

**SPECIAL BOTANICALS FOR NUTRITIONAL SUPPORT**

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**ABSTRACT**

A blend consisted in special botanicals can help the consumer access the activation of nutritional support in the human body. It can also help maintain healthy digestive processes as well as gut microbiome.

**Index Terms:** Healthy, diet, ingredients.

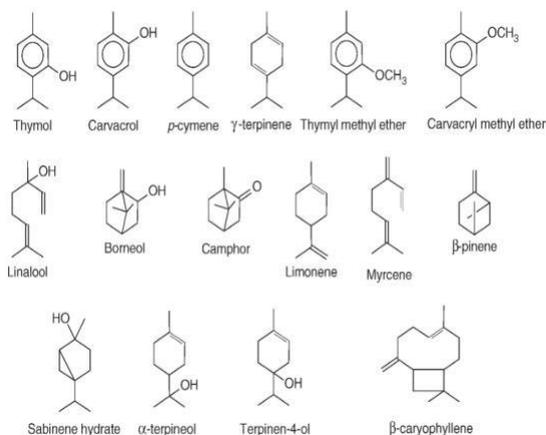
**I. INTRODUCTION**

WHEN different superfoods are blended together along with exercise and healthy diet, it helps the body to maintain normal and healthy gastrointestinal wellbeing. It also helps to support feelings of renewal and vitality. It maintains microbial balance at a normal level. It also maintains the food intake processes to be normal.

**II. Benefits of Ingredients**

Multiple nutritional ingredients are discussed in the paper that provide benefits individually as well as collective levels i.e., their combination can also pose various benefits to the human body. The benefits of natural and beneficial ingredients are mentioned as below.

**1. Thyme (leaf)**



**Figure 1: Terpenes in thyme oil.**

Thyme or *Thymus Vulgaris* has been highly regarded worldwide for years. Its extensive use in the medical sector has been developed from conventional herbs that transformed into high level medical treatments in

phytotherapy. Herbal thyme, thyme oil as well as thyme extracts have been used for bronchitis' symptoms as well as for whooping cough and catarrhs of upper respiratory tract. The development was mostly based on multiple experiments concerning in-vitro studies that revealed plentiful levels of pharmacological activities of both, plant extracts and essential oil. It also consists of spasmolytical and antimicrobial properties that are considered to be most important. The non-medicinal usage of thyme is not any less important as it serves as a major source for preservation in foods. It is used as a seasoning and as a component of culinary ingredients in many parts of the world. In addition to it, thyme oil is also used for cosmetic preparations.<sup>[1]</sup>

**2. Ginger (root)**

Ginger (*Zingiber officinale* (L.) Rosc) has been serving its purpose as a spice for a number of decades. Its roots, as well as the extracts obtained from it, include polyphenol chemicals, which have a high level of antioxidant activity, as well as 6-gingerol and its derivatives. Though it is worth mentioning that the digestive stimulating effects of ginger have been known for a long time such as the effects on the peptic juices such as bile, intestinal, gastric, and pancreatic juices were also discovered later.<sup>[2]</sup> Bile juice has a significant effect on fat uptake, as well as on fat metabolism, which impedes overall food digestion since fatty particles include all the other food parts and render them inaccessible to enzyme digestion. Lipase is one of the key factors that play an important role for digestion of fat. By the inclusion of ginger in animal diet, it was discovered that there was an increase in the intestine and pancreatic lipase.<sup>[3]</sup>

**3. Cinnamon (bark)**

Cinnamon has been a popular spice due to its extensive usage in various cultures. Cinnamon has also been used

as a carminative and stomachic for gastrointestinal difficulties as well as other symptoms, and it is still utilized for such purposes.<sup>[4]</sup> As per the ESCOP (German Commission E and the European Scientific Cooperative on Phytotherapy), the two medicinal herbs, *C. zeylanicum* and Cinnamon, have been approved. The bark is the part of the plant that is used for medicinal and culinary purposes.<sup>[5]</sup>

#### 4. Turmeric (root)

Turmeric is a botanical spice that is used widely in Asia and Middle Asia. It is not just used for flavour, but it is also thought to provide health advantages as an ingredient in many traditional remedies. It has also been added to processed foods, beverages, and nutraceuticals. It is a very important condiment that is used as an integral part in the culinary world in various nations for spice and to obtain yellow color in food as per the required intensity. Turmeric is such a well-known and healthy condiment because it contains bioactive components called curcuminoids. These are the primary phenolic compound classes found in turmeric. Their health benefits are attributed to curcuminoids that are linked with curcumin that is the chief constituent within curcuminoids. As per the scientific discoveries all sorts of clinical trials show that the extracts of turmeric that are rich with curcumin can show effective improvement for the subject's status along with reducing the risks concerned with diabetes and cardiovascular diseases and offering assistance for illness management.<sup>[6]</sup>

#### 5. Clove (seed)

Clove consists of multiple, minerals, fibers, and vitamins. The addition of ground or whole cloves can help to enhance the flavor of food while also offering important nutrients. 2 grams of cloves contains the following nutrients. Fiber: 1 gm  
Vitamin K: 2% of the Daily Value  
Manganese: 55% of DV  
Carbs: 1 gm  
Calories: 6

