

DETERMINATION OF ANTIOXIDANT PROPERTIES OF PLANTAGO AND HYPERICUM LINARIIFOLIUM

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Annotation. The significance of dietary supplements in traditional medicine is covered in this article along with details on vitamin properties, the chemical makeup of dietary supplements for internal illnesses, and the medicinal plants—*Calendula officinalis* and *Inula helenium*—that are used to treat them.

Keywords: biologically active additive, *calendula officinalis*, *inula helenium*,

Use reactive and equipment. Vitamin b₁₂ “Rhydburg Pharmaceuticals” (Germany), vitamin c - “Carl Roth GmbH” (Germany), B₉ “ds nutritional products GmbH” (from germany), B₁, B₂, B₃, B₆, PP vitamins “BLDPharm” (china) is obtained. At the level of HPLC in clean water, a setonitril, chemical clean in the brand acetic acid and sodium alkali manufacturing of chemical agents to use led.

The plant composition of the water-soluble vitamins produced in japan, the amount of the company shimadzu LC-Nexera xromatografik was carried out in liquid Lite 40 highly effective [1].

Prepare the standard solution. C (cas 50-81-7), B₁ (CAS 59-43-8), B₆ (CAS 58-56-0), B₃ (CAS 59-67-6), B₁₂ (CAS 68-19-9) , and PP (CAS 98-92-0) vitamin solution (100 mg/l) of her 5 mg of vitamin a from the amount of 50 ml of 0.1 n hcl solution and li dissolved is prepared. B₂ (CAS 83-88-5) and b₉ (CAS 59-30-3) of the standard solution to 50 ml of 5 mg of this vitamin of vitamin 0,025% sodium dissolved in the alkali solution was prepared. Then the initial B₁, B₆, B₃, B₁₂, PP vitamin 200 mk and mixed at the concentration of each vitamin were obtained from 14.286 mg/l solution was prepared. 7.143 hence, 3.571, 1.786 mg/l standard solution was prepared. Also vitamin c 286, 143, 71.5, 57.2 mg/l with the concentration of the standard solution are prepared. Graphics for drawing Kalibrlovchi 0 mg/l concentration in pure water was used.

The sample extractselect prepare. Water-soluble vitamins for the extraction ofshn g 1 from our sample for checking workshops and measure out 50 ml of volume

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konussimon was put into the tube and 25 ml of 0.1 n hcl was added to a solution of li. The mixture GT sonic the hedgehog-D3 (China) branded ultrasonic bath at 60 °C at a temperature of 20 minutes for the extraction was. Then the mixture sovtilib, filtrlangan with the water in the tube and measuring 25 ml was delivered. Extract from the amount of 1.5 ml of 0,22 mkm li syringe filter was filtered and used for the analysis laid out and in vialaga.

Xromatografik conditions.

