

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
STATE BIOTECHNOLOGICAL UNIVERSITY
Faculty of Veterinary Medicine
Department of Pharmacology and Parasitology



RECIPE
OF VETERINARY MEDICINE
Workbook

student

of the course

group

Kharkiv 2023

Approved by the methodological commission Faculty
of Veterinary Medicine SBTU
(protocol number __ dated 2023/02/ __)

Considered and approved at the session of the
Pharmacology and parasitology department of SBTU
(protocol number 7 dated 2023/02/03)

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The theoretical and methodical material for the study of veterinary prescriptions is presented comprehensively, taking into account the modern achievements of pharmacology. This will help to learn the veterinary formulation necessary for successful development of practical skills in veterinary pharmacology. The relevance of the questions asked and the specification of the answers to them contributes to a better assimilation of the material covered.

First edition

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METHODS OF STUDYING THE DISCIPLINE "VETERINARY PHARMACOLOGY"

When preparing for each class, a student should know:

1. Concepts such as medicine and preparation, types of dosage forms, components of a prescription, structure of a prescription.
2. Incompatibility of medicinal substances and rules of storage and release of poisonous and potent medicinal substances, how to correctly write a prescription for one or another medicinal form.

STUDENT REQUIREMENTS OF THE DEPARTMENT OF PHARMACOLOGY AND PARASITOLOGY

1. Have and wear clean overalls - a white coat and a cap.
2. Have with you a workbook for laboratory classes with completed homework.
3. To have the material specified for home preparation (see the course study methodology).
4. Missed classes should be made up during the next week after the student started classes - on the day of the shift of teachers assigned to this group.
5. Submit the modules on time, according to the work plan, and if you receive a negative grade, resubmit them during the next week.

SAFETY TECHNIQUES IN CLASSES IN THE DEPARTMENT OF PHARMACOLOGY AND PARASITOLOGY

1. Elementary medical ethics or culture of behavior and work at the workplace.
2. Come to class in clean technical clothes (robe, cap).
3. It is mandatory to wash your hands after the class, regardless of whether there was contact with a sick animal, research material or not (it is advisable to limit the intake of food in the department).
4. Be careful with strong and poisonous substances, in particular with acids and alkalis.
5. Follow fire safety rules.
6. Observe electrical safety rules, handle electrical appliances with care.
7. Before conducting the class, listen to a safety briefing at the workplace.

BASIC EDUCATIONAL LITERATURE

1. Kanyuka O.I., Skorohid V.Y., Gufriy D.F. Veterinary formulation and pharmacology: workshop / O.I. Kanyuka, V.Y. Skorohid, D.F. Gufriy // - Kyiv: Publishing House of the USGA, 1994. - 240 p.
2. Veterinary pharmacology with prescription: Textbook for higher agrarian educational institutions of I-II levels of accreditation in the specialty "Veterinary medicine"/ G.O. Khmelnytskyi, V.I. Strokan// - K.: Agrarian education, 2001.- p. : fig.
3. H.O. Khmelnytskyi. Veterinary pharmacology with prescription / G.O. Khmelnytskyi, V.I. Strokan // – K.: Urozhai, 2001. – 336 p.
4. Yaroshenko V.I. Workshop on the basics of the technology of dosage forms in veterinary medicine / Yaroshenko V.I., Khmelnytskyi G.O., Kuzovkin E.M.//– Kharkiv: Espada, 2003. – 358 p.
5. H.O. Khmelnytskyi Veterinary pharmacology: textbook/ G.O. Khmelnytskyi, V.B. Dukhnytsky // – Kyiv: Comfort, 2017. -571 p.

Students are responsible for: *systematic and deep mastery of knowledge, practical skills, professional skills, raising the general cultural level.* (**Article 52 of the Law of Ukraine "On Education" dated May 23, 1991 No. 1060-XII**)

Class location – classroom of the department

Purpose of the lesson: To study concepts such as prescription, medicine and drug, pharmacopoeia. Familiarize yourself with dosage forms, component parts of the recipe and the structure of the recipe. Master Units of measurement in the recipe, incompatibilities of medicinal substances, rules of storage and release of poisonous and potent medicinal substances.

Task: To study concepts such as prescription, medicine and preparation, pharmacopoeia. To master the rules of storage and release of poisonous and potent medicinal substances. To learn Components of the recipe and structure. Familiarize yourself with samples of medicinal products and forms. Complete **self-training tasks** independently.

Independently prepare for classes using recommended books, lecture material and electronic files from the discipline «Veterinary Pharmacology» at the «Distance learning portal (MOODLE) of SBTU».

Auditory work: Fill in the missing text in the practical session on the topic **General recipe**.

1. GENERAL RECIPE

1.1. Recipe is a science that studies _____

_____.

Accordingly, the following are distinguished:

- 1) medical prescription, the subject of which is the study of the rules of prescribing and
- 2) the technology of medicinal forms - rules and methods of manufacturing medicines in pharmacies and their release in the form of medicinal forms.

1.1.1. The pharmaceutical form is understood as the form most convenient for practical use, which is given to a medicinal substance or agent.

Medicinal forms, depending on the consistency, are divided into:

1. _____;
2. _____;
3. _____.

1.1.2. Medicinal product (medicine) - includes one or more medicinal substances used for the treatment or prevention of various pathological conditions.

1.1.3. The _____ drug _____ is

_____.

When prescribing and manufacturing drugs, it is necessary to follow the provisions set forth in the State Pharmacopoeia.

1.1.4. A pharmacopoeia is a collection of medical and pharmaceutical laws that regulate the preparation of medicinal products, the method of determining their authenticity and purity. This is the main regulatory document that has a legislative character within the borders of one state.

The International Pharmacopoeia is issued by the World Health Organization (WHO), has no legislative functions, but contributes to the unification and rationalization of the nomenclature, methods of analysis and necessary requirements for the quality of medicinal products.

1.2. THE RECIPE, ITS COMPONENT PARTS.

1.2.1. Recipe

The recipe is an official document. The persons who prescribe, manufacture and dispense medicines on it bear legal responsibility.

The prescription indicates: which medicinal substances and in what quantities must be released, which medicinal form to prepare, which animal to prescribe the medicine, in what way, in what quantities and how often to use it.

The prescription is written clearly, clearly, only with a ballpoint pen or ink on a form of the established form measuring 105 x 148 mm. On both sides of the form, leave a free field several centimeters wide for the pharmacist's marks.

Corrections are not allowed!

One prescription containing poisonous substances or two with simple substances can be written on one form, separating one prescription from the other with a # sign.

In the case of emergency production of medicines, write _____ (quickly) or _____ (immediately), _____ (very quickly - immediately) in the upper left corner of the form. Sometimes the word _____ is written on the prescription - antidote.

According to such a prescription, the pharmacy makes and dispenses medicines outside the queue.

1.2.2. Recipe structure.

I. _____, which includes the following sections:

- 1) stamp of the medical institution indicating the name of the address and telephone number;
- 2) Datum – date of prescription;

- 3) Nomen aegroti – type of animal with indication of age, nickname and affiliation (owner of the animal); if the owner is a private person, then his address is indicated;
- 4) Nomen medici – surname, first name and patronymic of the treating physician who wrote the prescription

II. _____, is expressed by the word *recipere* – take, imperative form from (the verb *recipere* – take. This word is written abbreviated – **Rp.**

III. _____
_____. It lists the substances that are taken to make the necessary dosage form. This section is written in Latin, each substance is indicated on a new line, with a capital letter, in the genitive case. The species names of medicinal plants are also capitalized (*Tinctura Valerianae* – valerian tincture; *Herba Millefolii* – yarrow herb). It is allowed to write some medicinal substances in an abbreviated form. The name of the substance that did not fit in one line is transferred to the next, but on the new line they start writing, retreating 2 characters to the right.

After the name of each substance, its quantity is indicated on the right in Arabic numerals. For example: ten grams - 10.0; five decigrams – 0.5; three centigrams - 0.03; five milligrams – 0.005.

Liquid medicinal substances are sometimes prescribed (more often with a volume of less than 1 ml) in drops written in Roman numerals.

For example: *Solutio Adrenalini hydrochloridi* 1: 1000 – *guttas X* (abbreviated: *gtts. X*) – solution of adrenaline hydrochloride 1: 1000 – 10 drops.

If the weight amounts are repeated, then after the last substance, write *ana* (*aa*) - equal, and if the solvent is added, then *ad* - to. If the activity of the drug according to the pharmacopoeia is expressed in units of action, then the recipe indicates units, not grams (for example, *Benzylpenicillinum-natrii* 500,000 units - benzylpenicillin - sodium 500,000 units).

Substances included in the composition. a complex prescription is prescribed in the following order:

1. In the first place, put the main substance according to the action _____; one drug prescribed in the prescription does not always provide the proper therapeutic effect, therefore, the main (main) substance is often added
2. Auxiliary substance _____, which is written in the second line. If there are several excipients, they are listed in order of pharmacological activity.

3. Substances that improve the taste, smell, and color of medicines are indicated in the third place. At the same time, it is necessary to keep in mind the peculiarities of animals: cows prefer salt, sheep prefer bitterness, dogs prefer sugar, etc.

4. Form-forming substances _____ are written in the last place, which give medicines a certain shape. These substances should not change the main effect of medicinal substances and affect the animal's body.

For liquid dosage forms, water, alcohol, oils are used as solvents; for soft ones - fats, etc. They are prescribed only in those cases when it is impossible to give the medicinal substance the required form without them.

The form-forming substance is taken in an amount that ensures the creation of the desired form for this medicinal substance. Therefore, their weight amount is not indicated in the recipe, but is indicated by the expression _____. In this case, the pharmacist himself decides how much of the base should be taken. Auxiliary, correcting, form-forming substances are introduced as necessary.

IV. **Subscriptio** _____

_____.

The instruction on the form begins with the requirement to mix all the medicinal substances: _____ - mix, _____ - so that it comes out (M. f. - abbreviated), and the form that should come out is indicated. **For example:** Misce fiat pulvis (M. f. pulvis) - mix to make a powder.

V. _____; written with the words Da Signa (abbreviated D.S.) - _____, mark or _____ - let it be released, let it be marked. This section is intended for people who use drugs to treat a sick animal. It is prescribed:

- in Russian or the national language

- with an indication of the method of drug administration (externally, internally, under the skin, etc.)

