



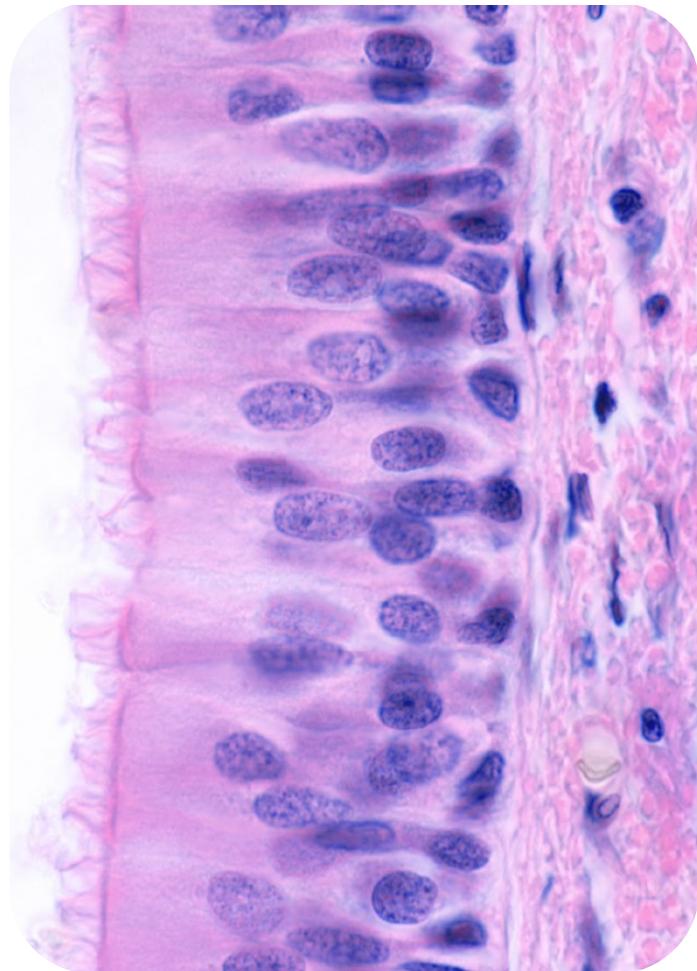
## Temporary Permeability Enhancer for Nutraceuticals

**CyLoc CapraMax** is a proprietary version of sodium caprate and a medium-chain fatty acid that is naturally present in coconut oil and milk fat. This fascinating ingredient functions as an intestinal permeability enhancer because it non-permanently and reversibly opens the tight junctions between epithelial cells. This unique property of sodium caprate enables harder-to-absorb molecules — because of their size or molecular properties — to pass through the digestive tract more efficiently. This makes sodium caprate a valuable tool that can be used to increase the bioavailability of nutrients in nutritional supplements and APIs in the pharma category.

Until the development of CyLoc CapraMax, sodium caprate was only available for the pharmaceutical industry. Now BioTess brings this game-changer permeability enhancer to the supplement, food, and beverage industries.

### KEY FEATURES OF CYLOC CAPRAMAX

- **Enhanced Absorption:** Sodium caprate facilitates transport of nutrients and macromolecules in therapeutic concentrations, that are otherwise difficult to absorb, across the intestinal lining more efficiently.
- **Rapid, Short-Lived Action:** Sodium caprate provides rapid and controlled enhancement of absorption.
- **Broad Application:** Sodium caprate has been studied in conjunction with bisphosphonates, antisense oligonucleotides, and peptide-based therapeutics to improve systemic availability.
- **Established Safety:** Sodium caprate is approved as a food additive and has a proven safety record in humans.
- **Emerging Benefits:** Preclinical studies suggest sodium caprate might have potential protective effects in cancer research.
- **Gentle and Reversible Mechanism:** Sodium caprate temporarily opens epithelial tight junctions without causing adverse effects on the digestive tract.