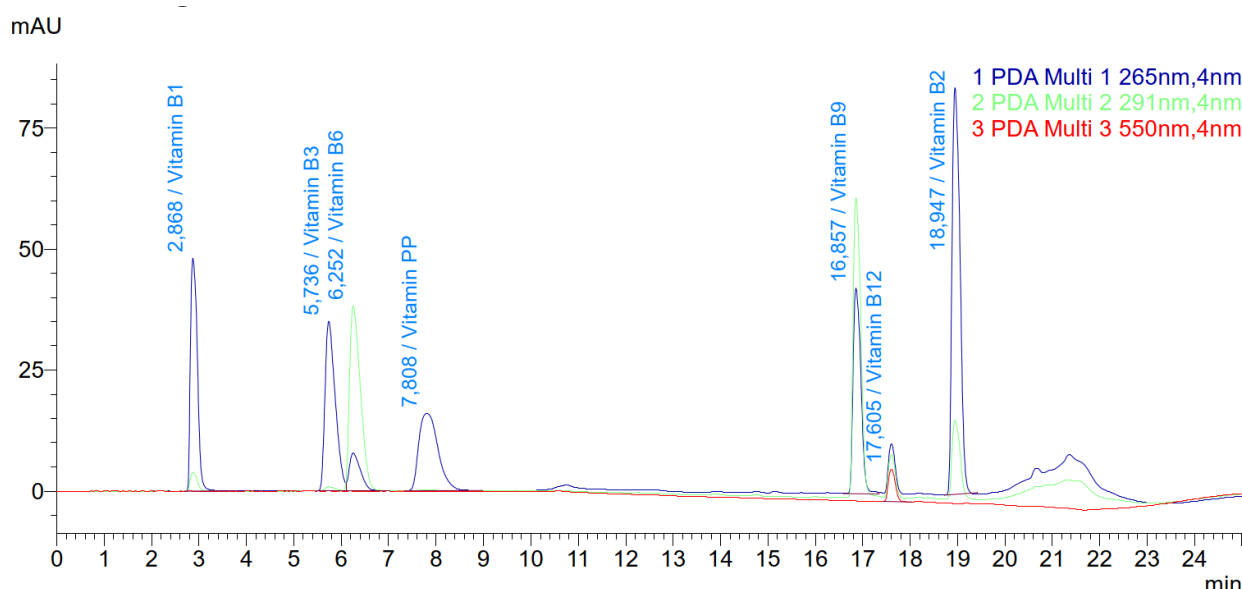
Vitaminproducts to determine. Sworth tandy solution and sample extract LC-40 pump, TB-40 avtosampleri, SP-M40 photo-with diod matrisa from detektor (PDA) is LC-Nexera xromatografik liquid Lite 40 highly effective and LabSolutions ver. 6.92 software were analyzed using. The geese C18 pack pants (150 × 4.6 mm; 5 mkm, Shimadzu, Japan) by reverse-phase columns of the asetonitril (a) and acetic acid in water at 0,2and 5% solution of li (b) consisting of a gradient in the phase mobility (table 1) were used. In'ektsiya size 1mk at 0, 0 is the flow rate,6 ml/min and columns thermostat temperature of 40 °C has been identified as. Of each vitamin analytical signal (peak area) of the threeunits of the wave lengths, 265, 291, 550 nm at recordeddi (1-3 pictures). Vitamin c for 15 minutes to determine gradiyenti was used (table 2) and 265 nm wave length is the measure of the analytical signal.

1 table. In the determination of vitamin harakat gradiyenti measure the phase of the program.

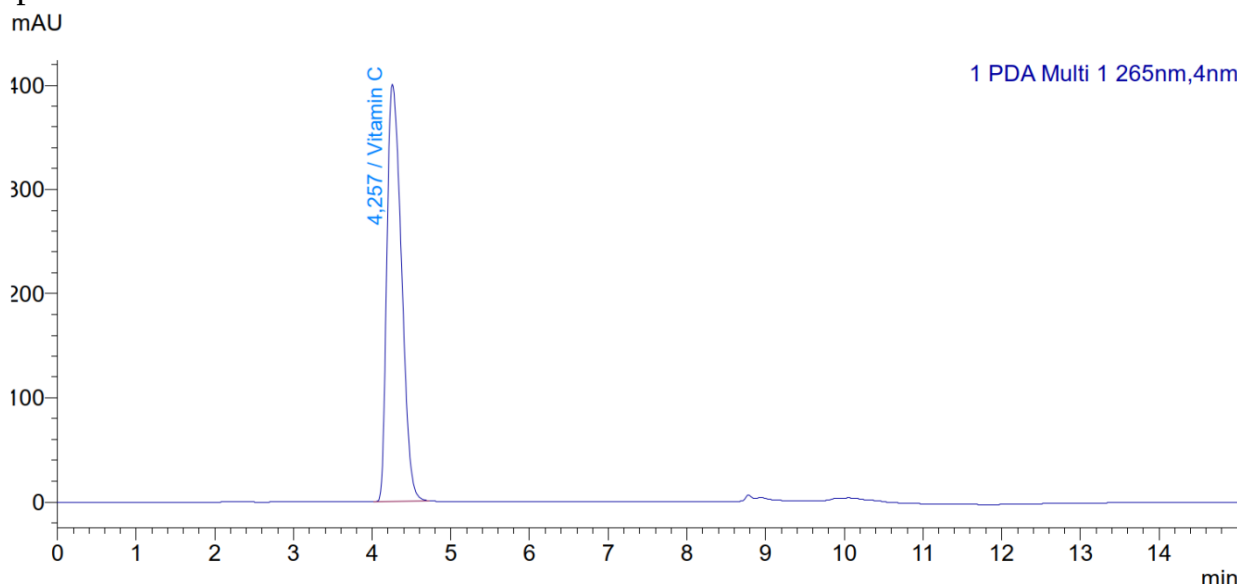
Time, minutes	Atsetonitril (A), %	0.5% acetic acid (B), %
0	0	100
3	0	100
14	20	80
17	50	50
18	0	100
25	Finish	