Manganese is one of the most essential minerals for the maintenance of brain function as well as for building stronger bones. In addition to all these benefits, these nutrients also contain rich antioxidant properties. These are the features that reduce oxidative stress. Cloves contain eugenol that is mainly responsible for acting as natural antioxidant.<sup>[7]</sup>

#### 6. Licorice (root)

Licorice is responsible for ascribing a number of different benefits by its consumption. For many decades, Licorice has been used extensively as folk and herbal medicines for the treatment of different diseases and health issues such as that related with the respiratory system and gastrointestinal symptoms.<sup>[8]</sup> A wide spectrum of various activities is known and are comprised of anti-ulcer, immune stimulatory, anti-microbial and anti-viral effects as well as anti-

carcinogenic and hepatic protective effects that lead to the protection of the endocrine, respiratory, cardiovascular, and nervous system.<sup>[9]</sup> Licorice also has a significant impact on all gastrointestinal issues since it restores the inner layer of the stomach and purifies the respiratory system. This occurs due to increase in the mucus production.

Licorice is composed of approximately 300 compounds including flavans, flavonoids, chalcones, phenolic acids, iso-flavonoids and iso-flavans, that also includes glabridin that is the main compound found in the hydrophobic part of the licorice extract.<sup>[8]</sup> About 3 to 5% of the triterpenoid saponin glycyrrhizin, quantity of the content depends on the species, is responsible for the sweet taste in licorice and is also considered to be the key active component of licorice.<sup>[10]</sup>

#### 7. Chamomile (flower)

Chamomile has been widely used for different purposes such as an astringent, antioxidant, anti-inflammatory and as healing medicine. As a conventional medicine it is also used for the treatment of ulcers, wounds, burns, bruises, eczema, skin irritations, gout, canker sores, sciatica, mastitis and for other issues. It is also useful in the treatment of skin inflammation, mucous membranes, respiratory tract, oral cavity, skin, gums, and a variety of other bacterial infections. In the form of aqueous extract, it has largely been used as sedative for calming nerves and to reduce anxiety to treat insomnia, nightmares, hysteria, and multiple other sleep related issues.<sup>[11]</sup>

#### 8. Echinacea (root)

- The following are some of the advantages of Echinacea.
- As per reports received from various laboratories, collagen-building and fibroblast activity can be inhibited.<sup>[12]</sup>
- The extracts of Echinacea have been reported to have significant antifungal properties by various vitro experiments where testing was conducted against multiple *Saccharomyces cerevisiae* as well as *Candida* species that also include *Candida Albicans*, which is the most common fungal disease in the skin of a human body.<sup>[13]</sup>

#### 9. Artichoke (leaf)

The extracts of artichoke leaves have been largely used for liver treatment in conventional medicines. Such therapeutic features have mostly been attributed to the content, cynarine (1,3-O-dicaffeoylquinic acid), present in these extracts. As per different assessments in pharmacology, it has been observed that artichoke can exhibit antibacterial, anti-oxidative, anti-carcinogenic, bile-expelling, LDL oxidation, inhibition of cholesterol biosynthesis as well as hepatoprotective and urinate properties. It is a large flower that is very rich with medicinal compounds and benefits.<sup>[14]</sup>

### 10. Fenugreek (seed)

It is used for the prevention of multiple serious terminal illness such as high blood pressure, heart conditions, viral, bacterial, and fungal conditions as well as cancer, obesity, and high cholesterol.<sup>[15]</sup>

### 11. Dandelion (root)

The Arabic physicians first used dandelion for medical purposes between the 10th and 11th centuries AD. It was used for the treatment of spleen disorders and liver diseases.<sup>[16]</sup> It was also used in North America for making infusions as well as decoctions using the aerial parts and roots of dandelion for curing indigestion and heartburn.<sup>[17]</sup> In the conventional Chinese medicines, it was primarily used for maintaining health of the respiratory tract. Dandelion was also used for the treatment of multiple disorders such as constipation, liver, eczema, gallbladder, rheumatic pains, and arthritis. There are many other properties that are attributed to dandelion as well as its bioactive components such as being anti-carcinogenic, anti-rheumatic, anti-inflammation, hypoglycemic and it possesses anti-nociceptive activities.<sup>[18]</sup>

### 12. Coriander (seed)

Coriander seeds are the part of the plant that is a dried fruit. It can be used ground or whole. The flavor of coriander seeds is tart and earthy, and it also gives of floral aroma when it is toasted. It is in responsible for supplying minerals, vitamins, and antioxidants to consumers, as well as benefiting human health. Coriander seeds as well as its leaves contain a large amount of Vitamin K that plays a vital role for clotting blood. It also helps in the prevention of several issues such as osteoporosis as it helps the human body to repair itself. Furthermore, it aids in the prevention of heart-related problems. It has a variety of effects that benefit heart health. This herb can also act as a diuretic that helps to flush the additional sodium from the human body and hence reduces the blood pressure. As per the research, it is also evident that coriander helps to reduce the chances of LDL bad cholesterol along with reduction of risk of atherosclerosis that is a type of coronary heart disease.<sup>[19]</sup>

