

# Chemical Composition Of an Apple Plant

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**Abstract.** Iron, ammonium cations, nitrates, nitrites, phosphate anions have been determined by Visocolor Um Weltkoffometer PF-12 for the purpose of determining the usefulness of the sorts Sirienko and Cir haci in our country. As a result of the analysis, quantities of cations and anions included in the human body have been determined and how much they affect it.

**Key words:** ion, iron, food, ecology, Visocolor Um Weltkoffer

Fruit and vegetable contains many essential ingredients for the human body: sugars, organic acids, nitrogenous substances, fats, fragrances and dyes, mineral salts, vitamins, enzymes, glucosides, phytoncides and pectin substances. Fruits and vegetables are the source of mineral substances and vitamins. Nucleic acids, phytoncides, and other biologically active ingredients in fruit and vegetable ingredients are of great importance in human nutrition. Vitamins in fruits and vegetables increase the resistance of the human body to various diseases. In the north of the same homologous sort, the amount of sugar in the apple is less than 16 in the south. The amount of sugar and organic acids in the freshly ground apples is much higher than that taken for 3-4 months. Because of the fact that some of the sugars and organic acids are consumed during breathing, their total amount is reduced. Fruits found in fruits and vegetables are divided into 2 groups: 1. Inorganic substances. This group includes mineral substances and gases. 2. ingredients. This group includes carbohydrates, nitrogenous substances, fats, organic acids, vitamins, enzymes, fragrances, vaccines, dyes and pectin substances, glucosides, phytoncides, etc. it applies.

33 kind of apples are known and 6 of them are spread throughout Azerbaijan. It differs from other fruits according to the apple structure. Apple peel is thinner and thicker. Sturdy and thick-skinned apple resistant. The apple s peel consists of several layers. The apples surface is smooth or dyed, glossy or matte, dry or greasy, with varying thickness, elasticity and hardness. If the peel of the apple is thick and tight, such an apple is resistant to transport and storage. Show such varieties as Caucasian, Crimean and Chinese varieties are divided. Only the first pumological group can get the perfect commodity sort. Some apples contain colored

dots under the peel and occasionally cover the whole surface of the apple. One of the main indicators of apples is its color. Its color is based on chlorophyll, carotene, anthocyanin and flavonoid pigment. The change in the chemical composition of an apple shows itself in the amount of sugar it contains.

According to F.V. Serevitinova, an average of 6.5-11.8% fructose, 2.5-5.5% glucose, 1.5-5.3% sucrose, 0.2-0.7% nitrogen, 1.05-1.49% pectin, 0.02-0.2% vitamin C, 0.9% cellulose, 0.5-1.0% pentose, 0.2-0.4% mineral material and 0.2% -0.6% organic acid. The German apple contains about 20-40 mg of vitamin C and a small amount of B1, B2 and PP vitamins. The apples vary according to their size. In this regard, apples are divided into 3 groups: small (up to 75 g), medium (75 to 125 g), large (over 125 g). According to the scientific research institute on behalf of IV Michur is divided into seven groups: small (up to 25 grams), small (25-50 gr.), Middle (50-75 gr.), Average (75-100 gr) upper (100-125 g), large (125-175 g), larger (more than 175 g). Summer apple varieties grow in June-August. It is gathered full-grown. Can be stored for 10-30 days. It is explained by the fact that summer acquisition is insecure, they are more likely to be physiologically ill and the respiratory process goes faster. Unlike the summer months, they receive autumn in the second half of August to the 1st of September. However, the consumption of this sort is not worthwhile. For this purpose, autumn pick-up is kept for 15-25 days after the occurrence. As the maturation continues in this period, it has its own value. 85 If the injection process is delayed, the anaerobic breathing process can reduce the sugar consumption. Unlike the injections, autumn retention is kept for 2-3 months. The autumn pickups can be shown as an example of how to buy Anthony 600 g, an Aport, Borovinka, Belfler-Kitayka, Striped Tissue, Titovka, Strawberry Brown, Striped Autumn. The autumn harvesting in Azerbaijan is accompanied by the Lancebergrenet, Azerbaijan, Yellow Belf and Gold Winter Parmen. This group applies to the second half of September and ends in the first half of October. They are consumed 2-3 months. When we pick them up they consist of protopectin and 1.5% starch. The total and inverted sugar levels are also low. So when it's caught, it changes and its composition changes. The starch is transformed into sugar protopectin into pectin. The taste and structure of the fruit improves. Winter intake is more affordable as it is resistant to storage and transportation. Some of these homologous varieties can remain until July. In recent years, palmery gardens have been built in Azerbaijan. In these gardens, Starking,

Jonathan, and Golden Wheat are grown. Delicatessen and apples after September 1 are divided into two pomological groups. Based on the standard (GOST 21122-75), depending on the quality of fresh pastries, 4 commodity types are listed: excellent, first, second, and third. The quality of Apples is determined by its shape, color, surface, and the largest diameter. All apple varieties should be clean, uniform, uniform, and colorful. Excellent, first and second sort of apples should be of the same pomology sort. The third type can be mixed. The diameter of the largest cutting edge is 65 mm in the round shapes, 60 mm in longitudinal shapes, 60-50 mm in the 1st order, 50-45 mm in the second and 40-35 mm in the third. Apples shortcomings and permitted standards are shown in the existing standards. For example, the supply may be slightly compressed and full-fledged in 1 cm<sup>2</sup> in the excellent order, 2 cm<sup>2</sup> of the first order, 4 cm in second order, and in 87 1/4 of the third row surface. At the point of sale, these figures are up to 2 cm<sup>2</sup>, 4 cm<sup>2</sup>, 6 cm<sup>2</sup> and 1/4 pieces respectively. Fast growing apples (GOST 16270-70) are divided into 1st and 2nd commodities. The 1st largest is 50 mm, the 2nd largest is 35 mm

