

Odessa National Medical University

Department of General and Clinical Pharmacology and Pharmacognosy

GUIDELINES
for independent work of students (IWS)

Discipline: "Resursovedenie"

Study subject CDS "The raw material base of medicinal plants of Ukraine. Particularly the standardization of medicinal herbs herbal remedies at the present stage. The levels of accumulation of radionuclides bodies of the Republic of Lithuania and the safety of their use. Basic provisions and requirements of the decree WHO (2007) to assess the quality of herbal remedies that are contaminated or have leftovers. Marginally acceptable levels of toxic metals and nonmetals "

Course 5 Faculty medico-pharmaceutical

approved by
in the methodical meeting of the Department
August 28, 2025
Protocol № 1
Head. Department of



_____ prof. Rozhkovsky YV

Odessa 2025

Theme number 2 "The raw material base of medicinal plants of Ukraine. Particularly the standardization of medicinal herbs herbal remedies at the present stage. The levels of accumulation of radionuclides bodies of the Republic of Lithuania and the safety of their use. Basic provisions and requirements of the decree WHO (2007) to assess the quality of herbal remedies that are contaminated or have leftovers. Marginally acceptable levels of toxic metals and nonmetals "10 h

1. Background.It has long been believed that Ukraine is extremely rich in natural plant resources, in particular medicinal plants. Indeed, in the USSR, almost 1/3 of wild and cultivated medicinal plant raw materials harvested just in Ukraine, as evidenced by relevant statistical data. But now such statistics are not available, and the state of natural resources worsened. CENSUS HR resources both in Ukraine and in the Odessa region was carried out for a long time, his conduct is essential and is one of the components of a large complex works on creation of the state cadastre of vegetation resources.

2. Purpose of the activity:

- sformirovat students' ideas about HR resource base in Ukraine and its current state;
- determine the place of wild and cultivated plants in ensuring raw domestic production of herbal remedies.
- konkretizuvati especially standardization of medicinal herbs herbal remedies at the present stage.

3. Interdisciplinary integration:

number pp	discipline	Know	be able to
one.	previous Medical botany	Phase of development, the environmental conditions of growth of medicinal plants;	To assess the current conditions of growth of specific types of LR
2.	pharmacognosy	The effect of various factors on the contents of the main storage and a bar RL	Choosing optimum blank areas and periods native RL
3.	Intra integration (the topic of this discipline, which integrates that which is studied) ...	Resursovedenie as science and academic discipline. The raw material base of medicinal plants in Ukraine.	develop: on the harvesting instructions, drying and storage of raw wild higher

		<p>The use of herbal medicines in the Republic of Lithuania and the modern world medical practice.</p> <p>Accounting for medicinal plant resources, the principles of their management and protection.</p> <p>Cultivation of Latvia in Ukraine and the world.</p>	<p>plants, algae, lichens and fungi, newsletters; make reports for doctors and advise the public on matters related to the harvesting and use of raw materials and products of natural origin.</p>
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4.Zadaniya for independent work during preparation for classes

4.1. The list of key terms, parameters, characteristics which students must learn in preparation for the class:

The term (concept), the question	Definition (content) response
official	
official	
neofitsinalnye	
informal	
potentially official	

Theoretical questions:

1. How is it possible to appreciate the richness of the flora of Latvia in Ukraine? In the Odessa region.?
2. What kind of plants and herbal drugs we call officinal?
3. Give examples of officinal herbal drugs, which is now widely used only from wild plants of the local flora.
4. What types of HR - RL sources scarce.
5. What are the main reasons leading to the introduction of Latvia into the culture.
6. What are the possible ways of using herbal drugs.
7. What are the advantages and disadvantages of cultivated medicinal plant raw materials?

4.3. Practical work (tasks) to be performed in class:

Exercise 1. Determine systematic affinity common plant sources in Ukraine crude drug, call and to indicate the corresponding a wild or cultivated RL (fill graphs 1-3, Tab. 5)

Ukrainian, Russian, latinskoe name of the Republic of Lithuania, the family	RL	Phytocenological Attachment		
	title	dik. (D) or cult. (K).	ways to use	
one	2	3	four	five

Task 2. To analyze the modern ways of using the most common in Ukraine plant sources of medicinal raw materials, fill in column 4, Table. 5, using the following symbols:

"FC" - packaged raw materials for pharmacy network; "SE" - herbal medicines; "PNC" - novogalenovyh preparations; "SP" - individual drugs; "KP" - complex preparations.

