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PAULOWNIYA GULLARI VA ULARNING TARKIBIDAGI VITAMINLAR MIQDORINI ANIQLASH**ОПРЕДЕЛЕНИЕ КОЛИЧЕСТВА ЦВЕТКОВ ПАВЛОВНИИ И ВИТАМИНОВ В ИХ СОСТАВЕ****DETERMINATION OF THE AMOUNT OF PAULOWNIA FLOWERS AND VITAMINS IN THEIR COMPOSITION****Mamatqulova Surayyoxon Abdusamatovna¹** ¹Farg'ona davlat universiteti, k.f.b.f.d.(PhD), dotsent**Usmanova Tursunoy Erkinovna²** ²Farg'ona davlat universiteti, o'qituvchi**Asqarov Ibrohimjon Rahmonovich³** ³Andijon davlat universiteti, kimyo fanlari doktori, professor**Annotatsiya**

Mazkur tadqiqot ishida Respublikamizga introduksiya qilingan, Farg'ona viloyati hududida o'suvchi Paulownia o'simlik barglari tarkibidagi vitaminlari YuSSX usulida o'rganildi. O'rganilgan o'simlik namunalari natijasi tahliliga ko'ra ularning tarkibida quyidagi B-2, B-6, B-9 PP va C vitaminlar mavjudligi aniqlandi.

Аннотация

В данной исследовательской работе были изучены витамины, содержащиеся в листьях растения Павловния, интродуцированного в нашу республику, произрастающего на территории Ферганской области, методом Юсхх. По анализу результата изученных образцов растений установлено, что в их составе содержатся следующие витамины B-2, B-6, B-9 PP и C.

Abstarct

In this research work, the vitamins contained in the leaves of the Paulownia plant introduced into our republic, growing in the territory of the Ferghana region, were studied by the Uscc method. According to the analysis of the result of the studied plant samples, it was found that they contain the following vitamins B-2, B-6, B-9 PP and C.

Kalit so'zlar: Paulowniya bargi, vitaminlar, riboflavin (B2), piridoksin (B6), foliy kislota (B9), nikotin kislota PP va askorbin kislota (C).

Ключевые слова: лист павловнии, витамины, рибофлавин (B2), пиридоксин (B6), фолиевая кислота (B9), никотиновая кислота (PP), и аскорбиновая кислота (C).

Key words: Paulownia leaf, vitamins, riboflavin (B2), pyridoxine (B6), folic acid (B9), nicotinic acid (PP) and ascorbic acid (C).

INTRODUCTION

As we know, many plant species on OUR PLANET are distinguished by their healing properties. Plants serve as a natural laboratory with a complex structure, synthesizing biological substances in themselves. The quantity and quality of biologically active substances in a plant is considered one of the most important factors determining their medicinal properties [2]. One of these plants is paulownia. People have been using parts of the Paulownia plant for various purposes for a long time. Its importance in the forestry industry and agriculture is considered to be very high. In addition, for centuries in traditional Chinese medicine, various parts of the plant including; its bark, fruits, xylem and leaves have been used to treat and prevent various diseases [6]. Today, the Paulownia tree is grown and used in many regions of our republic.

RESULT AND DISCUSSION

The experimental part. To determine the amount and type of vitamins contained in the flower of the Paulownia plant, samples were collected in April from the flowers of the plant growing in the territory of the Ferghana region, dried and crushed in natural conditions (in a cool place). The content of water-soluble vitamins was studied by high-performance liquid chromatography. The water-soluble vitamins in the sample were detected using a highly efficient liquid chromatography method. 5-10 g were extracted from the sample on analytical scales and placed in a flat flask with a volume of 300 ml. 50 ml of 40% ethanol solution is added on top. The mixture was equipped with a magnetic stirrer and a reverse cooler and boiled with intensive stirring for 1 hour, and then stirred at room temperature for 2 hours. The mixture was sifted and filtered. The rest was re-extracted 2 times, adding 25 ml of 40% ethanol. The filtrates were combined and placed in a 100 ml volumetric flask filled with 40% ethanol. The resulting solution was rotated in a centrifuge at a speed of 7000 a/min for 10 minutes. The resulting solution was taken for analysis from above. Working solutions of water-soluble vitamins with a concentration of 1 mg/ml were prepared. To do this, 50.0 mg of each vitamin standard on analytical scales was weighed in a transparent box and dissolved in a 50 ml measuring flask in 40% ethanol and filled to the line. In the literature, phosphoric, acetate buffer systems and acetonitrile were used as eluents in the determination of water-soluble vitamins using YuSSX. We used an acetate buffer system as well as acetonitrile. Chromatography conditions. Agilent-1200 chromatograph (equipped with automatic winding), ExlipseXDBC 18 column (reverse phase), 5 microns, 4.6 X250 mm, diode array detector (DAD), 250 Nm identified, consumption 0.8 ml/min, acetate eluent buffer: acetonitrile: 0-5 min 96:4, 6-8 min 90:10, 9-15 min 80: 20, 15-17 min 96: 4, thermostat temperature 250C, 5 µl injected amount (injection). Initially, working standard solutions were introduced into the chromatograph, then prepared working solutions (Fig.1).

