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CHLORELLA SUSPENSION PREPARATION TECHNOLOGY

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Аннотация: В статье приведены правила, необходимые для приготовления суспензии из культуры зеленых водорослей хлореллы, и сведения о ее специфическом воздействии.

Ключевые слова: хлорелла, суспензия, питательная среда, микроэлемент, биореактор, физический, химический, микробиологический, углекислый газ, грамм, миллилитр мг/кг.

Annotation: The article provides the rules necessary for the preparation of a suspension from a culture of green algae chlorella, and information about its specific effect.

Key words: chlorella, suspension, nutrient medium, microelement, bioreactor, physical, chemical, microbiological, carbon dioxide, gram, milliliter mg/kg.

Today, in our country as well as in all countries, as the population continues to grow significantly, the population's demand for food products is also increasing. As

a result, it is necessary to grow and produce high-quality and ecologically clean livestock food products at the required level to eliminate these situations. Accordingly, our government is developing a number of measures to fulfill these tasks. [2. 5]

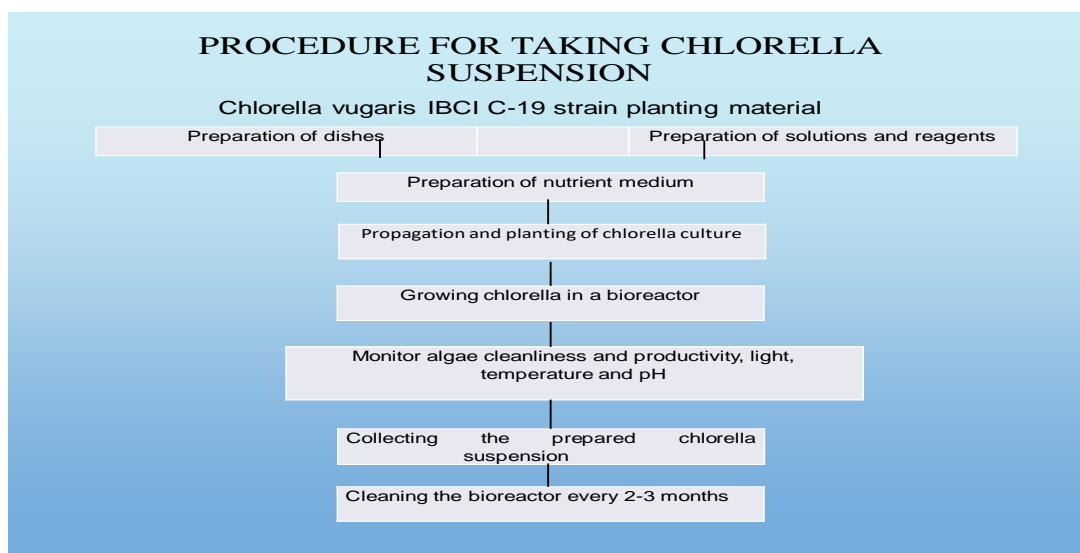
In particular, PF-60 of the President of the Republic of Uzbekistan dated January 22, 2022 "On the new development strategy of Uzbekistan for 2022-2026" and PF-5303 of the President of the Republic of Uzbekistan dated January 16, 2018 "On measures to further ensure the country's food security" decrees serve as a program in the fulfillment of these goals and tasks.

When searching for additional factors to increase productivity in livestock and poultry farming, focusing on the use of biologically active agents that stimulate the body's activity and are highly nutritious remains one of the main factors for achieving economic efficiency in the field.[3.8]

Nowadays, worldwide interest in chlorella green algae is increasing year by year. By using chlorella as a biologically active feed additive in livestock and poultry farming, it has been proven that production efficiency of 18% and higher can be achieved. [1.4.]