5. Content of the topic:

The theoretical material topics outlined in the text of the lecture number 1, and the following sources of information:

1. Heinrich M., Barnes J., Prieto-Garcia J., Gibbons S., Williamson E. M. Fundamentals of Pharmacognosy and Phytotherapy. 3rd ed. Elsevier, 2023. 282 p.
2. Medicinal Plant Resources : textbook / V. M. Minarchenko et al. Kyiv : Palyvoda A. V., 2019. 128 p.
3. Bioprospecting of Ethnomedicinal Plant Resources: Sustainable Utilization and Restoration / ed. by G. Shukla et al. CRC Press, 2024. 466 p.
4. Medicinal Plants: Bioprospecting and Pharmacognosy / ed. by A. B. Sharangi, K. V. Peter. Apple Academic Press, 2022. 602 p.
5. Van Wyk B. E., Wink M. Medicinal Plants of the World. 2nd ed. CABI, 2017.

6. The recommended literature:

6. Basic literature

7. Фармакогностичне ресурсознавство з основами інтродукції лікарських рослин / Навчальний посібник. – Полтава: ПДМУ, 2021.
8. Державна Фармакопея України : в 3 т. / ДП «Український науковий фармакопейний центр якості лікарських засобів». 2-е вид. Харків : Науковий фармакопейний центр, 2015. Т. 1. 1128 с.

9. Ресурсознавство лікарських рослин: Практикум / Тржецинський С. Д. та ін. – Запоріжжя: ЗДМУ, 2021.
10. Фармакогнозія: підручник для студентів фармацевтичних факультетів / Посилкіна О. В. та ін. – Харків: НФаУ, 2015–2018 (розділи, присвячені сировинній базі).
11. Тржецинський С. Д., Доля В. С., Денисенко О. М. Ресурсознавство лікарських рослин : навч.-метод. посіб. Запоріжжя : ЗДМУ, 2015. 115 с.
12. Грицик А. Р., Водославський В. М., Мельник М. В. Фармакогнозія. Ресурсознавство лікарських рослин : навч. посіб. Івано-Франківськ : ПП Голіней О. М., 2019. 248 с.
13. Зузук Б. М. Ресурсознавство лікарських рослин : навч. посіб. для студ. вищ. фармац. навч. закл. Вінниця : Нова Книга, 2015. 232 с.
14. Heinrich M., Barnes J., Prieto-Garcia J., Gibbons S., Williamson E. M. *Fundamentals of Pharmacognosy and Phytotherapy*. 3rd ed. Elsevier, 2023. 282 p.
15. *Medicinal Plant Resources : textbook* / V. M. Minarchenko et al. Kyiv : Palyvoda A. V., 2019. 128 p.
16. *Bioprospecting of Ethnomedicinal Plant Resources: Sustainable Utilization and Restoration* / ed. by G. Shukla et al. CRC Press, 2024. 466 p.
17. *Medicinal Plants: Bioprospecting and Pharmacognosy* / ed. by A. B. Sharangi, K. V. Peter. Apple Academic Press, 2022. 602 p.
18. Van Wyk B. E., Wink M. *Medicinal Plants of the World*. 2nd ed. CABI, 2017.

Additional literature:

19. Лікарські рослини: Рекомендаційний список літератури (актуальні видання 2024 року) / Уманський НУС.
20. Малопоширені ароматичні види лікарських рослин / Наукове видання. – Берегове: ЗУІ ім. Ф. Ракоці II, 2025.
21. Лабораторний журнал з ресурсознавства лікарських рослин : [посібник] / В. М. Мінарченко та ін. Київ : Паливода А. В., 2018. 94 с.
22. Фармакогнозія : підручник для студ. вищ. навч. закл. / В. С. Кисличенко та ін. ; за ред. В. С. Кисличенко. Харків : НФаУ : Золоті сторінки, 2015. 736 с.
23. Державна Фармакопея України : в 3 т. / ДП «Український науковий фармакопейний центр якості лікарських засобів». 2-е вид. Харків : Науковий фармакопейний центр, 2015. Т. 1. 1128 с. 520 p.

electronic resources

24. Medicinal Plant Names Services (MPNS) Resource. Kew Royal Botanic Gardens. URL: kew.org (дата звернення: 22.03.2026).
25. Ресурсознавство лікарських рослин : презентація лекції. Нац. фармац. ун-т. URL: https://cnc.nuph.edu.ua/wp-content/uploads/2023/09/prezentatsiia_resursoznavstvo-lr.pdf (дата звернення: 22.03.2026).