- with an indication of the amount and type of application (1 powder, 1 glass, etc.)

- with an indication of the frequency of use (4 times a day, morning and evening)

- with an indication of the time when the medicine should be given - before feeding or after.

The signature should be written clearly and in detail.

You can't limit yourself to the instructions: "Use is known", "External", "Internal". If the doctor himself administers the medicine to the animal, or it takes place under his personal observation and thus he assumes full responsibility for the correct prescription

and use of the medicine, then in the signature you can write: Pro autore (for the author) or Pro usu proprio, Ad usum proprium (for own use).

In order to eliminate errors when prescribing drugs, the pharmacy dispenses dosage forms intended for injections - with a blue label, inside - with a white label, and externally - with a yellow or red label.

For medicines that require a certain vacation package, the necessary instructions are made in the prescriptions:

- _____ - leave in a black glass.
- _____ - release in a yellow glass.
- _____ - release in waxed paper.
- _____ - release in wax paper.
- _____ - release in ampoules.

VI. Subscriptio medici - _____; it is always placed on the prescription after its verification (reading).

If there is no medical institution stamp on the prescription, the doctor's signature must be stamped. If the prescription contains poisonous and potent substances, it is necessary to put a stamp and round seal of the medical institution.

If the prescription is written on both sides of the sheet, write _____ (turn over) at the bottom so that the pharmacist does not miss one of the prescriptions.

If it is necessary to order the medicine again, the doctor writes on the prescription in the upper left corner _____ (let it be repeated), puts a new date and signature.

Prescriptions for narcotic and poisonous substances are valid for five days; on sleeping pills, neuroleptics - ten days; for all other drugs - no more than two months from the day of discharge.

Prescriptions are:

1. _____;
2. _____;
3. _____.

In a **simple** prescription, only one medicinal substance is prescribed, in a **complex** one - several; a **dosed** prescription indicates a dose for 1 dose, an **undosed** one - for several.

There are recipes:

_____ (from the words: officina – pharmacy, magister – mentor, teacher).

The _____ prescriptions include those whose composition is specified in the pharmacopoeia.

_____ – free, the composition of which is taken by the doctor at his own discretion.

1.3. UNITS OF MEASUREMENT.

The units of measurement of solid medicinal and other substances in prescriptions are most often gram (g), sometimes - action unit (OD); liquid - milliliter (ml), drops.

1.3.1. The name of the mass units and designation in the recipe.

№ з/п	Name of mass units	designation in the recipe
1.	gram	1,0
2.	decigram	_____
3.	centigram	_____
4.	milligram	_____
5.	decimilligram	_____
6.	decicentigram	_____
7.	microgram	_____
8.	decagram	_____
9.	kilogram	1000,0

1.3.2. The name of the volume units and designation in the recipe.

№ з/п	The name of the volume units	Designation in the recipe
1.	milliliter	1ml
2.	liter	1000 ml
3.	1 drop	gtt. 1
4.	10 drops	gtts. X

1.4. INCOMPATIBILITY OF MEDICINAL SUBSTANCES

When writing complex prescriptions, it should be taken into account that some medicinal substances may interact with each other when combined, as a result of which their activity changes. At the same time, the obtained drugs may act stronger or weaker than expected, lose their pharmacological activity or acquire toxicity, etc.

Incompatibilities are distinguished:

1. _____
2. _____
3. _____

1.4.1.

The reasons for this incompatibility can be the immiscibility of the ingredients, the formation of eutectic mixtures, the delamination of emulsions, the adsorption of medicinal substances, etc. The most common physical incompatibility is the insolubility and immiscibility of the ingredients. Yes, water does not form a homogeneous liquid with fatty oil during simple mechanical mixing. To obtain it, it is necessary to include a binding element (emulsifier) in this mixture, which will contribute to obtaining a stable emulsion. Adding water to alcohol tincture leads to the formation of turbidity - the appearance of extractive substances insoluble in water. Sometimes, when mixing dry powdery substances, hygroscopic masses or thick liquids are formed. Such mixtures are called eutectic.

They arise as a result of lowering the melting point of the mixture below room temperature. Thus, when mixing phenyl salicylate with camphor, a semi-liquid mass is formed. The same is observed when rubbing chloral hydrate with camphor, phenol, phenacetin and other drugs. Antipyrine with sodium salicylate gives a wet mixture.

Adsorption phenomena are possible when alkaloids and adsorbents such as activated carbon, aluminum hydroxide, kaolin, etc. are prescribed in one recipe. At the same time, the therapeutic activity of drugs is significantly reduced.

1.4.2.

This type of incompatibility is characterized by a chemical interaction between the components of the medicinal mixture, which leads to a change in their pharmacological activity.

In case of chemical incompatibility, the phenomena of neutralization, hydrolysis, oxidation-reduction processes, etc. are most often observed. Yes, acids neutralize alkalis, ammonia neutralizes formaldehyde.

1.4.3.

Carbacholin cannot be prescribed with atropine. With such a combination, only the effect of atropine will be manifested, since there is a direct one-sided antagonism between them.

Difficult prescriptions (difficult prescriptions) arise when several medicinal substances are combined in one prescription, the preparation of which requires the use of special technological techniques unusual for this medicinal form.

or box, write "_____" or "_____" and list the substances with the indication of their higher single and daily doses.

On the dishes in which these drugs are stored, write _____ and indicate higher single and daily doses.

The equipment necessary for weighing, mixing and dissolving poisonous and potent drugs is also stored in cabinets or boxes.

Ready medicines, which contain poisonous substances, must be stored separately from other medicines in closed cabinets or boxes. All poisonous and potent drugs are subject to daily accounting with their registration in laced, sealed and numbered journals. Drugs of group A and alcohol are taken into account selectively for each substance separately, keeping these documents.

Substances, _____, are dispensed by the pharmacy only on _____. The pharmacy releases poisonous substances of group _____ to medical institutions according to special requirements signed by the head of the institution and sealed with a round stamp.

Tasks for self-training
Topic: GENERAL RECIPE
CONTROL QUESTIONS

1. Drug
2. Physical incompatibility of medicinal substances
3. Chemical incompatibility of medicinal substances
4. List A, storage and vacation rules
5. List B, storage and vacation rules

№ Task.	Answer (give a definition + Latin, answer the question)

2. FILL IN THE TABLE.

STRUCTURE OF THE RECIPE

№ Recipe Section	name of the recipe section (Latin)	name of the recipe section (Ukrainian)	Contents of the section
I			
II			

III			
IV			
V			
VI			

3. To develop the skill of "matched" reading of doses, match the numerical value of the amount of the substance prescribed in the prescription with its name:

- | | | |
|---|---------|----------------------|
| 1 | 0,004 | A.4 centigrams |
| 2 | 0,0035 | B.35 decimilligrams |
| 3 | 0,00035 | C.4 decigrams |
| 4 | 0,04 | D.4 milligrams |
| 5 | 0,4 | E.35 centigrams |
| 6 | 0,0004 | F.35 сантимиллиграмм |
| 7 | 0,35 | G.4 decimilligram |

Answer						
1	2	3	4	5	6	7

Material support: Tables, scales, mortars, pestles, flasks, test tubes.

The work was accepted by " _____ " _____ 202__

Teacher's signature _____

Class location – classroom of the department

Purpose of the lesson: Learn such concepts as powder, pill, dragee, bolus, pill, capsule, collection. Familiarize yourself with each solid dosage form and the variety of each of them. Master How to distinguish each solid dosage form from one another. Methodology for writing prescriptions for each solid dosage form.

Task: such concepts as powder, pill, dragee, bolus, pill, capsule, collection. Master the rules for writing prescriptions for solid dosage forms. To learn How each of the solid dosage forms differs from one another. Get acquainted with the variety of each solid dosage form.

Complete **self-training tasks** independently.

Independently prepare for classes using recommended books, lecture material and electronic files from the discipline «Veterinary Pharmacology» at the «Distance learning portal (MOODLE) of SBTU».

Auditory work: Fill in the missing text in a practical session on the subject of **Solid dosage forms**

2. MEDICINAL FORMS AND THEIR RECIPE

2.1. Solid dosage forms.

2.1.1. Powder -

Solid medicinal substances are crushed in mortars, machine-mills, then sifted through a sieve. Depending on the diameter of the sieve opening, i.e

1. according to particle size, powders are divided into:

1. _____;
2. _____;
3. _____.

Powders are prescribed to animals internally or externally. Small powders are most often given inside, the smallest powders are given outside.

In veterinary practice, powders are used quite often. It is a convenient, portable, easy and quick-to-make dosage form; they can be stored for a long time.

Hygroscopic substances that dissolve when they collide with each other (camphor with chloral hydrate, etc.), with an unpleasant smell and taste, irritating mucous membranes, etc., cannot be prescribed in powders. (for internal use).

2. Powders are distinguished by their composition:

1. _____
2. _____

The first contain one medicinal substance, the second contain several.

3. Powders are divided into:

1. _____
2. _____

Powders for internal use. Powders are most often given to a large animal mixed with moist, easily digestible feed or water; pigs - with milk or syrup, dogs and cats - in a tablespoon with water, milk or other liquid. Sometimes flavoring substances are added to powders.

Powders are prescribed in undivided form or in divided form, i.e

4. According to the method of application, they are divided into:

1. _____
2. _____

_____ prescribed in the prescription in the total dose for the full course of treatment (example 1). In this form, weakly acting, harmless substances that do not require exact dosage can be prescribed.

They are dosed with canteens, dessert spoons, glasses and similar measures, which must be indicated in the signature.

Powders are released in paper bags, boxes, and wide-mouthed containers.

_____ usually contain poisonous and potent substances, drugs that require precise dosing.

Most often, dosed powders are prescribed by the dispensing method, when the prescription indicates a single dose with a further indication of how many such powders should be made.

Examples of recipes.

1. Simple undosed powder for internal use:

Pancreatic

Rp.: Piperazini adipinatis 30,0

D. S. Inside, a teaspoon 3 times a day.

2. Complex undosed powder for internal use:

For cow:

Rp.: Natrii sulfatis 500,0

Natrii chloridi 300,0

Natrii hydrocarbonatis 200,0

M. f. pulvis

D. S. Dissolve 2 cups of salt in 1/2 bucket of water and give the animal a drink.

3. Simple dosed powder for internal use:

For pig:

Rp.: Codeini phosphatis 0,5

D.t.d.N.6

S. 1 powder inside 3 times a day.

4. **Complex dosed powder for internal use:**

For dog:

Rp.: Ferri lactates 0,01

Sacchari. albi 0,3

M. f. pulvis

D. t. d. N. 6 S. Inside, 1 powder x 3 times a day x 2 days.

Powders for external use.

