УДК 664.149

# CONSIDERRING PROS AND CONS OF SUGAR-CONTAINING PRODUCT CONSUMPTION

***Filipchuk Artyom Alexeevich,*** *a second-year student of landscape architecture and gardening institute, Russian State Agrarian University−Moscow Timiryazev Agricultural Academy, e-mail: artucha2003@gmail.com*
***The English language advisor, scientific director − Ulanova Olga Borisovna****, PhD (Psychology), an associate-professor, e-mail: undina52@gmail.com*

***Abstract.*** *The research is dedicated to advantages and disadvantages of sugar-containing product consumption. It also classifies sugar into kinds. It enumerates foodstuffs with different kinds of sugar in their composition. The paper compares chemical construction and properties for different kinds of sugar. The research analyzes the influence of sugar on human physical and mental health.*
***Keywords:*** *cellulose, consumer, consumption, fructose, glucose, saccharose, sugar-containing products, sugar.*

**The topic relevance**

Our theme is relevant, as firstly, sugar can be defined from various standpoints [1]. Being analyzed from food technology positions, sugar is viewed as the additive to different kinds of food. Sugar is added by consumers to drinks, such as tea, coffee, cocoa. It is also added to some other foodstuffs, including dairy products, for example, jam and bakery foods. The examples of the former comprise sweet yoghurts. The examples of the latter contain cakes, tarts and biscuits. Being considered from chemical viewpoint, sugar is termed as any substance belonging to the group of water-soluble carbohydrates, characterized by low molecular weight and more or less sweet taste. Therefore, our research deals with several sciences including chemistry, food production, crop cultivation and medicine. Secondly, there are many kinds of sugar, such as glucose, fructose and saccharose. Consumption is known as the process of using different products in order to satisfy somebody`s requirements. A product is understood as some activity outcome. Thirdly, the theme is relevant as sugar consumption has got both advantages and disadvantages. On the one hand, sugar is of great importance for our organism. But on the other hand, sugar- containing products ought not to be consumed in large amounts. Fourthly, being carbohydrates, all sugars raise human immunity. It is quite relevant under the modern pandemic conditions, when people are subject to infection more than ever before. And besides, being very intense, our modern life is full of stress that is likely to be bad for our health.

**The research purpose and objectives**

The research purpose is to analyze the advantages and disadvantages of

sugar containing product consumption. The first tasks are to: define some basic ideas, such as “a product”, “a sugar-containing product” and “sugar”; classify sugar into kinds; enumerate foodstuffs with different sugar kinds in their composition; compare chemical construction and properties for different sugar kinds; analyze the sugar influence on human physical health and mental activity.

**The research subject and object**

Sugar-containing product consumption as our research subject influences the consumer`s health as well as different organism processes as the object.

**The research problem**

The research problem is it is difficult to understand that some sugar-containing products are not of sweet taste, as they do not contain too much sugar.

**The research methods**

The methods we have used are special for each research part. The first part is theoretical. We used several analyses methods in order to do this part of our research. The first method is to analyze glucose, fructose and saccharose composition from mathematical standpoint. The second method is to analyze the influence of different kinds of sugar on consumer`s organism from evaluative positions.

The second part is practical. We used a questionnaire in order to do this part. The questions asked to respondents were subdivided into groups. The first group can be characterized as sugar consumption analysis. It includes such questions as: 1) Do you eat sugar? 2) Do you use sugar or sugar-substitute? The second group is referred to as sugar-containing food consumption analysis. The examples of questions asked for this purpose comprise: 1) Do you add sugar to tea or coffee? 2) Do you get sugar from fruits?

**The introduction**

According to their composition, construction and properties, sugars are subdivided into several kinds, including monosaccharides, disaccharides and polysaccharides. Monosaccharides comprise both glucose and fructose. Disaccharides consist of saccharose [2] as well as maltose. Polysaccharides contain cellulose, starch and pectin acids. It is known that foodstuffs are rich in different kinds of sugar. We can find glucose in the foodstuffs, including honey, fruits, bread, cabbage and carrots. Fructose is rich in different fresh fruits as well as their processing products. The former comprise blackberries, apples, bananas, pears, grapes and peaches. The latter contains both raisins and figs. Saccharose is high in marmalade, marshmallows, gingerbread, prunes. Such products as different cereals, bread and buns, potatoes, beetroots , turnips and radishes are rich in starch. Starch is also abundant in different legumes comprising both peas and beans.