2table. In determining the amount of vitamin c in harakat gradiyenti measure the phase of the program.

Time, minutes	Atsetonitril (A), %	0.5% acetic acid li (B), %
0	0	100
2	0	100
6	50	50
6,01	0	100
15	Finish	



1-picture. Vita see also: standard solutionshis nest xromatrammasi.



2-picture. Vita see also: C xromatogrammasi of the standard solution.

The results obtained.

Namu to extract in the composition vitaminlarni determine. The sample extract xromatogrammac (3-4 picturess) were taken and the results on the basis of 100 g of the sample, the amount of vitamins in the composition of the following formula is 3-tablesbrought.

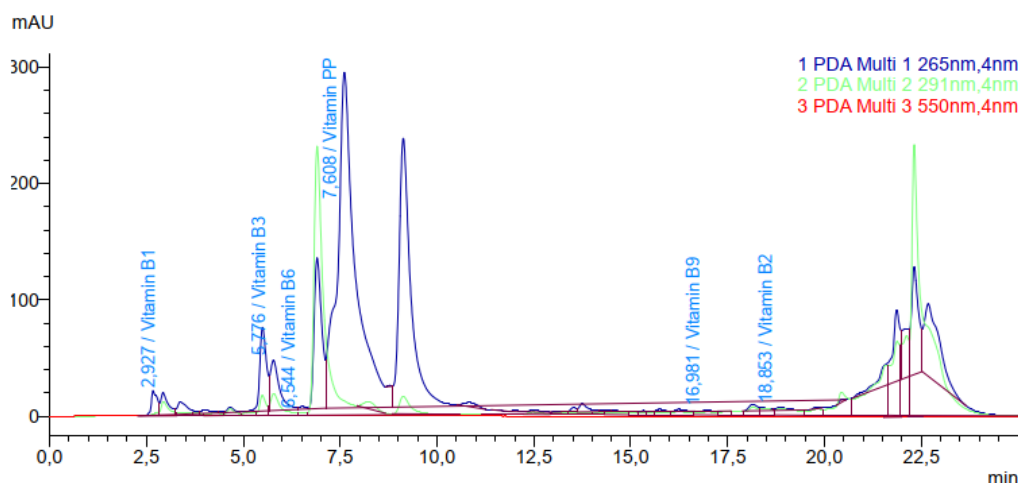
$$X = \frac{C_{st.vitus} \cdot V_{extract}}{m_{samples}} \cdot 100 g$$

Here, X – amount of vitamin content in 100 grams of fruit, mg;