Externally, the smallest powders are used in the form of powders for wounds, mucous membranes, skin, etc.

Powders (units of n. v. - _____, family v. - _____) are prescribed in undivided (non-dosed) form (examples 5, 6, 7), and in the signature it is indicated on which part of the animal's body it must be applied. Talc, white clay, starch, magnesium oxide, zinc, etc. are used as a filler in the powder.

Examples of recipes.

5. _____ powder for external use:

For cat:

Rp.: Streptocidi subtilissimi 20,0

D. S. Sprinkle the affected areas of the skin.

#

For cat:

Rp.: Aspersionis Streptocidi 20,0

D. S. Sprinkle the affected areas of the skin.

6. _____ powder for external use.

Expanded prescription:

For calf:

Rp.: Xeroformii 4,0

Talci ad 20,0

M. f. pulvis subtilissimus

D. S. Sprinkle the affected areas of the skin in the thigh area.

7. _____ powder for external use.

A simple prescription:

For calf:

Rp.: Aspersionis Xeroformii 20% - 20,0

D. S. Sprinkle the affected areas of the skin.

2.1.3.Pills

Pills are the official form, prepared at pharmaceutical plants and factories.

Pills have the appearance of round, oval or other forms of plates with a flat or biconvex surface. The composition of the pills includes medicinal and auxiliary (sugar, starch, sodium chloride, etc.) substances.

Excipients are used to obtain the shape and required weight of pills when the dose of the medicine is small.

Pills are prescribed inside, and they are also used to prepare solutions. Inside, they are given with food or manure, water, having previously crushed it. This is the most widely used dosage form.

Pills are convenient to take, hygienic in manufacture, portable, better stored, less exposed to moisture, air and light; they feel less the bitter taste of medicinal substances. Store the pills in a tightly sealed container in a dry place protected from light. They must have the correct shape, solid edges, an even and smooth surface, when placed in 50 ml of water at a temperature of 37°C and when the flask is slowly shaken (1-2 times in 1 s), they must disintegrate or dissolve within 15 minutes, and be covered with shells - no more than 30 min. If the pills do not disintegrate within the specified period, they should be withdrawn from use.

Sometimes pills have one or two perpendicular grooves, which makes it possible to divide them into 2 or 4 parts.

You can select pills:

1. complex, those that have several medicinal substances in their composition;
2. simple - one medicinal substance;
3. with a commercial name.

They are issued in different ways:

Examples of recipes.

1. _____ pills:

For calf:

Rp.: Analgini 0,5

D.t. d. N. 10 intabulettis

S. 1 pill 2 times a day.

#

2. . _____ pills:

For calf:

Rp.: Tabulettae Analgini 0,5

D.t. d.N. 10

S. 1 pill 2 times a day.

1. _____ pills:

For calf:

Rp.: Analgini

Amidopirini aa 0,25

Coffeini-natrii benzoatis 0,1

D. t. d. N. 10 in tabulettis

S. 1 pill 2 times a day.

4. Pills with _____ :

For calf:

Rp.: Tabulettarum, "Reopirinum" N. 20

D.S. 1 tablet x 2 per day x 10 days

2.1.4. Drazee – _____ (born in– _____) –

_____ ;

is for internal use only. The weight of dragees usually does not exceed 1 g. They have a regular spherical shape, a flat and smooth surface, a uniform color. Many vitamins and other groups of medicinal substances are produced in the form of dragees.

An example of a recipe.

For 10 calves:

Rp.: Dragee Aminazini 0,025

D.t. d. N. 40

S. 4 dragees for 1 reception 2 hours before loading.

2.1.5. Bolus - _____ (noun, singular),
_____ (gen., plural) - _____

This is a type of pill that is not included in the pharmacopoeia and is used in veterinary medicine.

As form-forming substances for preparation, the following are most often used:

rye flour - _____;

Altai root powder - _____;

white clay - _____.

Liquid and semi-liquid form-forming substances are most often used:

distilled, boiled, tap water (_____);

syrups (Sirupus simplex - simple sugar syrup);

alcohols;

soap (_____ – green soap);

indifferent extracts.

Green soap is used in the production of boluses from resins, gum, and white clay - when prescribing silver nitrate, lead acetate, and other drugs that react with organic molding agents and are destroyed by them.

The weight of boluses ranges from 0.5 to 50 g or more. They are injected inside with the help of a bolus pump, mainly by a large animal.

Boluses are prepared for 1-2 days, as they quickly dry and harden.

Boluses are prescribed by dispensational (1) and divisional (2) methods.

Examples of recipes.

I.

For Horse.

Rp.: Bismuthi subnitratris 5,0

Farinae secalinae et

Aquae destillatae q. s.

Ut f. bolus

D.t.d.N. 3

S. Inside, 1 bolus 3 times a day

#

For Horse.

Rp.: Bismuthi subnitratris 15,0

Farinae secalinae et

Aquae destillatae q. s.

Ut.f.boli N. 3

D. S. Inside, 1 bolus 3 times a day.

With both of these methods, the amount of formative substances in the recipe is not exactly dosed, but _____(q. s.) is written - how much is needed. Boluses are released wrapped in waxed or paraffined paper. In the form of boluses, substances with an unpleasant smell, bitter taste, and irritants can be prescribed.

2.1.6. Pill – _____(nominal name, unit part), _____(family part, unit part)– _____
_____ weighing from 0.1 to 0.5 g.

There are no developed standards for the weight of pills for animals.

This is one of the most ancient medicinal forms, which is gradually falling out of use.

In veterinary practice, pills are prescribed to birds, dogs and cats.

Pills are a fairly easy-to-use dosage form, but, nevertheless, "it has a number of disadvantages. The advantages of pills are portability, the ability to dose accurately enough, the unpleasant taste and smell of medicinal substances is weakened, they are well stored with the correct selection of the weight of pills.

The negative side of them is the not entirely hygienic method of production. They slowly disintegrate in the gastrointestinal tract, especially after long-term storage, when the pills have dried and compacted.

In the form of pills, it is most convenient to prescribe potent and poisonous substances that are prescribed in small quantities and for a long time.

The composition of the pills includes a medicinal substance and a base (the mass of the pill), which consists of substances that are indifferent or have a weak effect on the body. These substances provide the necessary mass and volume, the appropriate density, cause the ingredients to stick together and prevent the pills from hardening.

As auxiliary substances for the preparation of the pill mass, the following are used:

- _____ extracts and powders of various roots (liquorice - _____; yarrow - _____; althea - _____, etc.)
- _____ white clay (Bulus alba).

Often, the weight of the pill is not deciphered in the recipe, but _____(born V.) is written. In this case, the pharmacist himself selects the necessary indifferent substances in this particular case.

Pills are prescribed internally, they are prescribed by dispensation (examples 1,2) or divisional (example 3) method.

Examples of recipes.

1. For Dog

Rp.: Acidi arsenicosi anhydrici 0,001

Extracti et pulveris

radicis Liquiritiae aa q. s.

M. f. pilula

D. t. d. N. 30

S. One pill 3 times a day

#

For Dog

Rp.: Ferri glycerophosphatis 0,3

Massae pilularum q.s.

Ut f. pilula

D. t. d. N. 25

S. Inside, one pill 3 times a day

#

For Dog

Rp.: Ferri glycerophosphatis 7,5

Massae pilularum q.s.

Ut.f. pilulae N.25

D.S.Inside, one pill 3 times a day

So that the pills disintegrate only in the intestines, they are coated with keratin. It is necessary to make a special instruction about this in the recipe: *Obduce ceratino*.

2.1.7, Capsule - _____(noun, unit part), _____(gen. part, unit part) - is a shell or container where medicinal substances are placed. They are used for _____, viscous or hard products. In capsules, drugs with _____ (santonin, turpentine oil), volatile (carbon tetrachloride), thick oils (castor oil) are prescribed, and in acid-resistant capsules - substances that break down in the stomach.

Capsules are manufactured in a factory way. Depending on the material from which they are made, they are distinguished:

1. Starch capsules are _____, they are also called wafers (*Oblatae*); prepared from starch or wheat flour.

Starch capsules get wet quickly, and that is why they are prescribed only non-hygroscopic powders.

2. Gelatin capsules - _____; are elastic and hard. Elastic gelatin capsules are usually filled in factories with liquid medicinal substances (castor oil). It is necessary to specify in the recipes - release, in elastic capsules.

Hard gelatin capsules consist of hollow cylinders that fit into each other (bottom and lid, each of which is closed on one side. When prescribing drugs in hard gelatin capsules, it is indicated "D. in capsulis gelatinosis duris".

3. Glutoid capsules - _____, prepared from gelatin, processing them with steam or 3% alcohol solution of formaldehyde.

Keratin capsules - _____ .

The last two types of capsules dissolve only in the alkaline content of the intestine and are used in those cases when it is necessary that the medicine begins its effect not in the stomach, but in the small intestine.

Medicinal substances in capsules are prescribed in dosage form by dispensing method - the dose of the drug in one capsule and the number of capsules are indicated. Depending on the dose of the drug, you can prescribe several capsules per reception.

Examples of recipes.

1. _____ For pig

Rp.: Olei Ricini 2,0

D. t. d. N. 10 in capsulis gelatinosis elasticis

S. For one appointment.

#

2. _____ For sheep

Rp.: Extracti Filicis maris 1,0

D. t. d. N. 4 in capsulis gelatinosis elasticis

S. 2 capsules at a time after a 12-hour fasting diet, once a day for 2 days.

2.1.8. Collections - _____(name of plant, unit part), _____(plant of plant, plural part), _____(plant of plant, unit) - a mixture of dried and coarsely ground different parts of medicinal plants .

The plants included in the collection often contain active substances that have astringent, laxative, diuretic and other properties.

Plants are not appointed at meetings,

_____.
Fees are prescribed _____ in dry form with feed or infusions and decoctions are prepared from them; _____ – in the form of poultices, lotions, baths.

