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METHOD OF MANUFACTURING OF THERAPEUTIC FOOD SUPPLEMENT

The invention is related to food and pharmaceutical industries and particularly to method of manufacturing of therapeutic food supplement from algae – FUCUS and LAMINARIA.

I. Method of manufacturing of therapeutic food supplement from algae.

Melted dry algae-macrophyte and/or wet algae is washed with distilled ozone saturated water. Then, batches of swollen algae are blended in viscolizer and simultaneously sodium alginate is added.

Note:

Due to wash of dry algae by demineralised ozone saturated water aseptic product is obtained and consecutive viscolization provides further pasteurization of the product. As a result, we obtaint the product free from preservation agents.

The homogenization process proceeds in the hydrodynamic unit in distilled water at temperature of 65-75 ° C during 2-3 hours. During this process mechanical, hydrodynamic and hydroacoustic impact is applied at raw material. Due to such regime osmotic shock occurs in plant cells. The cell opens and its content penetrate into solution of sodium alginate and distilled water, reaching maximum viscosity of the product.

Note:

The transformed state of the cell permits human organism to assimilate most of valuable ingredients contained in the algae.

The obtained basic substance is cooled and forms gel of various degrees of viscosity depending on the amount of sodium alginate added.

The hot product is filled into sterile packaging materials: plastic or glass cans, jars, etc.

In order to provide the desired flavor and additional healthful properties any supplementary ingredients can be added to the basic substance.

The main technical results of the above inventive method are:

- increase of the product's purity;
- cost reduction.

Note:

The other existing manufacturing methods of algae food products have significant disadvantages.

1/ One method of producing food products from algae (laminaria) includes treatment with acid and alkali, heating, homogenization and packaging.

The disadvantages of this method are:

- multistage procedure that is always accompanied by manufacturing problems;
- inclusion of a number of inorganic agents which contaminate the final product.

2/ Another method requires the algae preliminary destruction and hydrolysis with further addition of the seed-oil, extract of the herb leaves and, also, aqueous solution of polyvalent metal food acids. The hydrolysis is carried out in an alkaline environment.

The disadvantage of this method is the injection of inorganic alkalis and acids leading to contamination of the product by organic impurities inclusive. In addition, the usage of seed-oil and herb leaves increases the cost of final product.

II. Production of therapeutic food products from algae on the basis of new technology

By using the new technology the line of unique "FUCUS" algae products was manufactured and offered to the market.

"FUCUS gel"

Composition: alginic acid and its salts, fucoidan, laminaran, fucoxanthine, beta-carotene vitamins A, C, D, Group B, PP, minerals in organic form, iodine, trace elements.

The dietary nutrition products based on "FUCUS gel" are produced.

The therapeutic and dietary nutrition products products have been clinically tested at the Central Clinical Hospital of Russian Academy of Sciences.

Production is placed in Pushchino town (Moscow Region) - Research Center of Russian Academy of Sciences.