adjustment, the industry is poised for continued expansion.
- **NBJ** estimates that supplement sales increased by 4.4% in 2023, surpassing pre-pandemic projections. The market is expected to grow by 4.9% in 2024 and maintain a growth rate of over 5% in the subsequent three years.
- **The report highlights Herbs and Botanicals, Special Nutrition, and Sports Nutrition** as key categories driving this growth. These segments are poised to benefit from increasing consumer interest in natural health solutions and specialized nutritional needs.

Source: 2024 NBJ Supplement Business Report

Events — See You There

11—12
SEPT 2024

Plant based World Expo
New York, NY

18—20
SEPT 2024

VitaFoods Asia
K32, Bangkok, Thailand

02—03
OCT 2024

Food Tech Summit & Expo
Speaking Sponsorship, Mexico City, Mexico

09
OCT 2024

CRN Science in Session
Salt Lake City, UT, USA

30—31
OCT 2024

SupplySide West
5165, Las Vegas, NV, USA

This information is intended for industry professionals or customers of dietary ingredients, not consumers. Any explicit or implied claims included in this presentation may not necessarily be appropriate for marketing purposes, and customers are responsible for their own compliance with relevant legal and regulatory requirements. These statements have not been evaluated by the US Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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