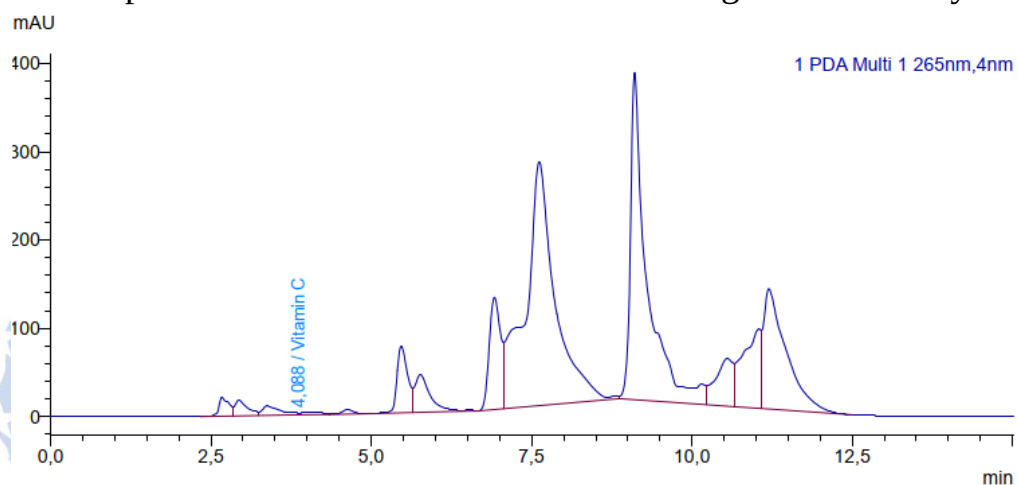
$C_{st. vitus}$ – extract vitamin content in YuSSX detected with the method of concentration, mg/l;

$V_{extract}$ – the size of the sample extract, l;

m_{sample} – extract extracted for the preparation of the mass of the sample.



3-point. The sample extract and vitamin content xromatogramma identify insi.



4-picture. The sample extract and vitamin content xromatogramma identify insi.
3-the table.

Amount of vitamin a in the extract and hold the time.

Vitamin	hold time, sec	Concentration, mg/l,	the amount of 100 g of the sample, mg
Vitamin B ₁	2,927	7,576	18,940
Vitamin B ₃	5,776	19,361	48,403
Vitamin PP	7,608	303,107	757,768
Vitamin B ₉	16,981	0,445	1,113
Vitamin B ₂	18,853	1,044	2,610
Vitamin B ₆	6,544	0,704	1,760
Vitamin B ₁₂	is detected	0	0,000
Vitamin C	4,088	2,958	7,395

Conclusion: The chemical makeup and nutritional value of calendula growing in Uzbekistan's natural climate were examined, samples of calendula flowers were collected and literary data were examined, general information about calendula
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officinalis and inula helenium was examined, and an autooxidation method for assessing the antioxidant activity of adrenaline was presented in vitro. Calendula's flower portion has been shown to have greater antioxidant qualities than other parts. Considering that it is extremely near to elecampane and has therapeutic qualities in disease gastrointestinal tract . Calendula officinalis has better antioxidant capabilities than inula helenium leaves. and it is suggested that these medicinal plants be used to create new food additives in future research.

References:

1. Asqarov r. i., Abdullaev, s. s. son, Mamatqulova, s. a., Abdulloyev, s. o., & Abdulloyev, S. H. (2024). WATER-SOLUBLE VITAMINS, THE AMOUNT OF YUSSX THE METHOD OF DETECTION OF THE TECHNIQUE TO DEVELOP A LIFE (CHILONJIYDA EXAMPLE). Fergana State University, 30(5), 61. Retrieved from <https://journal.fdu.uz/index.php/sjfsu/article/view/4679> Асқаров И.Р. // Табобат қомуси. // Тошкент, “Мумтоз сўз”, 2019.
2. Асқаров И.Р. "сирли табобат". Тошнот "фан ва технологиялар нашриёт-матбаа уйи" 2021. 1084 б.
3. И.Р.Асқаров "Кимёвий элементлар инсон организмида". Тошкент: "Тафаккур" 2012
4. Высокоэффективные лекарственные растения. Большая энциклопедия / Н. И. Мазнев. - М.: Эксмо, 2012. - 608 с.
5. Карабаева Р.Б., Ханабатова М.Т., Абдуллаева М. // Определение жирнокислотного состава масла ядер семян *Prunus dulcis* var. *amara* // Universum: химия и биология: электрон. научн. журн. 2022. 6(96). URL: <https://7universum.com/ru/nature/archive/item/13864>.