Fees (_____) are prescribed according to the same scheme as undivided powders (see example). Medicinal plants listed in the prescription are prescribed in order of their pharmacological activity or by botanical indication.

In the recipe, it is necessary to specify in detail the _____ of the fee. If mineral salts are added to the collection, they are indicated at the end of the prescription (see example 1). _____ collections manufactured at pharmaceutical factories are released for sale in _____, on which _____ is indicated. Such fees are written out in a simple way (example 2) with an indication of the name of the fee, amount and method of application.

Examples of recipes.

1. For calve

Rp.: Herbae Menthae piperitae

Floram Chamomillae

Fractus Carvi

Fructus Foeniculi aa 18,0

Sails carolini factitii 180,0

M. f. species

D.S. Brew in 1 liter of water, take 1.5 cups 3 times a day.

#

2. For calve

Rp.: Speciei pectoralis 150,0

D.S. Infuse in 1.5 liters of hot water, take 0.5 cups 4 times a day.

Tasks for self-training

Topic: SOLID MEDICINAL FORM

CONTROL QUESTIONS:

1. Powder
2. Pill
3. Capsules
4. Pill
5. Bolus

№ question	Answer (give a definition + Latin, answer the question)

TASKS BY RECIPE TELEPHONE

1. Cow tab. "Exuterum". Enter into the uterus 3 times x 1 R x 4 days.
2. Horse 50.0 10% Streptocidum powder
3. Tylarmm calves 3.0 1 year x 5 days.
4. "Ascorutinum" dragee for dogs. 2 others each x 2 years x 5 days
5. For dogs, 10 Laevomyces pills of 0.25 (1 p. x 2 years x 5 days each).
6. Pigs d. Ricini 10 tablets. capsules of 1.1 - (r.d. 5.0 2 yr. x 1 d.)
7. Pigs 30.0 20% Iodoformium powder.
8. Pigs tab. Norsulfazolum at 0.5 (r.d. 1.0). 4 years x 5 days.
9. Pigs 2 boluses of Hydrargyri monochloridum -(birth rate 3.0).
10. Pigs dragee "Decamevitum" (2 to. x 2 years x 10 days).
11. Pigs 50.0 carries, collection Sp. laxantes (in the genus - Laxantidis) 2 tbsp. Sat. brew in a stack of boiling water.
12. Pigs Rifampicinum 0.15 in gel capsules (r.d. 0.3) 2 years x 5 days.
13. Pig suppositories with Trichomonacidum 0.05 each (r.d. 0.15).
14. "Trimerazinum" guinea pig tablets (2 tons x 2 years x 5 days each)

15. Retinoli acetate dragees, 33,000 IU each (2 in. x 1 year x 5 days)
16. Pork belly 10 gelatin. capsules 01. Ricini 1.0 each (5 drops each, x 2 years)
17. Porcine 30.0 10% Aethazolium powders.
18. Pancreatic Tilanum 2.0 each (2 p. x 5 so.).
19. Pancreas 100.0 vitamin collection (Sp. vitaminosa) 2 tbsp. spoons brew in 2 glasses of boiling water, give 40 ml 2 times a day.
20. Sulfadimethoxum calf tablets 0.5 (b.d. 3.0) 1 year x 6 days.
21. Calves Aethapyrizinum dragees 0.05 (r.d. 0.2) 1 year x 3 days.
22. Trimetosolum for calves 0.5 (r.d. 2.0) in gelatin. capsules 2 years x 5 days.
23. Calves 50.0 20% Dermatolum powder.
24. Calves 500.0 Natrii sulfas. 50.0 per 2 years x 5 days.
25. Calves: root - r. Gentiarmnae, rhizome rh. Calami 50.0 each; Natrii chloridum 10.0 - 30.0 2 g/day with food.
26. Sheep glutamic acid (Ac. glutamicum) 0.5 2 g x 5 days.
27. Sheep tab-tka "Gastrofarm" (2 tons x 2 x 5 days each)
28. Sheep dragee "Hexavitum" (3 in. x 2 years x 7 days)
29. Sheep 2 boluses with Butadionum (r.d. 4.0).
30. Sheep 50.0 powder Streptocidum.
31. Sheep for 2 others. Extr. Filicis maris is thick in gelatin capsules of 0.5 (r.d. 2.0).
32. Pancreatic Tilanum at 1.0 2 r x 5 days.
33. Pancreatic tab. Synthomycinum 0.25 (r.d. 0.5) 2 r x 5 days.
34. Porcine 20.0 30% Xeroformium powders.
35. Pancreatic 200.0 Calcii lactas. 10.0 x 2 years x 5 days each.
36. Pancreatic Cysteinum 0.1 in starch capsules (1 p. x 10 days).
37. Pancreatic dragees "Quadevitum" (1 in. x 2 years x 10 days each).
38. Calves 200.0 Calcii phosphas. 10.0 per 2 years x 10 days.
39. Calves 50.0 20% Aethazolium powder.
40. Calves tab. Sulfamonomethoxinum at 0.5 r.d. 3.0 (1 year x 6 days).
41. Calves: Rad. Taraxaci, fr. Foeniculi, rh. Calami No. 50.0; Sal. carolinum 100.0. Give with feed at 40.0 3 g per day.
42. "Undevitum" dragee for calves, 2 others. x 2 years x 5 days.
43. Horses 3 boluses of Theobrominum (r.d. 50) 1 bi x 3 r x 1 d.
44. Horses for 10 others: Ac. ascorbicum 0.5; Rutinum 0.25.
45. Horses 12 intrauterine pills "Exuterum" 4 tons x 1 year x 3 days.
46. Foals Carbonei tetrachloridum in gelatin capsules of 2 ml (r.d. 6.0) Once, cautiously after a 12-hour fasting diet.
47. Horses 1000.0 Natrii sulfas. 500.0 per appointment. 2 years x 1 day.
48. For a horse 100.0 20% Dermatolum powder.
49. Sheep Pharmasinum 2.0 each (2 years x 5 days).

50. Sheep Calcii sulfas 200.0. 15.0 per year x x 10 days.
51. Sheep 20% powder Sulfantrolum 50.0.
52. The flock of sheep howls. Sp. Vitaminosa 100.0. Table, spoon to brew a stack of boiling water. Set 1/4 stack. × 1 year × 5 days
53. Sheep dragee Aminazinum 0.025 (r.d. 0.05) 2 r × 5 days.
54. 10 piglets pills with Mebendazolum - 0.2 (for 2 in. 1 year × 2 days).
55. 5 piglets 50.0 20% Iodoformium powder. Sprinkle the castration wound.
56. Porcine tablets "De-nol" (1 volume × 3 years × 5 days).
57. Pancreatic Sulginum at 1.0 (2 r × 5 days).
58. Pancreatic Doxycyclini hydrochloridum in gel capsules of 0.05 (r.d. 0.1) 1 year x 5 days.
59. Porcine dragees Propazinum no 0.025 (r.d. 0.05).
60. 100 sheep tab. Dertilum About by OD (for 1 in. after a 16-hour fasting diet).
61. For 50 sheep, dragees Propazinum at 0.025 (r.d. 0.1) per 1 in. (before loading).
62. Horse 50.0 2% Aethacridmi lactas powder.
63. 50 sheep Phenasalum 2.0 (for 2 doses after a fasting diet).
64. Horses 1000.0 Magnesii sulfas. 500.0 per 2 r x day.
65. Horses for 2 doses of Carbonei tetrachloridum in gel capsules of 5.0 (r.d. 10.0) 1 year x 2 days,
66. Sheep 500.0 Sal carolinum. 20.0 3 r. per day.
67. 100 sheep tab. СаИсии arsenas At 0.6 (r.d. 1.2). Once after a 12-hour fasting diet.
68. 20 lambs after castration 50.0 20% Sulfantrolum powder.
69. "Heptavitum" dragee for 100 sheep (1 in. x 1 r x 5 days)
70. Methionmum sheep 0.2 (r.d. 0.4) in gelatin capsules (1 r x 10 days).
71. Sheep 100.0 calming collection Sp. sedativa (brew 2 tablespoons of the collection with 2 cups of boiling water, give 2 tablespoons 2 times a day).
72. Sheep 500.0 Sal carolinum. for 20.0 3 r x day.
73. 100 sheep tab. СаИсии arsenas At 0.6 (r.d. 1.2). Once after a 12-hour fasting diet.
74. 20 lambs after castration 50.0 20% Sulfantrolum powder.
75. "Heptavitum" dragee for 100 sheep (1 in. x 1 r x 5 days)
76. Methionmum sheep 0.2 (r.d. 0.4) in gelatin capsules (1 r x 10 days).
77. Sheep 100.0 calming collection Sp. sedativa (brew 2 tablespoons of the collection with 2 cups of boiling water, give 2 tablespoons 2 times a day).
78. Calf pills Sulfamonomethoxium 0.5 r.d. 2.0 1-year x 7 days.
79. Calves 50.0 powder "Galmaninum".
80. Calves Sulfur depuratum 1.0 in starch. capsules (1 year x ? 0 days).
81. Pharmasinum, Sulginum for calves 1.0 (2 years x 5 days).
82. Calves 100.0 stomach collection - Sp. stomachica (brew 1 tablespoon of the collection with a glass of boiling water. 1/2 cup for 2 days)

83. Mepazinum dragees for calves 0.025, r.d. 0.1 by 2 in.
84. "Asparcam" pills for dogs (2 packs x 2 years x 10 days)
85. Calves Methacyclini hydrochloridum in gel. capsules of 0.15 (r.d. 0.45 x 2r x 5 days)
86. Dogs 100.0 collection Sp. amara (brew 1 tablespoon of the collection in a cup of boiling water, 1 tablespoon x 3 times a day).
87. Pancreatic tab. "Biseptolum" (2 tons each x 2 years x 5 days)
88. Porcine 20.0 20% powder of Jodoformium.
89. Cow 2 boluses with Phenbendazolum 5.0.
90. Cow pills "Gastina" (3 packs x 2 years x 5 days)
91. Cows 1000.0 Natrii sulfas. 500.0 for 1 year x 2 days.
92. Cow dragees Aminazinum 0.05 (r.d. 0.4) for 2 doses.
93. Cow 50.0 powder, consisting of: Ac. salicylicum - 6%; Zinci oxydum - 10%; Talcum - 40%; Amylum - 44%.
94. Pigs dragees Triphthazinum no 0.005 (r.d. 0.01) 2 p. x 5 days
95. Pigs Osarsolum no 1,0 1 p. x 5 days
96. Pigs 50.0 10%) Dermatolum powder.
97. Pig fruit f. Anisi, f. Foeniculi; letter - fol. Sennae, Natrii sulfas - no 50.0. set at 20.0 3 p. x day with feed.
98. Pigs tab. Disulforminum at 0.5 r.d. 2.0 2 years x 5 days.