When growing chlorella green algae from mother cell culture in laboratory conditions, it depends on constant light distribution, provision of carbon dioxide gas (1:1) to saturate the liquid, enrichment of the solution with minerals and microelements, and temperature (25-27°C) at the required level. Of course, cell growth should not be left out of control. [4. 6.7]

1-table



Composition of special nutrient medium for growing chlorella suspension

2-table

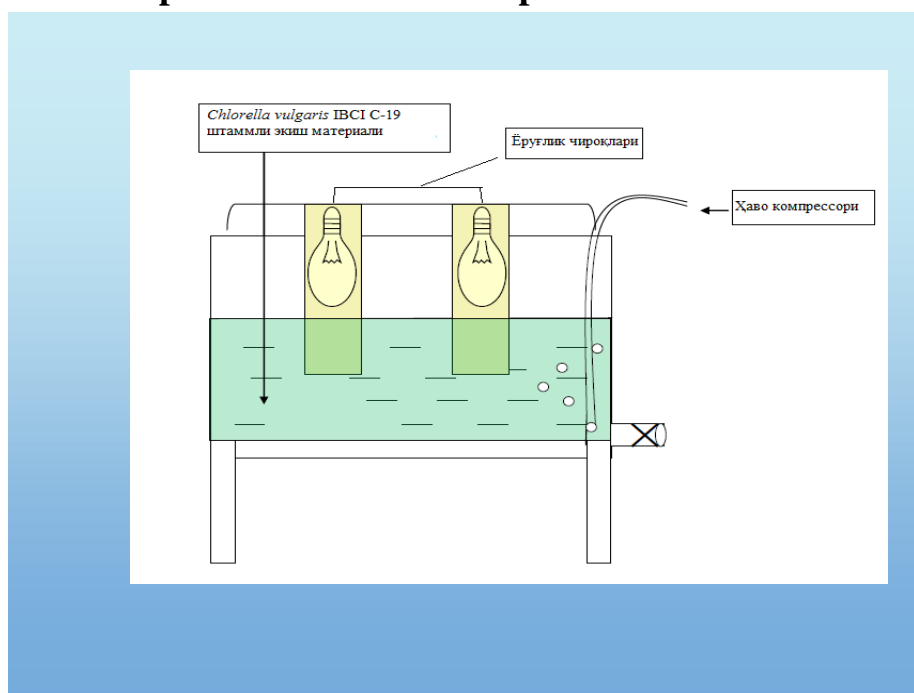
№	Reagents	The amount of solutions	
		10 liter	100 liter
1	KHO ₃ (potassium nitrate)	12,5 g	125,0 g
2	MgSO ₄ *7 H ₂ O (Epsom salt)	6,0 g	60,0 g
3	KH ₂ PO ₄ (potassium dihydrogen orthophosphate)	3,0 g	30,0 g
4	FeSO ₄ *7+H ₂ O (iron cupola)	3 mg	30 mg
5	Trilon B	0,11 g	1,1 g
6	Microelement	2,0 ml	20,0 ml

The amount of trace elements used in growing chlorella in the solution

Table 3

№	Reagents	Quantity in a liter of solution, gr
1	H ₃ BO ₃ (Boric acid)	28,6
2	MnCl ₂ *4 H ₂ O (Magnesium chloride is 4 molecules of water)	18,1
3	ZnSO ₄ *7 H ₂ O(Zinc cupro)	2,22
4	MoO ₃ (Molybdenum VI- oxide)	0,176
5	(Ammonium metavanadate)	0,230

Development of Chlorella suspension in a bioreactor



Description of Chlorella suspension and its physicochemical and microbiological parameters

4-table

S/n	Indicator name	Description and standard
1	Appearance, color, smell	Opaque dark brown liquid, odorless
2	Authenticity of <i>Chlorella vulgaris</i> strain	Young cells are flexible, and adults are spherical, round cells
3	Indicators of hydrogen ion concentration (pH), TB	6,5-8,5
4	<i>Chlorella</i> cell concentration, parts per milliliter	10
5	Microbiological purity, <i>Escherichia coli</i> in 1 milliliter	Not available
6	The content of toxic elements is not more than mg/kg Mercury Lead Cadmium Margumush	0,1 5,0 0,5 10,0
7	Storage of organochlorine pesticides, not more than mg/kg -hexochlorocyclohexane -dichlorodiphenyltrichloro-methane	0,02 0,05

Conclusions

1. *Chlorella* green algae is included in the list of 10 most nutritious plants in the world and contains more than 310 biologically active substances. Studying the unique properties of this plant is of scientific and practical importance.

2. By using *chlorella* plant suspension in animal husbandry practice, the ground is created to achieve high economic efficiency in the farm.

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