



**MICROENCAPSULATED
COLD PRESSED OIL POWDER:
Benefits for Nutraceutical, Functional Food,
Beverage, and Beauty Product Applications**

Botanical Innovations



INTRODUCTION TO COLD PRESSED OIL

Introduction to Cold-Pressed Oils

What Are Cold-Pressed Oils?

Cold-pressed oils are extracted mechanically without the use of heat or chemicals, preserving their natural nutrients (omega fatty acids, vitamins, antioxidants).

Examples: Flaxseed oil, coconut oil, olive oil, avocado oil, hemp seed oil.

However, they are susceptible to oxidation, rancidity, and degradation due to their high unsaturated fat content, which necessitates encapsulation for stability.



MICROENCAPSULATION

Microencapsulation Overview

What is Microencapsulation?

Botanical Innovations proprietary encapsulation involves coating or entrapment of the oil with a protective material.

Purpose: Protects oils from environmental damage (light, oxygen), improves stability, enables controlled release, and makes oils easier to handle in dry powder form.



BENEFITS OF MICROENCAPSULATED COLD PRESSED OILS POWDERS

Benefits of Botanical Innovations Microencapsulated Cold-Pressed Oil Powders

Why Microencapsulate Cold-Pressed Oils?

- **Increased Stability:** Encapsulation protects delicate oils from oxidation and prolongs their shelf life.
- **Improved Handling:** Conversion into a powder form enables easy incorporation into dry mixes, capsules, or topical formulations.
- **Controlled Release:** Allows gradual release of the oil, ensuring efficacy over time.
- **Enhanced Solubility:** Water-dispersible powder can be easily integrated into beverages or food products.
- **Masking Flavour/Odor:** Minimizes strong flavours or odours associated with some cold-pressed oils.



NUTRACEUTICAL APPLICATIONS OF MICROENCAPSULATED COLD PRESSED OIL POWDERS

Benefits in Nutraceuticals

Enhanced Bioavailability: Encapsulated oils are protected through digestion

Improved Nutrient Stability: Delicate oils like flaxseed retain their omega-3 fatty acids without degradation.

Synergistic Formulation: Can be combined with other vitamins, minerals, and plant extracts for enhanced efficacy in supplements.



FUNCTIONAL FOOD & BEVERAGE APPLICATIONS

Functional Foods & Beverages

Application in Functional Foods and Beverages

Uniform Distribution: Powdered oil forms allow for even distribution in foods and beverages like protein powders, meal replacements, and fortified drinks.

Retention of Nutritional Value: Encapsulation prevents the degradation of sensitive compounds such as omega-3s, ensuring full nutritional impact.

Enhanced Taste & Texture: Microencapsulation masks strong flavours (e.g., bitter flaxseed oil) and avoids oily textures in beverages and dry mixes.

Example: Encapsulated hemp seed oil for powdered smoothie blends providing a plant-based omega-3 source without altering the taste.



BEAUTY & PERSONAL CARE APPLICATIONS

Botanical Innovations Cold-Pressed Oils Powders in Beauty Products

Longer-Lasting Effects: Controlled release provides longer-lasting hydration and nourishment when applied to the skin.

Improved Formulation Stability: Encapsulation reduces oil separation in creams and lotions, improving texture and product performance.

Enhanced Efficacy: Protects delicate nutrients (e.g., vitamin E in avocado oil) that support skin regeneration and protection against environmental damage.

Reduced Sensitivity: Gentle release of oils like coconut or argan oil decreases the risk of skin irritation in sensitive skin formulations.

Example: Encapsulated argan oil powder in anti-aging creams for gradual hydration and reduced skin irritation.



CASE STUDY 1: Microencapsulated Flaxseed Oil Powder in Nutraceuticals

Case Study 1: Botanical Innovations Microencapsulated Flaxseed Oil Powder in Nutraceuticals

Overview:

Product Type: Omega-3 fatty acid supplement tablets.

Challenges: Flaxseed oil is highly prone to oxidation, leading to rancidity and loss of efficacy.

Solution: Botanical Innovations flaxseed oil powder.

Outcome: Improved stability and bioavailability over time, maintaining efficacy in omega-3 content.



CASE STUDY 2: Microencapsulated Coconut Oil in Functional Foods

Case Study 2: Botanical Innovations Microencapsulated Coconut Oil in Functional Foods

Overview:

Product Type: Protein shakes and meal replacement powders.

Challenges: Coconut oil is difficult to incorporate into powdered foods due to its oily nature and can develop off-flavours in high-temperature processing.

Solution: Microencapsulated coconut oil powder enhances mixability and retains flavour without clumping or oily residues.

Outcome: Enhanced product texture and shelf life, with consumer acceptance due to the pleasant, neutral taste in protein shakes.



CASE STUDY 3: Microencapsulated Avocado Oil Powder in Skincare

Case Study 3: Botanical Innovations Microencapsulated Avocado Oil in Skincare

Overview:

Product Type: Anti-aging night cream.

Challenges: Avocado oil is rich in fatty acids and vitamins but highly prone to oxidation, which can reduce the product's efficacy over time.

Solution: Botanical Innovations Avocado Oil Powder ensured gradual release and protected the oil from exposure to air.

Outcome: The cream maintained its texture and effectiveness for over time.



MARKET POTENTIAL AND CONSUMER TRENDS

Market Potential & Consumer Trends

Growing Demand for Natural & Functional Products

Increasing consumer preference for clean-label, natural, and sustainable ingredients in both food and personal care products.

Nutraceutical Market: Growing demand for omega-3 supplements, joint health, and cognitive function products.

Functional Foods & Beverages: Consumers seek convenience with health benefits, especially plant-based sources of nutrients.

Beauty & Personal Care: Natural oils are favoured for their regenerative properties in skincare and haircare.



KEY TAKEAWAYS

Botanical Innovations microencapsulated cold-pressed oil powders offer numerous benefits, including enhanced stability, bioavailability, and ease of formulation.

They align with current consumer preferences for functional, natural products in nutraceuticals, foods, beverages, and beauty products.

Botanical Innovations Oil Powders transforms delicate, volatile cold-pressed oils into versatile, market-ready products.





TALK TO US

Botanical Innovations

Flavours, Fragrances & Ingredients for Health and
Wellness Applications

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