

**PUBLISHED COPY****ABSTRACT****FOOD INDUSTRY SUPPLEMENT PRODUCT**

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The subject of the invention is a food industry supplement product. The product is characterized in that it contains 40-50 parts by weight of lyophilized beet extract, 30-40 parts by weight of lyophilized sour cherry pulp, optionally 10-20 parts by weight of lyophilized broccoli extract, further optionally 0.5-10 parts by weight of lyophilized grape leaf or grape skin extract.

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**FOOD INDUSTRY SUPPLEMENT PRODUCT**

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The invention relates to a food industry supplement product.

Many such food supplement products are known, having a beneficial effect on health, and their regular consumption helps to prevent certain diseases.

Our goal was to develop such a food supplement product that contains natural plant substances in the lyophilized state.

As plant substances, it contains lyophilized beet, sour cherry, broccoli, lyophilized grape leaf pulp or grape juice or skin.

The mild laxative effect of candied preserves made from the fruit of the sour cherry (*Prunus cerasus* L.) is known (Varró A.: "Curative effects of medicinal plants," p. 219, Kaposvár, 1991).

The tea prepared from the fruit stems is used primarily for preparation of tea. Hungarian patent specification 212 718 discloses cocktails which contain beet and/or horseradish extract.

We set ourselves the goal of producing a preferably powderlike product containing natural lyophilized plant substances that can be used as a food supplement.

The food supplement has an antioxidant effect and the ability to strengthen and regulate the heart muscle, and it may also serve to protect the liver.

The subject of the invention is therefore a food industry supplement product.

The product is characterized in that it contains 40-50 parts by weight of lyophilized beet extract, 30-40 parts by weight of lyophilized sour cherry pulp, optionally 10-20 parts by weight of lyophilized broccoli extract, further optionally 0.5-10 parts by weight of lyophilized grape leaf or grape skin extract.

We preferably use Othello grape skin as the grape skin.

It is advisable to market the product in tablet or capsule form.

The most important active substance of beet (*Beta vulgaris* var. *rubra*) is the plant dye anthocyanine, which is a flavonoid derivative.

This plays an important role in the prevention and treatment of cancer diseases.

Thanks to the fiber content, it is also effective in those suffering from gastrointestinal disorders.

The iron content is also significant, so that its consumption is recommended for those suffering from anemia.

Beet has an antioxidant effect, it reduces high blood pressure and arteriosclerosis, and furthermore increases the body's resistance.

An important component of beet is betaine. Betaine is a lipotropic substance, like methionine, choline and inositol.

The primary function of these substances is to prevent the accumulation of large amounts of fat in the liver.

Lipotropic substances increase the formation of lecithin in the liver, which keeps cholesterol in a more soluble state.

Lipotropic substances moreover detoxify the liver and increase the resistance to disease.

Lipotropic substances moreover boost the production of phagocytes in the body, which devour viruses and bacteria and destroy harmful or foreign tissues in the body.

In addition to betaine and choline, beet contains xanthines, vitexin, fecal acid, vitamins A, B and C, oils and sugars, among others.

The fruit of the sour cherry (*Prunus cerasus* L.) is high in vitamin C and anthocyanine.

There are also found therein fruit acids, fruit sugars, procyanidines, circulatory enhancers and free radical scavengers.

Sour cherry pulp has an anti-infarction effect. It may be used as an infarction preventive, as well as a strengthener of heart function.

It has analgesic and antipyretic effects, and can also be used as an anti-arthritis.

The active substance of broccoli (*Brassica napus* var. *napus* = Broccoli cruciferae) is gluconopin (3-butenyl mustard oil), which is a sulfur-containing compound.

This is effective against both Gram positive and Gram negative bacteria, and also against influenza.

The leaves of the grape (*Vitis viniferae*), the juice of its berry or its skin contain grape sugar and other sugars.

The skin of red grapes contains tannins and anthocyanines, which have a disinfectant effect.

Their content of vitamin C and other vitamins is also significant.

Plant extracts can be placed in a powder form by lyophilization.

Spray drying is not recommended, since this process also degrades many valuable compounds of the extracts.

We prepare the product according to the invention by mixing the lyophilized powder of the individual components, and then place the mixture in tablet or capsule form.

It is advisable to use grape sugar as the tableting agent.

However, the product can also be consumed in powder form.

We demonstrate the product according to the invention with the following examples.

#### Example 1.

#### Preparation of lyophilized beet powder

Enough water is poured onto the washed, peeled, sliced beet root to cover it.

We blend the mixture to a pulp, then dehydrate it at 40 °C on a freeze-drying tray.  
We thus obtain a dark red powder.  
The drying loss of the lyophilized beet powder is 4.7 wt. %.

Example 2.  
Preparation of lyophilized sour cherry powder

We wash the cherry fruit and remove the pits, then add enough water to cover and blend the mixture to a pulp.  
We freeze-dry the pulp at 40 °C on a freeze-drying tray.  
The drying loss of the lyophilized sour cherry powder is 5.6 wt. %.

Example 3.  
Preparation of lyophilized broccoli powder

We wash the broccoli, pick out the florets, and add enough water to cover.  
We then blend the mixture to a pulp.  
We freeze-dry the pulp at 40 °C on a freeze-drying tray.  
The drying loss of the lyophilized broccoli powder is 8.5 wt. %.

Example 4.  
Preparation of lyophilized grape skin powder

We add enough water to cover the washed grape skins, then blend the mixture to a pulp.  
We freeze-dry the pulp at 40 °C on a freeze-drying tray.

Example 5.  
Preparation of lyophilized grape leaf powder

We chop up the washed grape leaf, then add enough water to cover.  
We blend the mixture to a pulp.  
We freeze-dry the pulp at 40 °C on a freeze-drying tray.

Example 6.  
Preparation of the food supplement product

We measure out 40 parts by weight of beet powder, 40 parts by weight of sour cherry powder, 10 parts by weight of broccoli and 10 parts by weight of grape leaf powder in a mixing device.

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