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COMPOSITION OF THE GASOLINE FRACTION OF THE LEAVES OF PHYSALIS ALKEKENGI

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Abstract
The qualitative and quantitative composition of the chemical components of the gasoline fraction of Physalis alkekengi leaf extracts was studied.

Keywords: Solanaceae, Physalis alkekengi, Physalis, chemical component.

Introduction

The genus Physalis includes about 120 species of annual or perennial plants belonging to the Solanaceae family. It is native to the Americas, but is now widely distributed throughout the world in tropical and subtropical regions. Physalis is considered a beautiful and unusual plant. Physalis is a Greek word that means bubble, and its fruit is in the shape of an inflated cup [1-8]. Several species of Physalis can be found in Uzbekistan [9-11].

Physalis alkekengi L. is common in tropical regions of the earth. It is a perennial herb with a height of 30-60 cm. The calyx is bell-shaped, after flowering, it quickly expands and takes on an inflated spherical shape. It blooms and seeds in June-August. The fruits of the plant ripen in July-August and become large golden or red in color. It is grown as a medicinal and ornamental plant in moist and shady places (nut groves, gardens and forests), moist places shaded by trees in gardens, and in many households [12-30].

Analysis Conditions

For the experiment, 100.0 grams of plant leaves were taken and ultrasonically extracted with 90% ethyl alcohol. The obtained plant extract was purified from various pigments using activated charcoal. Then, by washing the extract 3 times with gasoline, the gasoline fraction was obtained, and the obtained fraction was subjected to chromatomass-spectrum analysis. The obtained results are presented in the table below.

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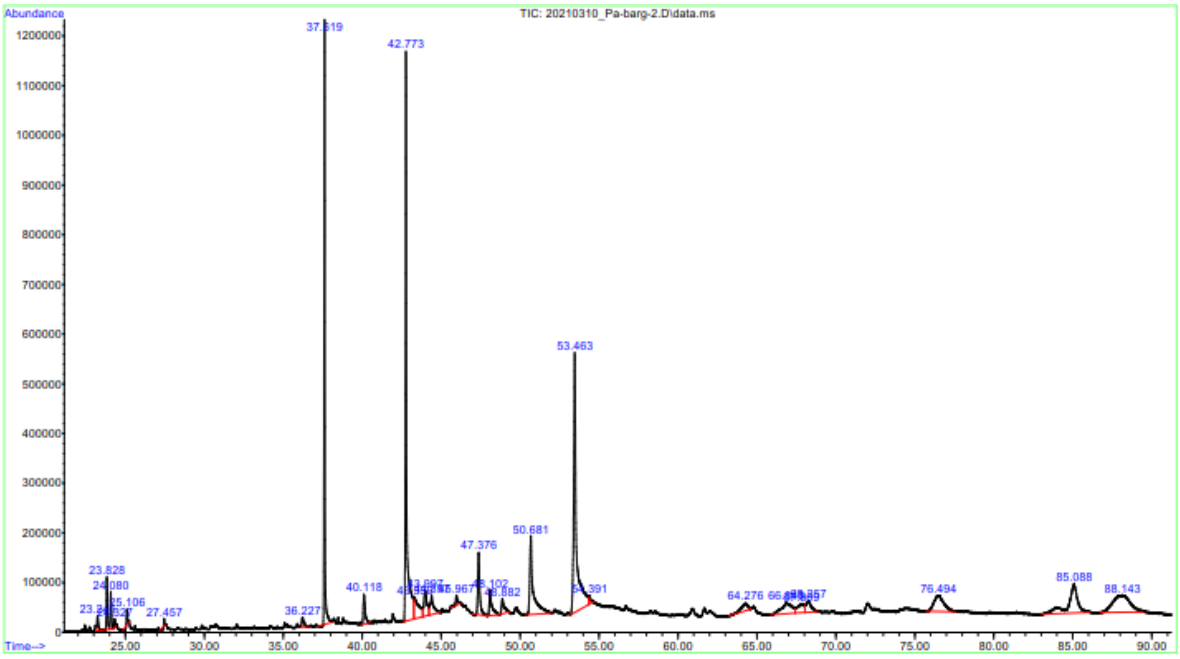
Table **Chemical composition of gasoline fraction**

№	The name of the substance	Storage time	Content, %	Probability, %
1	tert-Butyl 8-Methyl-10-azabicyclo [4.3.1]deca-3,7-diene-10-carboxylat	23.826	1.51	86
2	[R-[R*,R*-(E)]]-3,7,11,15-tetramethyl 2-hexadecene	24.081	1.12	87
3	Benzyl (dideuterated)methyl ether	27.459	0.05	96
4	n-Pentacosane	36.225	0.55	86
5	Tricosane	40.119	1.50	99
6	Palmitic acid	42.772	17.54	98
7	cis-9-Hexadecenal	43.341	2.66	93
8	Cyclopentadecane	43.341	2.66	93
9	Hexadecane	43.994	2.07	93
10	1-Heptadecene	44.398	1.69	96
11	Cetene	44.398	1.69	96
12	Farnesol	47.377	3.10	89
13	Stearic acid	48.102	1.77	95
14	1-Octadecene	48.885	1.03	94
15	Z,Z)- 9,12-Octadecadienoic acid	50.683	6.99	99
16	Linolenic acid	53.461	18.08	95
17	2-Methyl-Z,Z-3,13-octadecadienol	54.393	0.36	89

Results

The obtained data showed that the main components of the gasoline fraction of the leaves are the following compounds (in %): palmitic acid (17,54), linoleic acid (18,08), 9-hexadecenal (2,66), hexadecane (2,07), farnesol (3,10), stearic acid (1,77), (Z, Z)-9,12-octadecadiene (6,99), (E)-3-eicosene (6,86). It was found that palmitic and linoleic fatty acids are stored in high amounts in the plant leaf. The chromatomass spectrum of the gasoline fraction of the plant leaf is presented in the figure below



Picture **Chromatomass spectrum of gasoline fraction of Physalis alkekengi leaf**

Conclusion

The chemical components of the gasoline fraction of the leaves of Physalis alkekengi were studied, as a result, it was found that palmitic and linoleic acids are stored in large quantities in the gasoline fraction.

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