## Enhanced Antioxidant Support Backed by Scientific Research

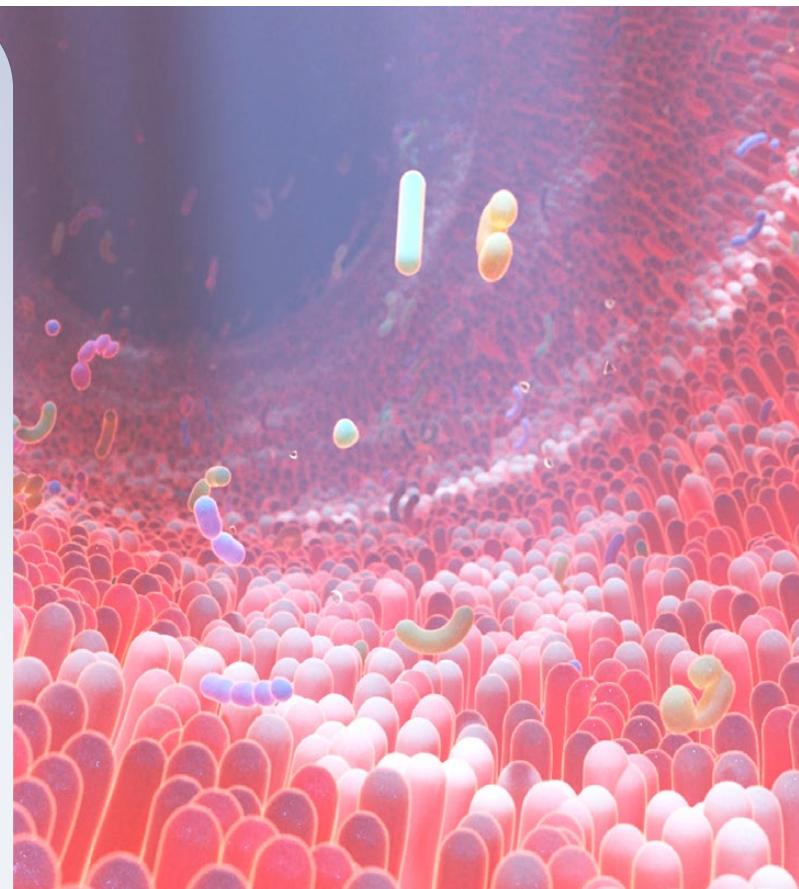
### KEY BENEFITS OF CYLOC CAPRAMAX

#### SODIUM CAPRATE

**Improves Nutrient Bioavailability:** Sodium caprate increases paracellular permeability, enabling effective delivery of hydrophilic nutrient compounds with otherwise poor absorption profiles.<sup>1</sup>

**Safe and Reversible Action:** Studies demonstrate that sodium caprate's absorption-enhancing activity is temporary and reversible, without long-term intestinal side effects when used at controlled concentrations.<sup>2</sup>

**Potential Anti-Cancer Properties:** Preclinical studies suggest that sodium caprate might induce apoptosis (cell death) and reduce tumor growth in gastric cancer xenografts, suggesting a possible future therapeutic role, although this finding remains experimental.<sup>3</sup>



## Product Applications



**Nutritional Supplements:**  
Ideal for capsules, tablets, and powders aimed at overall wellness.



**Functional Foods:**  
Perfect for inclusion in health bars, gummies, beverages, and other functional foods.



**Practitioner Formulations:**  
Suited for advanced formulations recommended by healthcare professionals to their patients.

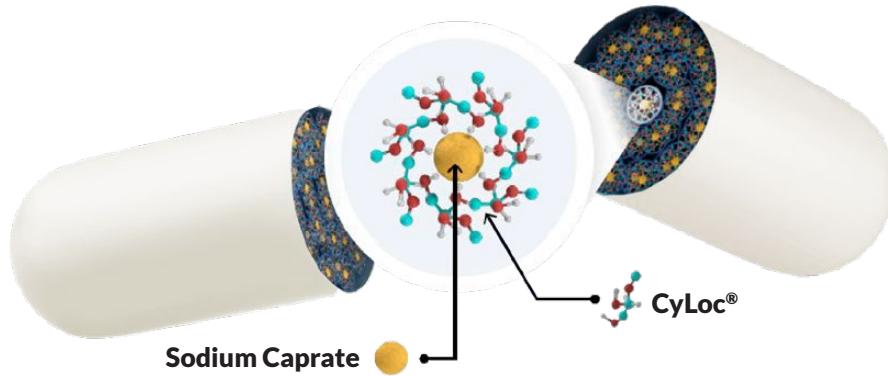


**Direct Sales Products:**  
Enhances product lines in the direct sales market with a unique and compelling health benefit.

