

Pharmacognosy

Proper harvesting of *Frangula alnus* herbal raw material greatly influences the quality and quantity of its active substances. Therefore the optimal time for buckthorn bark harvesting is the period of:

- +Sap flow
- Defoliation
- Fruiting
- Flowering
- Dormancy

A pharmaceutical warehouse received a herbal raw material that consists of "cones" with loose scales that are attached to a firm twig with or without fruits. Its collective fruits are pale green, fragrant, and bitter. Name the plant from which this herbal raw material was harvested:

- +*Humulus lupulus*
- Alnus incana*
- Rubus idaeus*
- Juniperus communis*
- Olea europaea*

Drugs derived from *Rauvolfia serpentina* roots are used in hypertension treatment. Authenticity of *Rauvolfia serpentina* herbal raw material can be confirmed by its content of:

- +Reserpine
- Vinblastine
- Adonitoxin
- Atropine
- Hyoscyamine

A pharmaceutical company produces a medicine under the brand name "Corglyconum.'" What herbal raw material is used in preparation of this drug?

- +Lily-of-the-valley grass
- Plantain foliage
- Buckthorn bark
- Dandelion roots
- Wormwood grass

According to the State Pharmacopoeia of Ukraine, the herbal raw material used in production of plantaglucide should be tested by means of thin- layer chromatography. The resulting chromatogram will have a weak blue zone, which will indicate the presence of:

- +Aucubin
- Atropine
- Acteoside
- Azulene
- Acorone

Essential oil of a certain plant contains up to 80% of cineol Specify the herbal raw material that is collected from this plant:

- +*Folia Eucalypti*
- Folia Melissa*
- Folia Betulae*
- Folia Absinthii*
- Folia Menthae piperitae*

A pharmacy received an infusion formulation. What herbal raw material can be used to make this dosage form?

+Valerian roots with rhizomes

Buckthorn bark

Oak bark

Rhubarb roots

Arrow-wood bark

Buckthorn bark and its derivative drugs are used as laxatives in medicine. According to the State Pharmacopoeia of Ukraine, during chromatographic identification of buckthorn bark it is necessary to detect:

+Glucofrangulins

Lanatosides

Purpurea glycosides

Ginkgosides

Panaxosides

Snake venom-based drugs are widely applied in treatment of locomotor apparatus diseases. Main components of these venoms are:

+Toxic proteins

Cardiac glycosides

Glucosinolates

Phenol-alcohols

Alkaloids

Valerian roots and rhizomes are processed in the phytochemistry workshop to produce tinctures and thick extracts that are the components of combined sedatives. Name the group of bioactive compounds that includes valerian valepotriates, - valtrate, acevaltrate, and dihydrovaltrate:

+Iridoids

Saponins

Alkaloids

Polysaccharides

Essential oils

Motherwort grass is a component of hypotensive and sedative drugs. This herbal raw material should be harvested taking into account its renewal rate. Therefore it can be harvested:

+Once every 5 years

Every year

Once every 10 years

Once every 2 years

Once every 3 years

Atropa belladonna grass extract is a component of compound antispasmodic drugs. Select such drug from the list:

+Bellasthesin

Herbogastrine

Solutan

Urolesan

Olimetinum

What fatty oil is nondrying due to its oleic acid glyceride content?

+*Ricini oleum*

Lini oleum

Cucurbitae oleum

Maydis oleum

Helianthi oleum

What herbal bioactive substances yield a positive reaction with ferric ammonium alum solution?

+Tannins

Bitters

Fatty oils

Saponins

Polysaccharides

A medicinal plant contains hydroxycoumarins and is used in production of venotonic agents. Name the herbal raw material harvested from this plant:

+*Semina Hippocastani*

Fructus Ammi majoris

Fructus Pastinacae sati

Herba Meliloti

Fructus Dauci carotae

Specialists of a pharmaceutical enterprise confirm the identity of *Cassia acutifolia* herbal raw material. During reaction with alkali it developed cherry-red coloring. What substances were identified?

+Anthraquinones

Alkaloids

Tannins

Glycosides

Iridoids

To identify cardiac glycosides there are usually three groups of color reactions being performed: for steroid nucleus, for lactonic ring, and for carbohydrate component. Specify the reaction for identification of butenolide ring:

+Legal's test

Dragendorff's test

Mayer's test

Reaction of sublimation

Stahl's reaction

Hyoscyamine and scopolamine are typically contained in the plants of the following family:

+*Solanaceae*

Apocynaceae

Fabaceae

Papaveraceae

Asteraceae

Yarrow grass is a component of herbal gastrointestinal remedies and is used to make herbal drugs. According to the State Pharmacopoeia of Ukraine the quality of this herbal raw material is assessed by its content of:

+Essential oils and proazulenes

Vitamins

Cardiac glycosides

Polysaccharides

Alkaloids

Digoxin is given to the patients with chronic heart failure. What medicinal plant that contains cardiac glycoside is a source of this medicinal substance?

+*Digitalis lanata*

Adonis vernalis

Erysimum canescens

Strophanthus kombe

Convallaria majalis

A pharmacist prepares an infusion in proportion 1:400. Specify the herbal raw material used in this infusion:

+Thermopsis grass

Camomile grass

Motherwort grass

Oak bark

Althaea roots

Helichrysum arenarium herbal raw material has anti-inflammatory and choleric effect. What parts of this plant are harvested?

+Flowers

Grass

Fruits

Roots

Rhizomes

During microscopy of althaea root it is necessary to determine the presence of starch granules within the plant cells. What reagent enables such analysis?

+Lugol's solution

Ammonium hydroxide

Concentrated sulfuric acid

Thymol solution

Alcohol solution of a-naphthol

The cholagogue derived from *Rosa canina* fruit is used in treatment of liver and gallbladder diseases. Name this drug:

+Cholosas

Allochol

Altan

Phytolyt

Chophytol

To determine the quantity of wild-growing medicinal plants, it is necessary to know their area of vegetation and yield per unit area. Yield of *Thymus serpyllum* grass can be determined by the following method:

+Projective cover method

Permanent quadrat method

Visually

Model sample method

Geodesically

In the process of phytochemical examination of buckthorn bark, the reaction with alkaline solution resulted in red coloring, which indicates the presence of the following:

+Anthracene derivatives

Saponins

Flavonoids

Slime

Alkaloids

Vinblastine and Vincristine demonstrate antitumor activity. Name the herbal raw material used in production of these medicines:

+*Folia Catharanthi rosei*

Herba Selaginis

Rhizomata Nupharis lutei

Folia Berberidis

Herba Vincae minoris

Standardization of a certain herbal raw material is done by calculating its alkaloid content in terms of hyoscyamin Name this herbal raw material:

+*Folia Belladonnae*

Herba Thermopsidis lanceolatae

Radices Berberidis

Fructus Capsici

Herba Chelidonii

A certain type of herbal raw material is being harvested in spring during sap flow Specify this material:

+Bark

Flowers

Roots

Infructescences

Buds