



DIZBA

Herbal Extract Company

We have been able to acquire the technical knowledge of production and packaging using the latest technologies of all kinds of herbal extracts, essential oils and pigments in high purity and quality. The use of these technologies will increase the quality and reduce the production costs of these products.

Herbal Extracts

Saffron	Damask Rose	Boswellia	Jujube	Sumac	Spirulina
Carrot	Pot Marigold	True Cardamom	Date Seed	Savory	Lavender
Tomato	Safflower	Dog-Rose	Coriander	Ganoderma	Sesame
Spinach	Flax	Coffee	Black Pepper	Liquorice	Barberries
Turmeric	Rubia Tinctorum	Rosemary	Fennel	Opium Poppy	Bindii
Henna	Milk Thistle	Beetroot	Tarragon	Paprika	Bay laurel
Pistachio	Pistacia Terebinthus	Thymes	Anise	Indian gooseberry	frankincense

Damask Rose

Damask Rose is the name of a type of rose. In addition to its good aroma and beautiful appearance, this plant also has medicinal properties. Rose has many advantages and benefits for health and beauty. Damask Rose is rich in vitamin A, vitamin E and vitamin C, which are powerful antioxidants that form the medicinal properties of rose and have great benefits for the body. In addition to these vitamins, Rose contains selenium, magnesium, manganese and potassium, all of which strengthen the body's immunity and prevent diseases from adversely affecting the body.

The benefits of using the extract and essence of the rose flower

- The presence of effective compounds in a much higher amount in the same volume
- Easier conditions for storage and transportation
- Absence of impurities and heavy metal elements
- Reducing the potential of microbial contamination and increasing product shelf life
- Increasing the quality and nutritional value of the product



Saffron and its applications in traditional and modern medicine

Saffron has a warm and dry nature. It also has a variety of constituent compounds that make this valuable spice even more popular, of which crocin is the most well-known. The concentrations of these compounds indicate the quality of saffron and its extracts.

Modern medicine has studied the healing properties of saffron and its constituent compounds by performing various experiments and has confirmed these properties in terms of therapeutic performance.



The advantage of using saffron extract instead of saffron strands

- we can have a much higher active ingredient in a smaller volume
- reducing the amount of Aflatoxin in the final product, which plays a key role in product quality
- Easy and safe storage
- Easy shipping



Sesame

Sesame is an edible seed and plant that is native to India, Africa and the Middle East and is considered the oldest oil seed in the world. Sesame seeds are rich in essential minerals such as zinc, copper, magnesium and calcium. In addition, sesame seeds are very rich in vitamin B, vitamin E, antioxidants, fiber and protein. Also, sesame has a large amount of protein and various polyphenols, which provide various useful properties. Sesame seeds are very nutritious; only 100 grams of these seeds can have 573 kcal of energy.



Sesame Peeling

The traditional method of sesame peeling and cleaning is to soak the seeds in water to swell the seed, and then use buoyancy sorting to separate the peels from the seeds. During the flotation separation of seeds and peels, brine can be used to adjust the density of water to promote better separation. Hot dilute alkali solutions such as sodium hydroxide, sodium borate, and sodium hypochlorite can be used to loosen or break the sesame seed peels.

Benefits of using our specific sesame's peeling machine:

- Dry type sesame peeling system.
- High peeling rate of 99%.
- High production efficiency and perfect results.
- Constant peeling process without modifying sesame's natural properties.
- Improved peeling systems via advanced technology.
- No chemical or salt used during Sesame Peeling Process.

The traditional method of extracting oil from sesame

Sesame oil is heated up to 100 degrees in hot press oil extraction. The important point here is that the properties of sesame oil obtained by this method are reduced due to high heat and in some cases completely lost and replaced by harmful substances, which causes diseases such as digestive and vascular problems and liver and breast cancers. In order to solve these problems, this oil obtained from sesame must be industrially purified by grinding or hot pressing method, which is a difficult and Costl task.

Sesame oil extraction with a cold press machine does not use heat. The oiling process in the sesame oiling machine (cold press) is done at a maximum temperature of 40 degrees Celsius. This method has an advantage over hot pressing and it is possible to preserve the properties of the oil to some extent.

Our company has succeeded in producing high quality sesame oil by using modern industrial systems. In this method, unlike traditional methods, there is no need to separate the sesame seed skin and the oil extraction process is done directly. This leads to the reduction of water consumption and preservation of the environment due to the induction of salinization resulting from the use of salt water, which is used in traditional methods to separate sesame seed skin.

In this method, the oiling process is done completely and other side products with lower efficiency such as flour are not obtained. Therefore, oil production efficiency increases from 37% to 60%. The oil produced by this method has the ability to tolerate a higher temperature and the smoke point of the oil increases from 220 degrees to 265 degrees.

