

SunCran® Naturelle

100% Natural Organic Cranberry Juice Powder – Carrier Free

PRODUCT INFORMATION

SunCran® Naturelle is a synergistic blend of 100% natural, carrier free, organic cranberry juice powder grown and processed from whole cranberries (*Vaccinium macrocarpon*) by Fruit d'Or in a 12:1 production ratio (whole fruit:juice powder) and the clinically proven prebiotic Sunfiber®. SunCran® Naturelle offers a clean label option for formulators along with USDA Organic certification, Non GMO Project verification, Low FODMAP Certification, Kosher and Halal.



A dual action formula to help support urinary tract and gastrointestinal health

Cranberries have long been cherished for their nutritional and medicinal properties. Today, cranberry products are most frequently used to help manage symptoms of Urinary Tract Infections (UTIs). It is estimated that >50% of women will get a UTI in their lifetime, with over 8 million having at least one every year.

SunCran® Naturelle contains only the soluble proanthocyanidins (PACs) that can bind to pathogenic bacteria associated with urinary tract infections, including *E. coli*, resulting in an anti-adhesion effect in the bladder. It has also been shown to reduce bacteria from infecting cells in the gut (anti-invasion effect). Cranberries are also an excellent source of antioxidants and polyphenols.

Sunfiber®, a prebiotic dietary fiber having more than 120 clinical trials showing efficacy for a variety of benefits including gut health, has been shown to improve the gut microbiome, which is the source of bacteria that can lead to UTIs.*

This synergistic effect of soluble PACs together with Sunfiber® offers both an improved gut microbiome and an anti-adhesion effect in the urine making SunCran™ Naturelle an excellent choice for addressing urinary tract and gastrointestinal health via everyday foods, beverages and supplements.*

Characteristics:

- ✓ Made from whole fruit cranberries DNA tested for authenticity by TRU-ID.
- ✓ Clean label / carrier free
- ✓ Free from carriers, gluten, GMO's, artificial colors, preservatives, sugars, sweeteners, pesticides.
- ✓ Standardized for soluble PACs
- ✓ 40% total dietary fiber
- ✓ Clinically supported benefits for addressing urinary and gut health* (recommended dosage 1 gram / serving)

Applications:

- ✓ SunCran® Naturelle is a cranberry juice powder that can be dispersed in water and imparts a vibrant characteristic red color. It can be incorporated into a variety of products including juices, smoothies, yogurt, powder drink mixes, nutritional bars, cereals and dietary supplements.

Claims:

- ✓ SunCran® Naturelle promotes anti-adhesion and anti-invasion activity, which helps support a healthy urinary tract and gut microbiome* (≥ 1 gram SunCran® / serving).



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SunCranTM Naturelle

Organic Cranberry Soluble Juice Powder – Carrier Free

Research:

Urinary tract infections happen due to fecal matter/pathogenic bacteria being introduced into the urinary tract. *E. coli* is thought to cause >70% of UTIs due to their ability to adhere to the lining of the urinary tract. It is known that soluble PACs can bind to *E. coli* and impair their ability to adhere to cell walls (anti-adhesion activity), resulting in a reduction in UTIs.

In vitro anti-adhesion activity (Data on file):

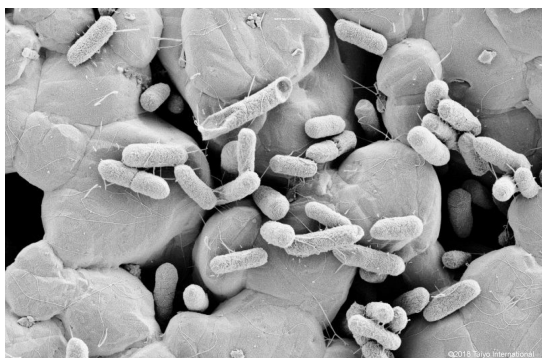
An *in vitro* study was conducted at Rutgers University to determine the ability of SunCran[®] Naturelle to bind to pathogenic *E. coli* bacteria and produce an agglutination reaction. It was shown that soluble PACs prevented *E. coli* from adhering to the urinary tract and bladder; allowing the bacteria to be flushed out before leading to infection.

Ex vivo anti-adhesion study (Data on file):

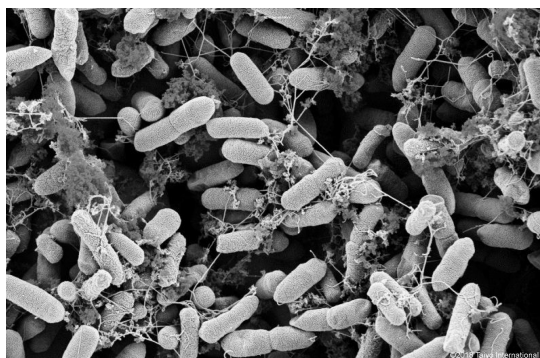
An *ex vivo* study was conducted at Rutgers University on 20 healthy volunteers. The volunteers consumed 1g of SunCran[®] Naturelle and then collected their urine. The urine was mixed with pathogenic *E. coli* to again examine the anti-adhesion activity. Moderate anti-adhesion activity was shown in 85% of the volunteers over the 24-hour testing period with peak activity at 6 hours.

In vitro anti-invasion study (Data on file):

An *in vitro* study conducted at the University of Wisconsin-Madison investigated the ability of SunCran[®] Naturelle to inhibit the ability of pathogenic *E. coli* to invade Caco-2 cells. This experimental design mimics what happens in the gut. This study demonstrated a dose-response decrease in the percent of *E. coli* that were able to invade these cells.



Scanning electron micrograph of extra-intestinal pathogenic *Escherichia coli*.



Scanning electron micrograph of extra-intestinal pathogenic *Escherichia coli* agglutinated in the presence of SunCran Naturelle.

Summary of SunCran[®] Naturelle Scientific Data:

We have clearly demonstrated how the soluble PACs in SunCran[®] Naturelle influence the pathogenic *E. coli* bacteria.* The mechanisms of anti-adhesion and anti-invasion are thought to influence the ability of *E. coli* to cause urinary tract infections. The greater literature shows promising results for cranberry helping with urinary tract health. Overall, SunCran[®] Naturelle now has an established mechanism that may compare favorably to the scientific literature regarding cranberries and urinary tract health.



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