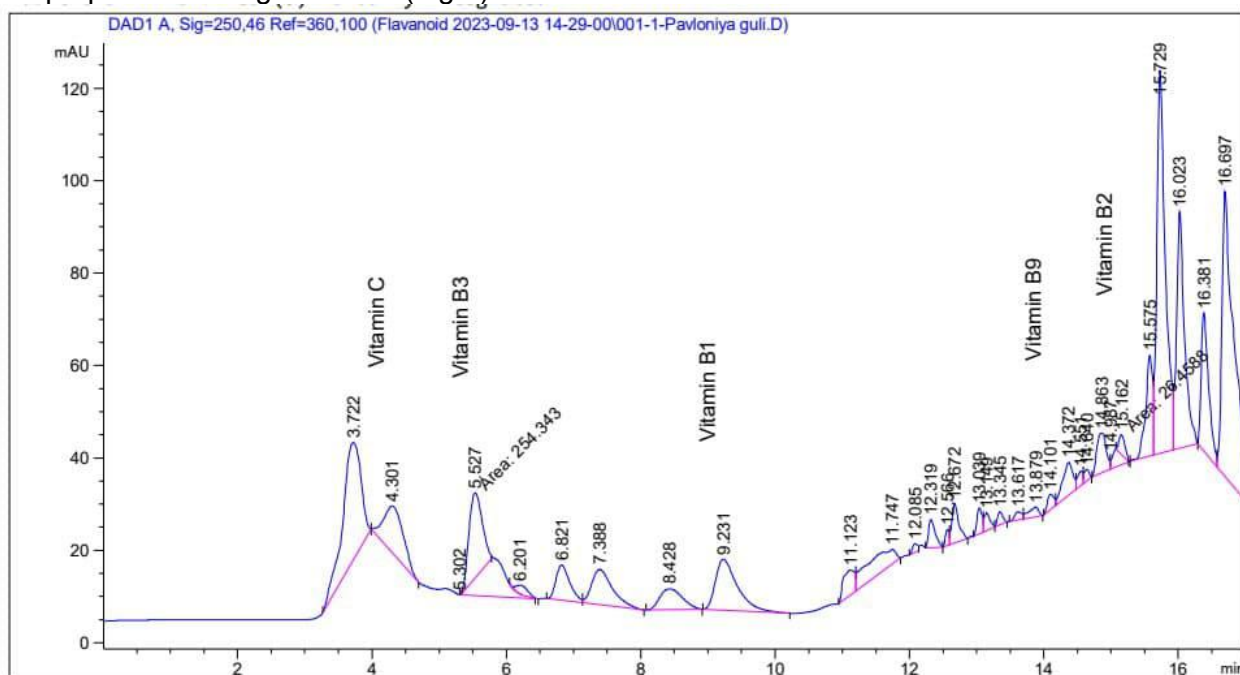


Figure 1. Vitamins of the leaves of Paulownia and rosemary plants YuSSX chromatogram.

The qualitative and quantitative composition of water-soluble vitamins was determined by high-performance liquid chromatography in the leaves of the Paulownia plant (Table 1).

Table 1

The amount of vitamins in the sample obtained as a result of the analysis.

Vitamins	Paulownia Flower
	Concentration mg/g
B-2	0,690225
B-6	3,778086

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B-9	1,218579
PP	0,436998
C	0,709205

CONCLUSION

According to the results of the analysis, it was found that the Paulownia flower contains vitamins thiamine riboflavin (B2), pyridoxine (B6), folic acid (B9), nicotinic acid PP and ascorbic acid (C). The largest amount of vitamin B6 was detected. Analyzing the above tabular data, we can conclude that, taking into account the types and amounts of vitamins contained in the flowers of the Paulownia plant, the development of new types of food additives based on the leaves of this plant shows the possibility of introducing promising medicines into the practice of traditional medicine and modern medical practice. And these plants can be a valuable resource in this regard.

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