## The Future of Single-Molecule Supplementation Technology

### A NANOMOLECULAR DELIVERY SYSTEM

BioTess leverages Tesseract's advanced CyLoc® delivery technology. This nano-encapsulation enables nutrients to pass safely through the stomach – where stomach acid would otherwise degrade the nutrients' integrity – preserving their integrity and enabling precise release and absorption in the gut.



### ADVANTAGES

In contrast to the pharma-only versions currently available on the market, BioTess CyLoc CapraMax sodium caprate is available to the nutraceutical, food, and beverage industries, offering the following advantages:

1. Supply chain and manufacturing superiority – there are no special temperature or handling requirements.
2. Dry and free-flowing powder – excellent alternative for blending and formulating with other ingredients.
3. Rapid and complete solubility in water.
4. Completely stable throughout the range of all normal production temperatures.

5. Advanced cyclodextrin inclusion maintains the chemical integrity of sodium caprate, preventing its premature conversion to inactive capric acid – shielding it until it reaches the more alkaline pH of the small intestine.
6. Advanced cyclodextrin inclusion enhances sodium caprate's permeability-enhancing activity where it is most effective – in the small intestine.<sup>4-6</sup>
7. Available to the nutritional supplement industry.
8. Competitive price points for both pharma and non-pharma versions.

## Why Choose CapraMax?

CyLoc CapraMax is particle-engineered with cyclodextrin inclusion technology by creating an exothermic reaction inside a cyclodextrin-oligosaccharide matrix. This microencapsulation of each sodium caprate molecule provides:

**Advanced Cyclodextrin Inclusion:** BioTess CyLoc CapraMax is virtually flavorless and odorless and opens this absorption enhancer's full commercial potential in nutraceuticals and consumables.

**Enhanced Delivery:** BioTess' innovative and advanced cyclodextrin inclusion of each sodium caprate molecule provides state-of-the-art protection as the molecules journey through the body toward their destination.

**Effective Flavor Masking:** Due to its advanced cyclodextrin inclusion, CyLoc CapraMax sodium caprate is virtually flavorless, thus widening its applications.

**Consumer Appeal:** Addresses growing consumer demand for higher bioavailability.

**Dynamic Atomization:** Produced with Dynamic Atomization – resulting in stable, consistent powder quality and precise control over powder properties, including minimal residual moisture in the cyclodextrin complex.

**Extended 3-Year Shelf Life:** Attributable to the added protection of enhanced cyclodextrin inclusion.

**Quality Assurance:** Manufactured in a state-of-the-art facility in Arizona that adheres to the highest quality manufacturing standards with no artificial additives or fillers, which ensures its purity and safety.

**Scalability:** Available in a wide range of quantities to meet specific production needs.

**Competitive Advantage:** Stand out in the market with an easy-to-work-with, innovative ingredient that meets the growing global consumer demand for optimized bioavailability.

## OVERVIEW

### Ingredient

- Permeability enhancer – improves nutrient bioavailability.
- Safe and reversible action.

### Technology

- Advanced cyclodextrin inclusion technology creates a protective layer around the molecule.
- Results in unparalleled masking of both odor and flavor.
- Produced with Dynamic Atomization, which achieves stable, consistent powder quality and precise control over powder properties, including minimal residual moisture in the cyclodextrin matrix.
- **Enhanced delivery + boosted solubility + advanced bioaccessibility of your ingredient.**

### REFERENCES

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## Contact Us

Ready to innovate your product line with BioTess CyLoc CapraMax Sodium Caprate?

Contact BioTess today to learn how we can support your formulation needs and help you stay ahead of the competition.