PRESCRIBE:

№ recipe	Recipe	№ recipe	Recipe

Material support: Tables, scales, mortars, pestles, flasks, test tubes

The work was accepted by " _____ " _____ 202__

Teacher's signature _____

PRACTICAL LESSON № 3

« _____ » _____ 202__ .

Class location – classroom of the department

Purpose of the lesson: To learn such concepts as ointment, paste, liniment, plaster, suppositories, porridge. Familiarize yourself with each soft dosage form and the variety of each of them. Master How to distinguish each soft dosage form from one another. Methodology for writing prescriptions for each solid dosage form.

Task: such concepts as ointment, paste, liniment, patch, suppositories, porridge. Master the rules of writing prescriptions for soft dosage forms

To learn: How does each of the soft dosage forms differ from each other. Familiarize yourself with the variety of each soft dosage form. Complete self-training tasks independently.

Independently prepare for classes using recommended books, lecture material and electronic files from the discipline «Veterinary Pharmacology» at the «Distance learning portal (MOODLE) of SBTU».

Auditory work: Fill in the missing text in a practical session on the topic Soft dosage forms

2.2. Soft dosage forms.

2.2.2. Ointment - _____(nominal v., unit h.), _____(sub. v., unit h.)

Ointments are used _____. They appoint

From the point of view of practical application, the ointment can be divided into two groups:

• Ointments of surface action are intended for action on the epidermis of the skin and mucous membranes;

• Deep-acting ointments affect the deeper layers of the skin and can have a resorptive effect. Ointment consists of medicinal substance _____ and base_____.

Ointment bases are substances or mixtures of substances:

1. that have a high lubricating ability;
2. that do not change their properties under the influence of light and air;
3. must be stable, neutral, i.e. not interact with medicinal products and not have an irritating effect;

4. mix well with the medicinal substance;
5. be quickly and completely absorbed by the surface on which the ointment is applied, or, on the contrary, remain on it in the form of a coating;
6. have a melting point close to body temperature;
7. do not decompose.

As an ointment base, use:

I. hydrophobic bases;

II. hydrophilic colloidal bases.

I. Hydrophobic bases are divided into:

1. _____
2. _____

Fatty bases	
Of mineral origin	Animal origin
<i>General properties</i>	
stable during storage, poorly absorbed by the skin	

Fat bases	
Animal origin	Plant origin
<i>General properties</i>	
They easily penetrate into the deep layers of the skin. They will quickly become bitter, interact with some substances.	Unlike animals, they are worse absorbed through the skin, more resistant.

II. Hydrophilic colloid bases - glycerol gels (for example, gelatin-glycerol base), polyethylene oxides, phytosterols, etc.

The basis for the ointment can be one of the above substances or an alloy of several substances of these groups.

The most widely used base for topical ointments is _____ white and yellow; for ointments of deep action - _____.

Hydrophilic colloidal bases can be used for the production of ointments of superficial and deep action. However, they are unstable and deteriorate quickly.

The choice of an ointment base depends on the doctor's instructions, on the goals and objectives he sets when prescribing this medicinal product.

The amount of ointment prescribed depends on the surface to be applied to, as well as the frequency of application. Ointments are usually prescribed on _____ days. Eye ointments in the amount of 5-10 g, and anti-scabies and others in the amount of up to 500 g and more.

In order to prescribe an ointment, it is necessary to know the concentration of the medicinal substance and the total amount. The ointment is prescribed in two ways:

1. _____
2. _____

If the composition of the ointment includes only one medicinal substance, the name of the ointment, its concentration and quantity are indicated in the recipe (example 1):

If the basis for the ointment is not indicated, it is prepared on petroleum jelly (example 2). All official ointments are prescribed in the same way.

_____ ointment is prescribed in an expanded way, indicating all its constituent parts (example 3).

Examples of recipes.

1. Abbreviated prescription:

To horse

Rp.: Unguenti Ichthyoli 5% - 50.0

D. S. Lubricate the inflamed areas of the skin

Example 1 - the first number shows the ratio of the medicinal substance and the ointment base in percent, the second - the total amount of ointment.

2. Expanded prescription:

To horse

Rp.: Ichthyoli 2.5

Vaseline albi ad 50.0

M.f. unguent

D. S. Lubricate the inflamed areas of the skin

#

To horse

Rp.: Sulfuris 10.0

Picis liquidae 5.0

Adipis suilli ad 100.0

M.f. unguent

D. S. Lubricate the affected areas of the skin

2.2.3. Pasta - _____(nominal v., od.h), _____(gen. v., od.h.) is a variety of _____, which differs in that _____.

Pastes are prescribed _____. Pastes are used as covering, drying, softening and anti-inflammatory agents. Locally, pastes act longer than ointments.

Pastes consist of medicines, ointment bases and indifferent powders. For the preparation of pastes, the same bases are used as for ointments.

If the amount of powdery substances in the recipe is less than 25% of the total amount of paste, then indifferent substances are added.

As the latter, starch (_____), talc (_____), white clay (_____) and some others are used.

The recipe for the paste is written in an expanded form, since it is necessary to specify exactly how much indifferent powder needs to be added, in other words, to determine the density of the paste.

If the paste is prescribed in an abbreviated form, then exactly 25% of powdered substances, including the medicinal product, will be taken during its manufacture.

Pastes belong to _____ medicinal forms. When preparing a recipe for a paste, it is necessary to know the concentration of the drug, the amount of the neutral agent and the total amount of the paste.

Examples of recipes.

Task: prescribe salicylic acid (Acidum salicylicum) in the form of a 5% paste of 50 g, containing 30% of dry matter.

Calculation: salicylic acid should be 5%, therefore, for 50 g of paste it should be taken $(5 \times 50) : 100 = 2.5$ g. The amount of dry matter is 30%. To make a paste of this density, it is necessary to take powdered substances $(30 \times 50) : 100 = 15$ g. Since there are 2.5 g of medicinal substances, it is necessary to add 12.5 g of indifferent powdered substances.

	To dog
Rp.: Acidi salicylici	2,5
Talci	12,5
Vaselini	ad 50,0
M.f. pasta	
D.S. Apply to the affected area of the skin.	

2.2.4. Liniment - _____ (noun. v., unit h.), _____ (gen. v., unit h.) is _____

In physico-chemical terms, it is a dispersed system of varying degrees of homogeneity, which allows them to be divided into homogeneous, emulsifying and suspension liniments.

1. Homogeneous liniments –

2. **Emulsifying liniments –**

3. **Suspension liniments –**

Liniments are used _____ for all types of animals.
_____ are taken as medicinal
substances_____

They are used for burns, inflammatory processes in the skin and subcutaneous tissue, myositis, sprained ligaments, local pains as softening and anti-inflammatory.

Liniments are unstable and are prescribed for the _____ period, when stored they _____. Therefore, in the signature, it is necessary to indicate

Liniments are _____ medicinal form. They are written out in _____ with a list of all constituent parts or in a short way.

Examples of recipes.

1. Expanded prescription:

To horse

Rp.: Olei Terebinthinae 30.0

Ammonii caustici soluti 20.0

Olei Lini 40.0

M.f. linimentum

D. S. Rub into the area of the affected joint

2. Abbreviated prescription:

To Sheep

Rp.: Linimenti Synthomycim 1% - 100.0

D. S. Lubricate the affected areas of the skin.

2.2.5. Plaster - _____(name of family, unit of unit),
_____(family of unit, unit of unit) is

_____. Plasters are used in surgical and obstetric practice to hold bandages, close the edges of wounds, etc. Irritating, anti-inflammatory and other substances can be prescribed in plasters. They are prepared by _____.

Plaster - _____ medicinal form. It is obtained by mixing medicinal substances with salts of fatty acids, resins, wax, fats, paraffin, rubber. There are two types of patches:

1. _____ – dense at room temperature and bodies that soften at temperature; they are able to adhere tightly to the skin. Issued:
that was smeared on the cloth and
that were not smeared

2. _____ After the solvent evaporates, they remain on the skin in the form of a film.

Plasters are written out in a piece with an indication of its mass or that it was smeared on some fabric (collenkor, canvas, silk, etc.). In this case it is necessary to specify the dimensions of the patch in centimeters - length (Jongitudo) and width (latitudo) or total magnitude (magnitude).

Examples of recipes.

1. Patch written in a piece:

To pigs

Rp.: Emplastri Meliloti 30.0

D. S. Warm it up, apply it on a cloth of 5 × 10 cm and apply it to the affected area of the skin.

2. Plaster applied to fabric:

To cows

Rp.: Emplastri Plumbi compositi 20 × 5 cm

D. S. Apply to the affected area of the body

3. Liquid patch:

To dogs

Rp.: Collodii 100.0

D. S. To fix the bandage.

2.2.6. Suppositories – _____ (nominal family, singular part),

family, singular part), _____
(genitive family, plural part) are

_____.
There are _____ suppositories (suppositoria rectalia);
_____ (suppositories vaginalia); sticks -
_____. They are introduced into the natural openings and
cavities of the animal's body, into the wound canals for both local and general action.
It is necessary to keep in mind that the substance absorbed in the rectum is
_____, because it enters the
inferior vena cava from the rectum, bypassing _____. Therefore, a single
dose of medicinal substance when prescribed in suppositories should not be exceeded.
Rectal suppositories have the shape of _____, vaginal suppositories -
_____, sticks (bougies) - the shape of
_____. The latter are intended for entry into

_____.

Suppositories consist of _____. Anti-
inflammatory, hemostatic, analgesic, astringent, disinfectant and absorbent drugs are
used as _____.
_____ for suppositories are
substances that are dense at room temperature and bodies that melt at temperature.

They should be:

- _____;
- _____;
- _____;
- _____.