7. Materials for self-control

7.1. Questions for self-control

1. Features of standardization of medicinal herbs herbal remedies at the present stage.
2. The levels of accumulation of radionuclides bodies of the Republic of Lithuania and the safety of their use.
3. Basic provisions of the decree and the WHO requirements (2007) to assess the quality of herbal remedies that are contaminated or have leftovers.
4. Granichno permissible levels of toxic metals and nonmetals

7.2. Tests.

1. The national pharmacy chain does not come packaged herbal drug that is potent or poisonous. This is, in the above list:
A. The leaves of Digitalis lanata
B. fennel Fruits
V. Bark of buckthorn
G. Birch Buds
D. valerian root
2. For the manufacture of the individual drugs used RL
A. Kidney Birch
B. Leaves mother and stepmother
B. Grass knotweed
G. The leaves of Digitalis lanata
D. grass succession
3. The raw material of this plant are harvested in nature and are cultivated in Ukraine. This plant
A. Stinging nettle
B. cottonweed medicinal
V. Salvia officinalis
G. chamomile
D. Mack hypnotic
4. Formulations used as belladonna protivastmaticheskie, antispasmodics. Official raw belladonna are:
A. Flowers
B. The leaves and roots
B. Grass
G. Fruits
D. Rhizomes
5. Medicament "Pertussin" is used as an expectorant. The preparation includes an extract:
A. The leaves of black henbane
B. sage leaves drug

V. leaves belladonna common

G. herbs thyme

D. nettle leaves

6. For drug substance kondilin NSA used:

A. rhizomes with roots podofilla

B. Korenevischa with angelica root

B. Korenevischa with valerian roots

G. Travu Hypericum spotted

D. Travu horsetail

7. Diosgenin is a substance for the synthesis of steroid hormone preparations - cortisol, and progesterone. The source of its production are:

A. Leaves Ungern Victor

B. rhizomes and roots of ragwort broadleaf

B. The rhizomes with roots of Dioscorea

G. The leaves of barberry

D. Rhizomes scopolia karnioliyskoy

8. Individual drug Ergotamine tartrate, which stimulates smooth muscle of the uterus and has hemostatic action prepared from

A. Herba Thymi serpylli.

B. Folium Belladonnae.

V. Herba Thermopsidis.

G. Fructus capsici.

D. Secale cornutum

9. Raw artichoke is a source of anti-sclerotic preparations, choleric, hepatoprotective activity. As a medicinal plant harvest:

A. The leaves and baskets

B. Roots

V. Travu,

G. Seeds

D. Plody.

10. Most types of plant raw material is stored in dry form. By the processing of fresh juice for taking plant material at the plants:

A. Althaea officinalis

B. Plantago major

V. Rosa canina

G. Urtica dioica

D. Capsella bursa-pastoris

11. psyllium preparations are widely used in medical practice. To cultivate this:

A. Plantago stepposa

- B. *Plantago media*
- B. *Plantago lanceolata*
- G. *Plantago psyllium***
- D. *Plantago maxima*

12. A plant raw material manufactured tincture, extracts, included in the complex preparations "Bellataminalum" "Bekarbon" "Besalol" "Belalgin" etc., is used for this grass

- A. *belladonna***
- B. *Landysh*
- B. *astragalus*
- G. *alternate*
- D. *celandine*

13. Chamomile flowers - a popular drug of conventional medicine .. For this purpose, the raw material harvested from:

- A. *Tripleurospermum inodorum*
- B. *Leucanthemum vulgare*
- B. *Anthemis cotula*
- G. *Anthemis arvensis*
- D. *Chamomilla recutita***

9. Individual assignments for students on the topic

Describe the basic standardization rules for 10 types of HR at sviiy choice

Methodical recommendations were made by



associate professor Boyko IA