

THE PROSPECTS OF STUDYING BAS ACTINIDIA CHINESE SKIN (KIWI)

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Introduction. Many people don't even suspect that kiwi skin is more useful than the Chinese actinidia fruit itself and can be consumed with pulp. Kiwi (*Actinidia chinensis*) belongs to the Actinidia family, which includes 350 species. Kiwi is a subtropical, deciduous, woody, curly liana. Kiwi fruit is a large oval or slightly elliptical berry weighing 40 to 100 g or more. The skin is thin brownish-green, covered with hairs that are easily removed in mature fruit. The long peduncle is drive off from the fruit during harvesting. The flesh of ripe fruits is green, with a purple tinge, with small (weight 1000 - 1-1.5 g) and numerous (1000-1400 pieces) small black seeds that surround the white core. It's taste is subtle, sour-sweet, somewhat similar to strawberry, melon and pineapple juice mixture.

An average kiwi contains: 75 mg of vitamin C, 0.3-0.4 g of fat, 11 g of carbohydrates, 1 g of protein, 2.6 g of fiber, 4 mg of sodium, organic acids, actinidine enzyme that breaks down proteins and helps digest food. Calorie value is 46 kcal. Cholesterol is completely absent in kiwi.

Kiwi peel is a source of fiber that has a positive effect on the human intestine, namely, a laxative effect and helps to avoid constipations. It can also help to avoid dysbiosis (such microbes as *Staphylococcus aureus* and *Escherichia coli* are destroyed). The skin is rich in vitamins C and E, which are known as synergists of eliminating free radicals, they are powerful antioxidants both for the organism and for the skin. This combination is an effective immunomodulator and helps to increase the immune status, makes the body immune to viral diseases. In addition, ascorbic acid is involved in the hydroxylation of lysine and proline residues during collagen synthesis, which provides human skin elasticity and health. The skin contains vitamin E, which is necessary for hematopoiesis. Folic acid stimulates erythropoiesis, leukopoiesis, thrombopoiesis and thus is the main anti-anemic vitamin.

Kiwi peel can be used to tone, moisturize and rejuvenate the skin, since Vitamin E protects collagen and elastin proteins from damage by free radicals. Fruit acids (ANA) affect the skin's state at the molecular, cellular and tissue levels. They exfoliate, moisturize, have anti-inflammatory and antioxidant effect, and stimulate the synthesis of collagen and glycosaminoglycans, helping to balance the pH of the skin. Actinidine, together with ANA acids, tackles pigment spots.

Aim. To carry out the analysis of the literature data about the chemical composition and the possibility of using kiwi peel in order to create anti-inflammatory, restorative drugs.

Materials and methods. Carboxylic acids were studied with the use of the method of paper chromatography in a solvent system of ethanol-chloroform-ammonia-water (70: 40: 20: 2) with probable organic acids samples. Hydroxycoric acids in the kiwi fruit peel were studied using the method of paper chromatography known samples of hydroxycoric acids. The titrimetric method was used to determine the amount of organic acids. Determination of the quantitative content of ascorbic acid was performed with the use of spectrophotometric method, according to the method of State Pharmacopoeia of Ukraine, article "Rose hips". The content of the hydroxy cinnamic acids amount was determined with the help of spectrophotometric method at a wavelength of 327 nm in terms of chlorogenic acid.

Results and discussion. As a result of chromatographic study of organic acids, tartaric, ascorbic, malic and citric acids were identified in kiwi fruit skin. The content of organic acid in kiwi fruit peel was $8.24 \pm 0.02\%$. The quantitative content of ascorbic acid in the skin of kiwi fruit was $0.21 \pm 0.01\%$. The hydrocyanic acid content in the skin of Chinese actinide fruits was $3.47 \pm 0.02\%$.

Conclusions. The results of previous studies on Chinese actinidia skin give reasons for further study of the BAS of this plant and, considering waste-free production, the creation of new anti-inflammatory and restorative drugs.