Advantages of using new technologies in sesame oil extraction

- 1) increasing the smoke point of sesame oil from 220 degrees to 265 degrees
- 2) No formation of foam during the production process
- 3) Increasing oil production efficiency from 37 to 60 percent
- 4) No need for salt water and mixer to separate sesame seed skin
- 5) No destruction of the environment
- 6) Absence of toxic compounds such as oxalate
- 7) Residue that can be used for livestock feeding



Infusion of various herbal extracts in sesame oil for the first time in the world

- Using this method, it is possible to benefit from the therapeutic properties of various medicinal plants in the composition of sesame oil.
- These extracts are completely suspended in the oil and do not settle.
- In addition to various therapeutic properties, they will give a pleasant taste, smell and color to the oil as well.

In order from the right:

first two examples: combination of sesame oil and saffron extract (high concentration)

The second two samples: the combination of sesame oil and saffron extract (low concentration)

The third two samples: the combination of sesame oil and rosemary extract.

The fourth two samples: the combination of sesame oil and Damask Rose extract

Black Seed (*Nigella sativa*)

Black seed oil is rich in antioxidants and prevents diabetes by reducing blood sugar and cholesterol levels. This oil helps the digestion process and strengthens the digestive system. It is used to control indigestion, reduce stomach gas, eliminate anorexia and diarrhea.



Raisins Sap

For the first time in the world, DIZBA Technology has succeeded in producing raisin sap in very high purity without any additives. Using modern technologies, this company has the ability to produce all kinds of extracts, essential oils, oils, etc.

Raisins are dried grapes. This drying process concentrates both the nutrients and sugars present in grapes, making raisins nutrient and calorie-dense. Raisins are produced commercially by drying harvested grape berries. For a grape berry to dry, water inside the grape must be removed completely from the interior of the cells onto the surface of the grape where the water droplets can evaporate. However, this diffusion process is very difficult because the grape skin contains wax in its cuticle, which prevents the water from passing through. In addition to this, the physical and chemical mechanisms located on the outer layers of the grape are adapted to prevent water loss. The three steps to commercial raisin production include pre-treatment, drying, and post-drying processes.



Pistachio Hull Extract

Pistachio hull (external soft shell of pistachio) is the major part of pistachio by-product that has a high content of bio-active compounds (such as polyphenols, tocopherols, dietary fibers, essential oils, and unsaturated fatty acid) with antioxidant properties and health-promoting effects.

Studies have demonstrated how pistachio hull extract acts as antioxidant, cytoprotective, and photoprotective and shows antibacterial, anti-inflammatory, anti-melanogenic, and anti-mutagenicity properties. Several studies evaluated the use of pistachio hull as a source of healthy and technological compounds that could be used in food and pharmaceutical industries to improve their product stability and nutritional characteristics.



Cardamom essential oil

Cardamom Essential Oil is an intriguing oil to explore for both aromatic and therapeutic blending purposes. Aromatically, Cardamom Essential Oil is a spicy- sweet middle note that blends well with other spice oils, citrus oils, wood oils, and so many other oils.



Frankincense

Frankincense is the gum of a tree called Bosulia. The color of frankincense is bright yellow. Bosolic acid is an active substance in frankincense, whose structure is similar to steroids and has the same function as painkillers and anti-inflammatory drugs. In addition to bosolic acid, frankincense is rich in carbohydrates and essential fatty acids. Medical research says that frankincense contains 60-85% resin, 6-30% gum and 5-9% essential fatty acids.



jujube

Jujube is a fruit known as "red date". The jujube tree is so full of properties that none of its parts can be overlooked. Jujube root is used to treat digestive diseases and jujube leaf decoction is used as a sedative. Also, jujube fruit has countless medicinal properties that are used for various purposes. This fruit is a good source of vitamin C and contains significant amounts of minerals. It also has protein, carbohydrates and minerals of calcium, phosphorus, iron, carotene, thiamin, riboflavin, niacin and fluoride. It contains pectin (as calcium pectate) as a soluble fiber effective in reducing fat and blood sugar. The total fat content of jujube fruit is very low. The ratio of unsaturated fatty acids to total fat in jujube fruit is high.



Sumac

Sumac belongs to about 35 species of plants in the family Anacardiaceae.

Sumac comes from the Aramaic language and means red.

A wide range of nutritional and pharmaceutical chemical elements such as tannins, flavonoids, anthocyanins, organic acids, flavonoids, proteins, fibers, essential oils, nitrates and nitrites have been identified in sumac.

This plant also contains minerals useful in the treatment of various disorders and contributes to various biological processes.



Benefits of using sumac extract as an alternative to sumac

- Existence of effective compounds in much higher amounts in the same volumes
- Absence of infections caused by the activity of *Aspergillus* fungi and their production of aflatoxin
- Easier storage and shipping conditions
- Absence of impurities and heavy metal elements
- Reduces the potential for microbial contamination and increases product shelf life
- Increases the quality and nutritional value of the product
- Absence of salt in sumac extract unlike ground sumac



Turmeric

The spice known as turmeric may be the most effective nutritional supplement in existence. Many high-quality studies show that turmeric has major benefits for your body and brain. Many of these benefits come from its main active ingredient, curcumin.



