

ON EDIBLE BIO-SALT

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Abstract: The concept of edible bio-salt was discussed; the main characteristics and the trends of research and development of edible bio-salt in the world were introduced.

Key words: Edible Bio-salt; Characteristics; Research and development

In recent years, a new variety of edible salt began to appear in the world, and it has gradually developed into a new salt industry, it is bio-salt.

1. The concept of Bio-Salt

What is Bio-Salt? Just as its name implies, the bio-salt means the edible salt produced from biomass feedstock. Differently from sea and lake salt, well and rock salt, It is a completely new salt variant.

For the time being, the mainly raw materials, used to produce bio-salt, are terrestrial halophytes and marine algae. According to some characteristics of the bio-salt products having appeared in the markets, the bio-salt is defined as follows: bio-salt means the new variety of edible salt, which is extracted by a certain technique from seawater-irrigated vegetables and marine algae mixed with a certain percentage and which naturally contains perfect mineral balance.

2. The main characteristics of Bio-Salt

The main characteristics of Bio-Salt are as follows:

2.1 Source of plants

The bio-salt products are produced with plants, which is the main characteristics of bio-salt. The plants as raw materials of bio-salt can tolerated high-level salinity, growing on heavy saline soils or naturally living in the ocean. Only those plants can accumulate large

amount of mineral elements so as to ensure the production efficiency. Generally, the feedstock plants are edible plants with a long food history.

2.2 Perfect balance of mineral elements

Differently from the traditional refined table salt, the bio-salt not only contains naturally lower sodium and higher potassium consistent with the requirements of low sodium salt, but also contains other essential mineral elements and trace elements with a perfect mineral balance.

2.3 Being rich in organic nutrients and bioactive iodine

The feedstock plants of bio-salt, as the traditional vegetables or edible seaweeds, are usually of high nutritional value with a long food history. Those plants are rich in protein, amino acids, fats, carbohydrates, vitamins, carotenoids, bioactive iodine and some other bioactive substances. Depending on the different processing technology, some bio-salt products retain those organic nutrients and bioactive iodine.

2.4 No containing any chemical additives

The feedstock plants of bio-salt are cultivated with seawater or naturally live in the sea.

Because the production process of bio-salt does not involve any chemical substance, the bio-salt itself does not contain any chemical additives and the toxic heavy metals in the bio-salt are also extremely rare.

2.5 Being helpful to the prevention and treatment of hypertension and some other diseases.

Refined table salt mainly consists of NaCl, about 95% and more. According to Doctor advises, overdose of sodium can cause many dysfunction of human body organs, such as high blood pressure, heart, liver and kidney disease, potassium deficiency and so on. It can also promote diabetes, swelling, obesity, insomnia and stroke.

Bio-salt of naturally low sodium salt and containing perfect mineral balance, combines the goodness of precious minerals and the good qualities of seawater vegetable and seaweed. The bio-salt is beneficial to human health and helpful to the prevention and treatment of hypertension and some other diseases. Certainly, it is also suitable for the health-conscious consumers and pregnant women.

3. The trends of research and development of bio-salt in the world

Up to now, the bio-salt products are produced and marketed only in very few countries and are relatively expensive. At present, the international research and development of

bio-salt are mainly concentrated in three areas: first, study on the biological activities and medicinal value of the feedstock plants; secondly, study on the production technique of bio-salt; thirdly, study on the medical roles of the bio-salt products

To date, the market of bio-salt in China is still a blank. The authors, as researchers of halophytes for 20 years, have first proposed the concept of bio-salt in China and the concept of bio-salt has gradually aroused the attention of government, scholars and salt-industry entrepreneurs. Moreover, the production technique of bio-salt has also been fully studied by the authors under the aids of the governmental science funds.

4. Conclusions

Bio-salt, as a new variety of healthy edible salt, will definitely promote the development of the health cause of humankind. Bio-salt will be an ideal alternative to table salt for the patients of high blood pressure, cardiovascular disease, kidney disease, stroke and diabetes so on.

As a new variety of edible salt, undoubtedly the bio-salt products will have a very broad market prospects. Therefore, we have the reason to believe that the bio-salt will lead a worldwide green revolution of the edible salt industry in the near future.