In general, many changes are occurring in sucrose and acidity contained during the retention period. Apples lose 30-60% of its previous acidity. At the end of 226, the acid is consumed more. By contrast, the total amount of perfume is at the highest level. It is recommended that the fruit be kept at a temperature of 0-40 C. In order to receive the spring, the temperature should be between 0 C and 0 C, and for winter it should be at minus 10 C at 100 C.

There are up to three hundred varieties and varieties in Azerbaijan. Of these, sixty are important for the industry. The advantage of getting other juicy fruits is that it can be kept and used all year round. The apples ripening season is as follows: summer (July, August), autumn (September, October), winter (from November to February). The same sort may change the adult period, depending on climatic conditions. Different color, taste and aroma depending on the type and varieties of the grape variety. Along with the natural use, a number of valuable canned products - compote, jam, povidlo, juice, puree and so on can change depending on climatic conditions. . apples and its various canned products have a very good therapeutic effect on heart weakness, hemorrhage, chronic gastrointestinal illnesses, and vitamin deficiency.

Azerbaijan's Guba district is considered as the main apples areas. Here are various kinds of apples grown. Recently, Guba regional agrarian science center has been producing various apples, cherries and pear varieties from France as part of the Frazer project. The apples contains about 5-24% of sugar, about 1.3% of acids (apples, lemons, chestnuts), pectin and vaccine, vitamins B and C, carotene, minerals, potassium, sodium and iron salts. . in apples iron salt has great healing properties. The main part of apples sugar is glucose and fructose, which is very beneficial for the cardiovascular system. The mineral content of apples (mg / 100 g.) Is as follows: calcium-3, copper-small amount, iron-0,1, magnesium-small amount , phosphorus-9,5, potassium-12,9, selen-0,4, sodium -1, zinc-small amount.

More than ten thousand varieties of apples are cultivated worldwide. Apples varieties are divided into 3 groups according to their time of harvest: summer, spring and winter varieties.

Summer cortes: Fehmi, Shirvanreneti. Papyrus, Melba. Eve.

Springflakes: Yellow Belflor, Winter Flower, Landsberqreneti.

Winter Sorts: Cir Pilgrim, Yellow Sour, Simirenkoreneti, Golden Delicacies, Golden Eternity, Champagne, Red Delicate, Royal Red Delicatessen.

New introduced varieties of apples include: Qrand Smith, Fuji, Golden Delicate, Conaqold, Agrenet. When selecting breeds and varieties of fruit, their cultivation must be taken into account, their use and storage character. The simultaneous harvesting of the product complicates its accumulation and causes loss. For this purpose, the plants are grouped according to their maturity time and are then given autumn-winter varieties (60-80%) in the main fruit crops. Investigation of any food product is a complex analytical issue. Due to the specificity and multi-component composition of the product, standard methods are adapted to the specific physical-chemical composition of the product - it is required to carry out analytical studies at this and other levels for each concrete event. There are several ways to do this.

During the study, the varieties of winter differed from each other, namely Selimenko, Zhir pilgrim and Palmet apple varieties. For this purpose, using photometric method, the amount of  $Fe^{3+}$ ,  $NO_3$ ,  $NO_2^-$ ,  $NH_4^+$ ,  $PO_4^{3-}$  ions of cations and anions found in apple varieties with the help of

Visicolor Um Weltkoffer has been determined. In each apple varieties, the appropriate juices are prepared for the purpose of the ions. Then mix with apple with water 1: 1 ratio. From each mix, 5-10 ml of sample is poured into the test chamber separately, with a special standard solution for each ion to be added. A test box with an example of an analyzer at the top of the device is placed. The monitor on the device displays the quantity of  $\text{NH}_4^+$ ,  $\text{NO}_3^-$ ,  $\text{NO}_2^-$  in the same sample. It should be noted that separate measurements are made for each ion and the exact amount of these ions is determined.

Based on the findings of the research, we can say that the result of Cir apple tree were very high. It means that this type that should be preferred in terms of nutritional value. The results are shown in Table 1.

**Table 1. Quantity of ion in Simirenko and Cir pilot varieties (mq / l) Sort Ion Simiryenko Cir hachi Palmet**

Sort Ion	Simiryenko	Cirhacı	Palmet
$\text{Fe}^{3+}$	2.56	3.0	3.0
$\text{NO}_3^-$	1.01	1.35	1.3
$\text{NO}_2^-$	1.3	1.5	1.49
$\text{NH}_4^+$	0.82	1.25	1.4
$\text{PO}_4^{3+}$	> 50.0	> 50.0	50.0

From this point of view, the development of agriculture in the Republic of Azerbaijan has a special place in its education in the educational institutions of our country. An explanation of their chemical components in different types of apple plants and their appointment is one of the main goals set in the teaching process. Therefore, in addition to applying modern methods in the teaching of this subject, it is important to give special emphasis to mastering students.

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