The best base is cocoa butter - _____. Currently,
hydrogenated fats in combination with paraffin called butyrol are widely used -
_____, alloys of fats with wax and spermaceta; paraffin with
lanolin, gelatin-glycerin and soap-glycerin gels, etc. If the base is not specified in the
recipe, then cocoa butter is used. Instead of specifying the exact weight of the base, it
is allowed to write _____ - how much is needed. This
greatly facilitates the technology of preparation of the dosage form.

Sticks (bougies) are of different sizes, which depends on the holes for which they are intended. Therefore, it is necessary to specify their length and diameter in the recipes.

To write a prescription for suppositories,

_____. All prescriptions must be signed with _____. Candles and balls are wrapped in parchment paper, cellophane or foil (rectal) and released in boxes. Store them in a dry and cool place.

Currently, suppositories are manufactured mainly on _____, therefore, prescriptions are most often written in _____, for manufacture in a pharmacy -

_____.

Examples of recipes.

1. Abbreviated prescription (case cum - with and the name of the medicinal substance in the instrumental case):

Dogs

Rp.: Suppositorii cum Ichthyolo 0.2

D. t. d.N. 10 S. Enter 1 suppository into the rectum.

2. Candles with a commercial name:

Sheep

Rp.: Suppositoriorum "Osarcidum" N. 10

D. S. Insert 2 suppositories into the vagina once a day for 5 days.

3. Trunk candles:

Pigs

Rp.: Extracti Beladonnae 0.5

Butyrolī q. s.

Tuesday f. suppository

D. t. d. N. 10

S. Enter one suppository into the rectum 2 times a day

#

Rp.: Ichtlryoli 1.0 Sheep

Butyri Cacao q. s.

Ut f. suppository.

D. t d. N. 5

S. Insert 1 suppository into the vagina once a day.

#

To horse

Rp.: Anaesthesini 0.1

Butyroli q. s.

Ut f. bacillus longitude 8 cm and diameter 0.5 cm

D.t.d.N.4

S. For introduction into the urethra of a horse.

2.2.1. Porridge is _____ (nominal noun, singular part), _____ (nominal noun, plural part) is _____

_____. Depending on the consistency, porridges are distinguished between thick (_____) and soft, semi-liquid (_____).

Thick porridges are close to _____ in consistency, and thin porridges are _____. Most often, substances of _____ origin, salts of mineral acids are prescribed in porridges, and they _____ do _____ not _____ use

_____. Since the drugs included in the porridges are not precisely dosed, it is not recommended to use poisonous and potent substances in this form. Substances that are easily oxidized and decomposed of inorganic origin (potassium permanganate, silver nitrate, etc.) are also not prescribed.

Porridge consists of

- _____;
- _____.

As the latter, take the same components as for boluses:

- licorice root powder (_____)
- rye flour (_____)
- powder of alteya root (_____)
- flax flour (_____)
- simple syrup (_____)
- plant extracts, juices (_____)
- balms, etc. (_____)

Formative substances must have a good taste and binding properties.

Sugar syrup, licorice root extract, and juniper berry juice are added to pigs' porridge as a flavoring substance (_____); horses are given a small amount of salt; cattle - bitter or salty substances.

The amount of formative substances to obtain the porridge depends, on the one hand, on their binding abilities, and on the other hand, on the properties of the medicinal substances included in the composition of the porridge. The ratio of formative and medicinal substances in porridges is most often _____.

The powder of alteino root has a good binding capacity, of which 1/6 by weight is enough to bind herbal medicinal substances. Rye flour is close to alte root powder in its binding ability. Sweet substances have the least binding force.

Porridges are very unstable, so they are prepared for _____, or no more than _____ days. The porridges are stored in a dry, cool place and released in glass jars or in boxes lined from the inside with paraffined, waxed or parchment paper.

Porridge is most often prescribed for pigs, less often for _____, sometimes for dogs and sheep.

The porridge is prescribed in an undivided way, with an indication in the signature of the dosage method and the frequency of use. Flavoring substances are indicated after medicinal ones. The usual amount of formative substances in the porridge is not indicated, but is indicated as _____. However, if the liquid contains pharmacologically active substances, they must be dosed.

Examples of recipes.

Pancreatic

Rp.: Folii Sennae 40.0

Farinae secalinae et

Aquae distillatae q. s.

Ut f. electuarium

D. S. Ha 2 receptions equally 2 times a day.

Tasks for self-training

Topic: SOFT MEDICINE FORMS

CONTROL QUESTIONS:

1. Ointment and its reception.
2. Ointment bases - definition, properties.
3. Fatty bases of mineral origin
4. Fatty bases of animal origin
5. Fat bases of animal origin

№ question	Answer (give a definition + Latin, answer the question)

2. TASKS ON THE RECIPE OF MLF

1. Calves 30.0 ointment ung. Concovi. Grease places of burn.
2. Calves rect. Candles with Ichthyolum at 0.2 (r.d. 0.4) 1 year x 5 days.
3. Calves 100.0 liquid ointment, in which: 3% Pix liquida, 5% Xeroformium, 92% - growth. Oil (lubricate damaged areas of the skin).
4. Calves 50.0 ointment on pork fat, in which 2% Iodum, 4% Kalii iodidum. Grease in the region ligament joint.
5. Calves 180.0 liquid. Arcodex patch. For wrapping the skin.
6. Calves 50.0 mag, paste containing 20% Aethazolum.
7. Pig ointment Pilocarpini hydrochloridum 2% in a tube of 10.0. Eye ointment.
8. Pigs 20.0 5% Anaesthesinum ointment (on butter). Oil skin in the region shoulder joint.
9. Pigs 100.0 liquid ointment Chloroformium compositum. Rub in region. crosses

10. Pigs 50.0 p. Lassari. Apply to the affected areas of the skin.
11. Pancreatic 20.0 patch Thalm.
12. Porcine 50.0 10% Butadionum ointment (on pork fat). Lubricated in the region shoulder joint.
13. Pancreatic 30.0 paste, in which 15% Dermatolum, Zinci oxydum.
14. Epidural suppositories with Nystalinum 500,000 units (rectally for 1 week x 4 years x 10 days).
15. Pancreatic 100.0 liquid ointment, in which 5% Creolinum, 2% Kalii carbonatis 93% fish oil (Ol. jecoris Aselli). Rub into the affected areas of the skin.
16. Pancreatic 20.0 "Jam" ointment. Lubricate the affected areas of the skin.
17. Calves 50.0 Solidolum ointment. Smaz defeat. areas of skin.
18. Calves 50.0 10% Iodoformium ointment on pork fat.
19. Calves rect. suppositories with Nitazolum at 0.25. R.d. 2.0, input 2 years x 5 days.
20. Calves 100.0 liquid ointment, which contains 5% Creolinum, Sapo viridis, 2% Kalii carbonas, 88% - vegetable oil. Rub into the affected areas of the skin.
21. Calves 50.0 Zincum pastes. Apply to the affected areas of the skin.
22. Calves 180.0 Septonex Liquid Patch. For wrapping the skin.
23. Sheep suppositories (vaginal) "Osarbonum" introduction of 2 st. x 2 years x 5 days.
24. Sheep 10.0 eye ointment Ditetraclinum.
25. Sheep 50.0 main 20% Aethazolum paste.
26. Sheep 50.0 10% Resorcinum ointment (on vaseline). Rub into the affected areas of the skin.
27. Rub 50.0 Naphthalginum liniment into the region of sheep. jump, joint
28. Sheep 20.0 complex lead plaster - E. Plumbi compositum.
29. Pancreatic 100.0 liquid ointment, in which 5% Creolinum, 10% Kai carbonas; 85% grows. oil Rub into the affected areas of the skin.
30. Pancreatic 30.0 ointment Ung. Wilkinsoni.
31. Pancreatic 30.0 paste, in which 20% Dermatolum.
32. Pancreatic liquid patch Cubatolum 190.0. For the treatment of skin lesions.
33. Suppositories with Laevomyctinum at 0.25 (r.d. 0.5) Enter into the direct k-ku 2 r. x 5 days.
34. Pancreatic 30.0 ointment, in which 2% Ac. salicylicum, 5% Ac. boricum, 10% Formalinum, 83% Vaseline.
35. Calves 50.0 Furacilinum pastes. Apply to the affected areas of the skin.
36. Calves: Creolinum 10.0; Pix liquida - 20.0; 01. Helianthi - 70.0. Rub into the affected areas of the skin.
37. Calves 50.0 ointment, in which 10% Iodoformium (vaseline base).
38. Calf candles with Laevomyctinum each 0.5 (r.d. 1.5). In the rectum for 2 years x 5 days.

39. Calf patch bactericidum 10x15.
40. Calves 20.0 "Sunoreph" ointment.
41. Horses 150.0 liquid ointment, in which 30% 01. Terebinthinae; 70% vegetable oil. Rub along the course of the sciatic nerve.
42. Horses 50.0 Naphthalanum ointment. Smaz. struck. areas of skin.
43. Horses 50.0 Plaster Plumbum simplex. Warm it up, spread it on a cloth, stick it to the affected area of the body.
44. Horses 50.0 master, pasture, in cat. 5% Collargolum; 30% starch. Apply on
45. Sheep 50.0 mag, paste in which 20% Streptocidum.
46. Dogs 50.0 patches Epilinum. For hair removal.
47. Sheep candles "Osarcidum". Insert into the vagina 3 st. x 1 year x 5 days.
48. Sheep 50.0 20% Ichthyolum ointment. The base is penetrating.
49. Suppositories with Dimedrolum at 0.02 (2 r x 5 days) (rectally).
50. Hyaluronic acid 50.0 liquid ointment, which contains 5% Xeroformium and Pix liquida, the base is vegetable oil. Lubricate burn sites.
51. Pork belly 30.0 pastes, per cat. 20% Bismuthi subnitras, 10% Zinci oxydum. Basis - Ung. Naphthalanum. Apply to the affected areas of the skin.
52. Subpigmentary 0.5% eye ointment Hydrocortisonum 10.0 (apply to the conjunctival sac of both eyes 2 times a day).
53. Pancreatic 15.0 liquid patch Clemrinum. Treat affected skin areas.
54. Horses 100.0 lin. Terebinthinae compositum (rubbing in the region of the hock joint).
55. Horses 50.0 master, pasture, in cat. 10% Bismuth subnitras.
56. Sheep 50.0 10% Pix liquida ointment. The base is Ung. Solidolum.
57. Koni ^iaze "Espolum", in a tube of 20.0 . Lubricate in the area of the calf muscle.
58. Cow 20.0 ointment on vaseline, in which 10%> Ac. salicylicum. To remove udder warts.
59. Callus patch for cows to remove udder warts - Empl. ad clavos 9.0.
60. Sheep 100.0 liquid ointment, consisting of: T- ha Capsici – 20.0; 01. Terebinthinae 30.0; vegetable oil - 50.0. Rub in region. abdominal wall.
61. Sheep 10 suppositories with Metronidazolium 0.5 each. Enter vaginal for 2 st. x 1 year x 5 days.
62. Sheep 50.0 Ung. Sulfuratum simplex. Grease pir. areas of the skin.
63. Sheep 180.0 liquid patch Cubatolum. For wrapping the skin.
64. Sheep 30.0 pasts - P. Teimurovi. Apply in the crown of the hoof.
65. Sheep 30.0 mag, paste in which 10% Xeroformium. Apply to the region of the crown of the hoof.
66. Calf candles with Cordigitum at 0.0012 (r.d. 0.0024) 1 year x 5 days. (in the rectum).
67. Calves 50.0 patch Empl. Plumbi simplex
68. Calves 50.0 Furacilinum pastes. Pump for sale. areas of skin.