### 13. Cranberry

Cranberry-based products in a variety of formulations have been subjected to intensive testing for several decades to assess their efficacy to aid in the management of Urinary Tract Infections (UTIs). As per the studies and research, there has not been any particular effect observed for the treatment of this problem using cranberry. Instead, the focus is diverted towards the preventative strategies. It has shown considerable effects as per the vitro and vivo studies with animals for preventing UTI. It works by the inhibition of type I and P-fimbriated uro-pathogens to the uroepithelium and impairs subsequent and colonization infections. Isolating the cranberry components has proven to be a difficult undertaking. Because it also considers a wide range of

fruit components and juice derivatives. According to the research, proanthocyanin/anthocyanidin moieties are powerful anti-adhesion amalgams.<sup>[20]</sup>

### 14. Papaya

Papaya is a commonly available fruit that is sold at reasonable prices and contains a high nutritional value. It contains low calories and is relatively rich with minerals and vitamins. Due to the lower value of calories i.e., 32 Kcal per 100 gm of fruit, it is a much-preferred fruit for people suffering from obesity and want to reduce their weight. It consists of a lower carotene content as compared to other fruits such as sitaphal, guava, plantains and apples that can help for the prevention of damage by free radicals. Green papaya, which is not ripe, is also used as a vegetable and contains all the nutrients except carotene. It is a rich source of various enzymes. Papain helps in the digestion of protein in food. In alkaline, neutral and an acid medium, vegetable pepsin offers a high amount in the unripe form and aids effectively for digestion.<sup>[21]</sup>

### 15. Mandarin

Mandarins are a rich source of Vitamin C that plays a key role for the prevention of infections and removal of free radicals while also offering support to the health of skin. It also contains considerable amounts of Vitamin A and B. The vitamin C in Mandarins helps to maintain the immune system function and prevents colds. It can flush out all the toxins from the human body and can help to move into the digestive system as they are a very good source of fiber as well. It can help to lower cholesterol and keep blood sugar levels balanced by slowing the absorption of food. It is a great source of strengthening bones as they contain magnesium, phosphorus and calcium that play a vital role for building strong bones, creating new ones, and for prevention of osteoporosis.<sup>[22]</sup>

### 16. Grapefruit

Grapefruit is a rich source of Vitamin A that is very important to support the immune system of a human body and keeps eyes and skin healthy. It also contains vitamin C, which helps to keep the skin healthy. It also contains folate, which is essential for a baby's development during pregnancy. Grapefruit also contains potassium, magnesium, and calcium. It is low in calories yet high in nutrients. Grapefruit is an incredible fruit to add into one's diet as it provides a considerable amount of fiber along with various other benefits, up to 15, minerals and vitamins. Due to its antioxidant properties, it protects the cells from harmful viruses and bacteria.<sup>[23]</sup>

### 17. Black Currant

Black currant berries are considered to be an amazing source for bioactive compounds including flavanols, anthocyanins, phenolic acids and procyanidins. Black currant is also a good source for bioactive polyphenols and are present as 500-1342 mg/100g of the total polyphenols with mostly the anthocyanins present as 160-411 mg/100 g. The polyphenol microcapsules of

black currant are a very favorable food additive to be incorporated into functional foods. It is due to the antioxidant content and bioactive constituents present in it that are beneficial for the health of a human body.<sup>[24]</sup>

### 18. Oro Blanco

Oro Blanco grapefruits are a rich source of vitamin-containing antioxidants that help to strengthen the immune system of the human body and consist of anti-inflammatory properties. They are a good source of fiber for the stimulation of digestive tract. It also contains potassium for balancing fluid levels of the human body.<sup>[25]</sup>

### 19. Pumpkin Seed

According to the research, pumpkin seeds have a high nutrient profile that can help with a variety of health issues. They are high in unsaturated fatty acids, minerals, vitamins, and proteins, which can assist to lower the risk of chronic diseases such as cancer. They are a very good source of various nutrients and offer a high level of minerals and vitamins even in small servings. They are quite high in calories, so it recommended to be consumed in limited portion to maintain healthy weight.<sup>[22]</sup>

### III. Nutrition Facts

Serving Size: 1 drop

Servings per container: 30

Amount Per Serving: %DV %VD

Calories 6

Carbohydrate 2g 1%\*

Total Sugars 1g †

Includes 1g Added Sugars 2%\*

\*Percent Daily Values are based on 2,000 calorie diets.

†Daily value not established

### IV. CONCLUSION

The combination of various natural ingredients can help the body to absorb nutrients and vitamins that can help to prevent the aging process in various ways while also including better vision, healthier and brighter skin, and promotion of joint health. In the case of an improper combination, the food becomes more difficult to adjust, causing the consumer to feel weighed down and sluggish. A good combination contributes to a smooth and efficient digestive system.

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