



CITRUS BIOFLAVONOID COMPLEX



POWERFUL AND NATURAL ANTIOXIDANT AND ANTI-INFLAMMATORY INGREDIENTS

WHAT ARE THE BIOFLAVONOIDS AND WHERE WE CAN FIND THEM?

Bordas is an important and well-recognized company of vast reference in **many international markets as food, flavours, fragrances, nutraceuticals, pharmaceutical and animal feed ones.**

We manufacture flavonoids and we have developed our own line of citrus derivatives production (candied, cells, comminute, concentrates, dehydrates, fresh fruit, juices, peels, pulps, purees and slices), both organic and conventional:

- Bitter orange from Seville
- Sweet orange
- Blood orange
- Tangerine
- Grapefruit
- Lemon
- Lima

Citrus fruits are well known for providing large amounts of vitamin C, but they are a great source of natural bioflavonoids too.

Bioflavonoids is a term used to describe biologically active molecules, named flavonoids, founded in different compounds derived from plants, which improve health.

Each citrus contains different types of flavonoids, found in different amounts and concentration. The citrus fruits listed before contain high concentrations of the following bioflavonoids:

- Diosmin
- Hesperidin, from Sweet Orange
- Rutin
- Naringin, from Grapefruit
- Tangeretin
- Diosmetin
- Narirutin
- Neohesperidin, from Bitter Orange of Seville
- Nobiletin
- Quercetin

BENEFITS OF CITRUS BIOFLAVONOIDS COMPLEX

Bordas has a wide experience in the field of extraction and production of different active and functional ingredients.

Although all flavonoids are structurally related with others, they have different functionalities.

As each flavonoids offers separately different proven beneficial effects to human health, in Bordas company we create and develop infinitives and excellent natural formulations mixing different types of flavonoids. These mixes are commonly named **Citrus Bioflavonoids Complex (CBC)**.

Our tailor-made **Citrus Bioflavonoids Complex (CBC)**, which become an added value for different industries, are designed and created carefully to satisfy every requirement of our clients and to provide the desired health function.

Citrus Bioflavonoids have pharmacological and biochemical effects and are potentially useful for therapeutic purposes.

CITRUS BIOFLAVONOIDS: PROPERTIES AND BENEFITS IN HUMAN HEALTH



The benefits of the antioxidant and anti-inflammatory properties of the Citrus Bioflavonoids result in the following activities:

- **Antioxidant:** Thanks to this antioxidant properties, Citrus Bioflavonoids help to fight against free radicals, decreasing and preventing the oxidative stress.
- **Synergistic power:** Citrus Bioflavonoids and vitamin C are usually extracted from the same citrus fruits. They both have, separately, antioxidant power. This power increases significantly when they act together.

- **Potential anti-allergens:** Allergic diseases are often associated with an excess of oxidative stress in the body. Citrus Bioflavonoids help to eliminate these free radicals and to stabilize the reactive oxygen species.
- **Capillary resistance:** Studies have shown that certain Citrus Bioflavonoids can increase capillary resistance and strengthen the walls of blood capillaries. This activity may be related to its ability to protect collagen.
- **Healthy Circulation:** Citrus Bioflavonoids can also provide general benefits for the health of the circulatory system, preventing and even treating different vascular diseases, and so improving blood circulation.
- **Boost the immune system:** Several studies have shown that Citrus Bioflavonoids also help to maintain and improve the state and functions of the immune system, increasing the ability to provide a correct and rapid immune response.
- **Cholesterol and obesity:** Citrus Bioflavonoids have the ability to regulate blood cholesterol levels, producing beneficial effects on obesity.
- **Antimicrobial and antifungal:** There are many studies which have demonstrated the antimicrobial and antifungal effect of Citrus bioflavonoids.

WHY IS CITRUS BIOFLAVONOIDS COMPLEX INTERESTING FOR MY INDUSTRY?

The versatility of the Bioflavonoids Citrus makes them an ideal complement for different applications such as **food, beverages, dietary supplements, personal care products and solutions for animal feed.**

The application and functions of each Citrus Bioflavonoids Complex will always depend on the individual functions of each flavonoid, and the synergies created when forming the complex.

Depending on the sector and the beneficial action sought, Citrus Bioflavonoids Complex can be used for the following purposes and applications:

- **Pharmaceutical industry:**
 - **Flavouring:** Citrus Bioflavonoids Complex provide bitter taste notes to the final formulation.

- **Natural preservatives:** Citrus Bioflavonoids Complex can be used as natural preservatives thanks to its antimicrobial, antifungal and antioxidant properties.
- **Food and dietary supplements:** Thanks to its different benefits in vascular health, immune system, cholesterol control, etc., Citrus Bioflavonoids Complex can be a great interest in the pharmaceutical industry.



- **Personal Care Industries:**

- **Oral care:**
 - **Natural preservatives:** Citrus Bioflavonoids Complex can be used as natural preservatives in different oral care products.
 - **Oral health:** Thanks to its antimicrobial properties, Citrus Bioflavonoids can be used to protect the oral health.
- **Cosmetics:** Citrus Bioflavonoids have antioxidant, anti-inflammatory and UV protection properties, which make them very interesting for cosmetic and skin care industries.