69. Calves 50.0 liquid ointment, in which 3% Xeroformium, 5% – Pix liquida, growth. oil - 92%. Grease defeat areas of skin.
70. Calves 30.0 5% Phenolum ointment (on vaseline).
71. Calves 30.0 5% Ac. salicylicum (on lanolin).
72. Horse 50.0 mag, paste in which 20% Butadionum
73. Cow 180.0 liquid patch "Septonex". For wound treatment.
74. Calves 50.0 ointment, in which 5% Sulfur depuratum, 10% Jchthyolum. The base is lanolin. Grease affected skin areas.
75. Calves 100.0 liquid ointment, in which 10% Lysolum, 5% Natrii carbonas. The basis is vegetable oil. Rub into the affected areas of the skin.
76. Calves rect. candles with Ethionamidum 0.5 each (r.d. 2.0 2 years x 10 days)
77. Cow vaginal suppositories with Metronidazolium at 0.5 (r.d. 2.0) 1 year x 5 days.
78. Cow 50.0 10% Camphora ointment (on pork fat). Grease defeat areas of the udder.
79. Cows 50.0 main paste, in which 20% Jodoformium. Apply to the lesion. areas of skin.
80. Cow 50.0 Naphthalginum liniment. Rub in the area of the ankle joint.
81. Cows 50.0 Formalinum ointment. Lubricate the skin in the hoof crown area.
82. Cow 100.0 liquid collodium patch. To bring the edges of the wound closer together.
83. Pig suppositories "Cefeconum" (rectally - 2 cm x 2 years x 3 days)
84. Liquid ointment for pigs: Ammonium causticum solutum, 01. Terebinthinae no 25.0; Lini 50.0, rub in the area of the ankle joint.
85. Pigs 190.0 Cubatolum Liquid Patch.
86. Pigs 20.0 eye ointment, in which 5% Cocaini hydrochloridum, 3% Ac. boricum, the base is vaseline.

PRESCRIBE

№ recipe	Recipe	№ recipe	Recipe
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Material support: Tables, scales, mortars, pestles, flasks, test tubes

The work was accepted by " ____ " _____ 202__

Teacher's signature _____

Class location – classroom of the department

Purpose of the lesson: To learn such concepts as solution, mixture, infusion, decoction, emulsion, tincture, extract, mucus, new galenic preparations, aerosols. Familiarize yourself with each liquid dosage form and the variety of each of them. Master How to distinguish each liquid dosage form from one another. The method of writing prescriptions for each liquid dosage form.

Task: concepts such as solution, mixture, infusion, decoction, emulsion, tincture, extract, slime, new galenic preparations, aerosols. Master the rules of writing prescriptions for liquid dosage forms.

To learn: How does each of the liquid dosage forms differ from each other. Familiarize yourself with the variety of each liquid dosage form.

Complete self-training tasks independently.

Independently prepare for classes using recommended books, lecture material and electronic files from the discipline «Veterinary Pharmacology» at the «Distance learning portal (MOODLE) of SBTU».

Auditory work: Fill in the missing text in a practical session on the topic Liquid dosage forms

2.3. Liquid dosage forms.

2.3.1. Liquid dosage forms

This is due to:

Convenience of their introduction:

1. Having a number of advantages over other forms:

- can be prepared from solid (_____), liquid (_____) and gaseous (_____) medicinal substances;
- the pharmacological action occurs in comparison with other medicinal forms_____;
- liquid forms_____;
- Medicinal substances included in their composition can_____.

2.3.1. Solution- _____

_____.

_____ is most often used as a solvent
_____. It is customary to prepare a solution for external
or internal use on _____, and for injections -
on _____. In field conditions and
on grazing pastures, it is allowed to take _____, and as
an _____ exception,
and _____. Water
is a good solvent for many medicinal substances, it is indifferent both to the animal's
body and to the agents that dissolve.

When the medicinal substance does not dissolve in water, _____
is used. _____ and others dissolve well in
it. Alcoholic solutions are larger than aqueous solutions. However, alcohol is an active
pharmacological substance that acts locally (depending on the concentration –
astringent, bactericidal) and generally (resorptive).

Official alcohol concentrations are _____%. Most often, _____%
ethyl alcohol is used for intravenous administration, _____% internally, _____%
externally.

As solvents, _____
_____, etc. are also used. Oil solutions are used

or _____, solutions for injections are prepared
on _____,
_____ or _____ oils, and
for external use - _____,
_____ and other oils. They easily dissolve
_____, etc.

The solvent in some solutions can be _____.
When the recipe does not specify a solvent,
use _____, when the alcohol strength is not
specified, use _____% alcohol.

2.3.1.1. Thus, according to the type of solvent, solutions can be:

1. _____;
2. _____;
3. _____;

4. _____;

5. _____

2.3.1.2. Solutions are distinguished by the number of ingredients:

1. _____;

2. _____.

Recipes for simple solutions, if the solvent is distilled water, are written in the _____ way. If the solvent is different or the solution is complex, then the _____ method is used.

2.3.1.3. T.b. according to the method of prescribing, prescriptions for solutions can be:

1. _____;

2. _____.

When writing in an **abbreviated** way, after the word "Rp.:" write _____, then in the _____ case the name _____, _____ and its _____ . The recipe ends with an abbreviated _____.

When writing out in an **expanded** way, after the word "Rp.:" the name _____ and its _____ is written, then _____. In the Subscriptio they write: _____. At the end of the recipe - _____.

2.3.1.4. The method of preparation of the solution can be

_____.

When preparing in a mass way, the medicinal substance and solvent are taken by _____. This method is the most accurate, but time-consuming, so it is rarely used. Volumetric solutions are made as follows: first prepare _____, and then by diluting a solution of _____ is obtained.

The essence of the mass-volumetric method is that _____.

_____ is most often prepared by this method.

2.3.1.5. Solutions are divided into 3 groups according to the method of application:

_____;

_____;
_____.

2.3.1.5.1. Solutions for internal use are administered through _____ and _____.

The most common way of introduction is _____. To write out prescriptions, you need to know _____.

Dosing of solutions is done_____. This method is inaccurate. Spoons have different capacities, and the size of the dose is affected by the degree of its filling. It is accepted that a tablespoon contains _____ml of an aqueous solution, a dessert spoon – _____ml, a tea spoon – _____ml. When dosing with drops, it should be taken into account that the size of the drop, and hence its weight, depend on _____ and so on.

It is known that 1 ml of distilled water at a temperature of 20 °C contains 20 drops of 95% ethyl alcohol – _____drops; 70% alcohol - _____ drops, various oils - _____ drops, ether - _____ drops. Therefore, it is best to use droppers.

The volume of the prescribed solution depends on_____. For small animals, solutions are prescribed in _____, for large animals - in _____. If the dose of medicinal substance per intake is less than 1 ml, then the solution is dosed_____, if more – _____, _____, _____.

Solutions for internal use are prescribed in the _____ method, complex - _____, simple - _____ forms. In the case of a complete form, all components of the recipe are listed with the indication _____ . In the signature, it should be noted exactly how the substance _____ is _____ dosed (_____, etc.) and _____.

Examples of recipes.

1. Expanded prescription of a simple aqueous solution for internal use application:

Task: Prescribe calcium chloride solution to the calf for 10 uses internally. Calculation: for one intake of calcium chloride for a calf of 1.5, and for ten

intakes:_____. It was decided to dose with tablespoons:
_____ ml. Therefore, water must be taken up to _____ml.

To sheep

Rp.: Calcii chloridi 15.0

Aq. coctae ad 150 ml

M.f. solutio

D. S. Inside, 1 tablespoon 3 times a day

Such a prescription is used in the event that the solvent
is_____.

2. The short form of the prescription of the same recipe:

indicate_____.

The solvent in this case will be _____.

To sheep

Rp.: Solutionis Calcii chloridi 10% – 150 ml

D. S. Inside, 1 tablespoon 3 times a day

3. When prescribing simple alcohol, ether, glycerin, or oil solutions in abbreviated form, after the name of the drug, write the word -

_____ or _____
in the _____ case:

Dogs

Rp.: Solutionis Kalii iodidi spirituosae 4% – 150 ml

D S. Inside one tablespoon 3 times a day.

In this case, alcohol - _____%, oil - _____.

4. Complex solution for internal use – unfolded samples of writing:

Task: Prescribe codeine phosphate (Codeini phosphas) single dose 0.015, ammonium chloride (Ammonii chloridum) - 0.3 for internal use to the dog. Give in the form of a solution 3 times a day for 4 days.

It is convenient for the dog to give 1 dose of the solution contained in 1 tablespoon, i.e. 15 ml. Calculation: Total doses - 3 times a day x 4 days = 12.