All kinds of sugar have both advantages and disadvantages for a human organism. On the one hand, glucose takes an active part in human metabolism. Glucose is of great use for people, as firstly, it provides an organism with energy. Secondly, glucose lets us overcome different stressful situations. It maintains

the organism`s cardio-vascular system. However, on the other hand, too much glucose in the human blood is likely to result in obesity as well as sugar diabetes development [3]. On the one hand, fructose raises the immunity, takes the fatigue off, stabilizes the blood sugar level and provides the organism with energy. But on the other hand, too much fructose consumed results in depression, nervous exhaustion, apathy. Too great appetite is likely to result in obesity. On the one hand, being the most available sugar sauce, saccharose consumption protects the liver. It also stimulates the person`s activity that can be either physical or mental. It also favors the blood circulation, providing the erythrocytes with necessary nutrition. Saccharose also stimulates insulin production. But on the other hand, too much saccharose is bad for health, as it results in too much fat formation. Saccharose protects our teeth from caries.

**The research outcomes**

We have also used a questionnaire. The experiment was conducted in 2021 in March. 20 students of my group, DG 101, participated in this questionnaire. Table 1 presents the research outcomes (see table 1)

**Table 1 − The research outcomes**

<table>
<tr><td rowspan="3">Total number of students</td><td rowspan="3">Kind of analysis</td><td colspan="3">Answer variants</td></tr>
<tr><td colspan="3">Number of students</td></tr>
<tr><td>I eat sugar</td><td>I don`t eat sugar</td><td>I use a sugar substitute</td></tr>
<tr><td rowspan="5">20</td><td rowspan="3">Sugar consumption</td><td>15</td><td>4</td><td>1</td></tr>
<tr><td colspan="3">%</td></tr>
<tr><td>75</td><td>20</td><td>5</td></tr>
<tr><td rowspan="5">Sugar-containing food consumption</td><td colspan="3">Number of students</td></tr>
<tr><td>I get sugar from fruits</td><td>I add sugar to tea or coffee</td><td>I eat sweets</td></tr>
<tr><td>12</td><td>6</td><td>2</td></tr>
<tr><td colspan="3">%</td></tr>
<tr><td>60</td><td>30</td><td>10</td></tr>
</table>

The research demonstrates that most students of our group eat sugar. A number of those using sugar-substitute is inconsiderable. The greatest number of students gets sugar from fruits. Fewer number of respondents adds sugar to tea or coffee. There are very few respondents consuming sweets.

**The research conclusion**

Our research is of great practical importance, as it contributes to establishing interdisciplinary relationship between different sciences, enabling to examine one idea from different standpoints.

**References**

1. **Iljushina, E. S.** Vlijanie sahara na zdorov'e cheloveka / E. S. Iljushina, L. A. Fedoseeva, E. L. Ermolaeva, G. A. Gribina // Sovremennye nauchnye is-

sledovanija i innovacii. 2017. − № 6. − URL: https://web.snauka.ru/issues/2017/06/83341.

2. **Nikolaeva, N. V.** Kristally saharozy kak osnova saharosoderzhashhih produktov / N. V. Nikolaeva, D. P. Mitroshina, A. A. Slavjanskij, V. A. Gribkova, N. N. Lebedeva // Sahar. 2021. − № 8. − pp. 34−39.

3. **Tejtel'baum D. Bez sahara** Nauchno-obosnovannaja i proverennaja programma izbavlenija ot sahara v svojom racione / Dzhekob Tejtel'baum, Kristl Fidler; per. s angl. V. Gorohova [nauch. red. N. Nikol'skaja]. − M. : Mann, Ivanov i Ferber, 2016. − 240 p.