- Turmeric contains bioactive compounds with medicinal properties
- Curcumin is a natural anti-inflammatory compound
- Turmeric can increase the antioxidant capacity of the body
- Curcumin can boost brain-derived neurotrophic factor
- Curcumin may lower your risk of heart disease
- Turmeric may help prevent cancer
- Curcumin may be useful in treating Alzheimer's disease
- Arthritis patients respond well to curcumin supplements
- Curcumin has benefits against depression
- Curcumin may help delay aging and fight age- related chronic diseases

Spirulina



Spirulina is a type of green algae that can be used as a dietary supplement. People consider spirulina a superfood because of its excellent nutrients and health benefits. Spirulina is high in protein and vitamins, making it an excellent dietary supplement for vegans. Research has shown that spirulina has antioxidant and anti-inflammatory properties, as well as the ability to help regulate the immune system.

Pomegranate Seeds



Pomegranate fruit hosts a range of vitamins and minerals. The health benefits of pomegranate are wide-ranging thanks to ellagic acid, which is found naturally in pomegranates. Ellagic acid is a natural, yet powerful nutrient-boosting antioxidant.

Wheat Germ

A wheat germ is a part of the wheat kernel that may help in reproducing the plant. Naturally, it contains the nutrients needed to grow and develop into a healthy, new organism.

The health benefits of wheat germ may include a boost to the immune system and a preventative measure against cardiovascular diseases. It may also have anti-aging properties, and can positively affect mental agility, muscle development, stamina, and wound healing. The nutrients in wheat germs might even aid in digestion, prevent damage to the arteries, and help in weight loss.



Common Hop (*Humulus lupulus*)



Powdered extract of hops is derived from the hop cones, or flowers, of the hop plant. This extract generates the familiar aroma and taste related to the hoppy characteristics of beer.

Because this extract is derived from the whole hop cones, they represent the unique and complex combination of chemicals (known as terpenes) that produces the distinct waves of scent for that type of hops.

Ashwagandha



Ashwagandha has been called the king of medicinal herbs. It's best known for reducing stress and anxiety. It may also modestly enhance various aspects of physical performance, increase testosterone levels, and improve reproductive health, but more research is needed to confirm these effects.

Wild Rue Oil (Peganum Harmala)

Harmal, is an arid plant widely distributed in Saudi Arabia, throughout the Middle East, and South Asia. It is a medicinal plant used in folk medicine to treat diseases such as diabetes mellitus, fever, sore throat, and syphilis.

The Harmal plant shows certain therapeutic properties like the stimulating action on the motor tracts of the central nervous system and cerebrum. Earlier, this plant was used as an aphrodisiac and a purifier. With all these properties, it has anti-bacterial properties as well.



Grape Seed Oil



Grapeseed oil is high in polyunsaturated fatty acids (PUFAs), mostly omega-6 fatty acids. According to the American Heart Association, PUFAs may be beneficial to your heart if they're used in place of saturated fats and trans fats in your diet. Grapeseed oil is a good source of vitamin E, even more so than olive oil. Vitamin E is a vitamin that works as a fat-soluble antioxidant, which helps protect your cells from damaging free radicals that have been associated with cancer, heart disease, and other chronic illnesses. Vitamin E also supports your immune system.

Chili Pepper

- Chili peppers are a rich source of spicy-hot capsaicin.
- They are also very high in antioxidant carotenoids, which are linked to numerous health benefits.
- Here are the main bioactive plant compounds in chili peppers:
 - Capsanthin. The main carotenoid in red chili peppers — up to 50% of the total carotenoid content — capsanthin is responsible for their red color. Its powerful antioxidant properties may fight cancer.
 - Violaxanthin. The major carotenoid antioxidant in yellow chili peppers, violaxanthin accounts for 37–68% of the total carotenoid content.
 - Lutein. Most abundant in green (immature) chili peppers, lutein's levels decrease with maturation. High consumption of lutein is linked to improved eye health.
 - Capsaicin. One of the most studied plant compounds in chili peppers, capsaicin, is responsible for their pungent (hot) flavor and many of their health effects.
 - Sinapic acid. Also known as sinapinic acid, this antioxidant has a variety of potential health benefits.
 - Ferulic acid. Similarly to sinapic acid, ferulic acid is an antioxidant that may help protect against various chronic diseases.



Echinacea Angustifolia



Echinacea, also known as purple coneflower, is the most popular herb belonging to the daisy family.

Today, people use echinacea to shorten the duration of the common cold and flu and reduce symptoms such as sore throat (pharyngitis), cough, and fever. Many herbalists also recommend echinacea to help boost the immune system and help the body fight infections. Echinacea angustifolia extract is mainly composed of Echinacoside, Polyphenols and artichoke acid.

Due to the fact that our company is a producer of advanced equipment for the processing of medicinal plants and also has the technical knowledge of processing these plants in the form of various derivatives such as extract, oil, essential oil, etc., the cost of production is greatly reduced and the added value of the final product is high.



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