Codeine phosphate is required: $0.015 \times 12 = 0.18$

Ammonium chloride - «- : $0.3 \times 12 = 3.6$

Distilled water - «-: $15 \text{ ml} \times 12 = 180 \text{ ml}$

To dogs

Rp.: Codeini phosphatis 0.18

Ammonium chloride 3.6

Aquae destillatae ad 180 ml

M.f. solutio

D. S. Inside, 1 tablespoon 3 times a day for 4 days.

Liquids are introduced into the rectum in the form of _____. They can be _____ or _____. Cleansing enemas are intended for emptying the intestines and consist of water alone or water to which soap, glycerin, laxatives, etc. are added. In this case, the volume of liquid for large animals is taken up to _____ l, for small ones - from _____ ml to _____ l.

Medicinal enemas are prescribed for general or local action. In this case, the volume of liquid should be small: for large animals - up to _____ l, for small ones - _____ ml and less. Medicinal enemas are given after cleansing. If the medicinal substance has an irritating effect, _____ is added in an amount approximately 10 times more than the dose of the medicinal product. The temperature of the medicinal enema should be within _____. When prescribing them, it is necessary to know the dose of the medicinal substance for one administration; the volume of one enema and the number of injections (usually 1-2).

To horse

Rp.:Chloralihyetati 30.0

Mucilaginis Amyli ad 300 ml

M. D. S. Enter into the rectum.

Starch slime is added to the recipe due to the fact that chloral hydrate has _____. (Explanation of prescription - see potions).

2.3.1.5.2. Solutions for injections. Their special feature is precise dosing and sterile preparation; enter _____, _____ less often _____, etc.

Requirements for dosage forms used for parenteral administration:

_____;

_____ ;
_____ ;
_____ - in a number of cases.

The solvent for injection solutions can be: _____, since distilled water may contain dead bodies of microorganisms, pyrogens that appear - Aqua bidestillata seu Aqua redestillata ;

In those cases when it is necessary to introduce a large amount of solution into the body, _____ is taken as a solvent

_____ is often used to dissolve antibiotics

Non-drying indifferent oils - _____, etc.

____ - are used to prepare solutions of substances that are soluble only in oils.

It is forbidden to introduce oil solutions into the bloodstream (_____).

Parenteral administration of medicinal substances is carried out most often with the help of _____ and _____. At the same time, dosage accuracy, fast and complete action are achieved. The latter makes it expedient to use them when providing assistance in acute cases of animal disease, as well as when administration is difficult - when the animal is in a critical condition.

Parenteral administration of medicinal substances has its advantages and disadvantages.

Advantages:

Disadvantages:

Sterilization – _____

_____.

There are 3 types of sterilization:

It is achieved as follows:

- 1.1 by heating with hot air in a drying cabinet at _____ for _____ min. or _____ within _____ minutes;
- 1.2 heating with saturated steam in an autoclave at 121°C (1-1.1 atm) for _____ min. (sometimes up to _____ min.) or at _____ (0.5 atm) – _____ min.;
- 1.3 one-time heating with flowing steam in a steam sterilizer or autoclave at _____ for _____ minutes.
- 1.4 tindalization – heating once a day for an hour at _____ 5 times or at a temperature of _____ 3 times; in the intervals between heating, the processed materials are stored at a temperature of _____;
2. bacterial filtration in aseptic conditions through microporous sterile filters (pore diameter _____ μm).
3. addition of antiseptics.

When choosing the method and duration of sterilization, it is necessary to take into account

_____.

Medicinal substances that decompose at a temperature of 100°C are subjected to tyndalization, and solutions that decompose at _____ and below are prepared by _____. In this case, only the glass and solvent are sterilized, and various antiseptics are added to the solution.

Solutions are issued in _____ or in _____. When prescribing solutions for injections, it is necessary to know _____ for one injection, _____ and _____ for 1 injection.

In the case of preparation of the solution in the pharmacy, it is necessary to indicate that the solution must be prepared _____ it is necessary to indicate:

Potent and poisonous medicinal substances are prescribed in such a way that 1 ml of solution for small or 3-5 ml for large animals contains a single dose. The volume of the solvent must be selected in such a way that the medicinal substance is completely dissolved in it, and its concentration corresponds to the goals and objectives set by the veterinarian when prescribing it to the animal.

Examples of recipes.

Task: Prescribe galantamine hydrobromide to a dog at a dose of 0.001 for 10 subcutaneous injections.

Calculation: With the expanded method of prescribing the medicinal substance, you need to take _____, the solvent is _____, the volume is 1 ml. So, for 10 introductions, you need _____

Expanded prescription:

To dogs

Rp.: Galanthamin hydrobromidi 0.01

Aq. distillates ad 10 ml

M.f. solutio sterilis

D. S. Administer 1 ml subcutaneously 2 times a day.

But simple solutions, in which the solvent is water, it is better to write _____. In the abbreviated form, the concentration is usually indicated in _____. In these cases, the first number means _____, the second - _____. To calculate the concentration of the solution in percent, you need to make the following proportion. 1 ml of solution contains 0.001 medicinal substance, and 100 ml: 0.001 – 1, X – 100, where $X = (0.001 \times 100) : 1 = 0.1\%$

2 Abbreviated spelling

To dogs

Rp.: Sol. Galanthamin hydrobromidi sterilisatae 0.1% - 10 ml

D. S. Administer 1 ml subcutaneously 2 times a day.

3. Solutions in ampoules.

To cows

Rp.: Sol. Atropini sulfatis 0.1% - 1 ml

D. t. d. N. 5 in ampullis

S. Administer 1 ml subcutaneously 2 times a day.

When prescribing solutions in ampoules in the signature, it is necessary to write _____, not _____, because in the latter case, a mistake can be made, since the volume of ampoules of the same substance is different.

In addition, when prescribing such prescriptions, you need to know _____

_____. All this is indicated in the pharmacopoeia.

Sometimes ampoules release _____ drugs that are sensitive to atmospheric influences or have unstable solutions (_____, etc.). Solutions from them are prepared before use by _____.

Examples of recipes.

4. Powder for preparing a solution in ampoules

To horse

Rp.: Novarsenoli 0.3

D. t. d. N.5 in ampullis

S. Dissolve the contents of the ampoule in 5 ml of water for injections, enter intravenously slowly once a day for 5 days.

In such cases, it is necessary to write _____
_____ in the prescriptions:

Rp.: Aq. bidestillatae 5 ml

D. t. d. N. 5 in ampullis

S. To prepare a novarsenol solution.

5. In the form of solutions, a number of _____ is produced
_____. When prescribing them, the word "solution" is not used. In the same way, solutions with _____ are prescribed _____.

To cows

Rp.: Pituitrini 1.0

D.t.d.N. 10 in ampullis

S. The contents of 5 ampoules should be administered intravenously, if necessary, repeat

2.3.1.5.3. Solutions for external use are usually prescribed in large quantities. They are used for _____

_____.

Complex solutions are prescribed in _____, simple solutions in _____ form, the concentration of the medicinal substance is indicated in _____ or _____.

An example of a recipe. 1.

Abbreviated prescription of a simple aqueous solution:

To dogs

Rp.: Solutionis Kalii permanganatis 1: 1000 – 500 ml

D. S. For irrigation of the oral cavity.

Sometimes solutions for external use are prescribed in _____ with further dilution to the required concentration before use. In this case, it is necessary to specify in the signature exactly how much concentrated solution and solvent to take in order to obtain the necessary dilution for treatment.

2. Task: Prescribe a solution of potassium permanganate for washing the wound for 5 treatments.

Calculation: for washing the wound, the concentration of potassium permanganate should to be _____, the volume per treatment _____ l.

The calculation is carried out according to the formula:

required amount of solution (ml) x required concentration (%): available concentration (%) = 1000 ml x 0.1%: 5% = 20 ml

Therefore, to prepare 1 liter of potassium permanganate solution with a concentration of 1: 1000 (0.1%) it is necessary to take _____ ml of _____% of its solution.

To pigs

Rp.: Sol. Kalii permanganatis 5% - 100 ml

D. S. 20 ml per 1 liter of water for washing the wound

3. Abbreviated prescription of a simple solution (solvent – any oil, alcohol 90%, glycerin, ether):

To cats

Rp.: Solutionis Tannini glycerinosae 5% - 50 ml

D. S. Lubricate the mucous membrane of the oral cavity once a day.

#

To dogs

Rp.: Solutionis Mentholi oleosae 1% - 50 ml

D. S. 2 drops in each nostril 2 times a day.

#

To pigs

Rp.: Solutionis Tannini spirituosae 1% - 100 ml

D. S. Lubricate the damaged area of the skin.

If it is necessary to use alcohol of a different concentration or a certain type of oil, then _____ is used.

3. Expanded prescription of a simple aqueous solution

Rp.: Chloramine B 1.0

Aq. distillates ad 200 ml

M.f. solutio

D. S. For hand disinfection.

4. Expanded description of a simple solution (different solvents):

Task: Prescribe 100 ml of 1% menthol solution in sunflower oil to the horse.

To horse

Rp.: Menthol 1.0

Olei Helianthi 100 ml

M.f. solutio

D. S. Lubricate the affected areas of the skin.

Task: Prescribe 50 ml of a 2% solution of diamond green in 60% alcohol to lubricate the affected area of the pig's skin 3 times a day.

To pigs

Rp.: Viridis nitentis 1.0

Spiritus ethylici 60% ad 50 ml

M.f. solutio

D. S. Lubricate the affected areas of the skin 3 times a day.

5. Sometimes prescriptions can prescribe a medicinal substance in its pure form (powder) with subsequent preparation on the spot of a solution for

_____. At the same time, _____
_____ should be clearly indicated in the signature.

Rp.: Calcariae chloratae 3000.0

D. S. Mix in 3 buckets of water and use to disinfect calf cells.

6. Expanded prescription of a complex solution.

Complex solutions are prescribed only _____.

Dogs

Rp.: Iodine 0.03

Potassium iodide 0.3

Glycerin 30 ml

M.f. solutio D.S. Lubricate the mucous membrane of the larynx and pharynx

2.3.2. Mixture – _____

Medicinal substances included in the mixture can be _____, or _____, dissolve _____ or form _____, the latter must be shaken before use.

_____ are used as solvents for preparing mixtures _____.

Mixtures are prescribed in _____ form _____, taking into account the dose of the medicinal substance, the number of doses and the amount of the mixture per dose. Dose _____.

Examples of recipes.

To horse

Rp.: Sol. Sodium bromide 5% - 50 ml

Tincturee Menthae piperitae 5 ml

M. D. S. Inside for one appointment.

#

To cows

Rp.: Pulveris radice Ipecacuanhae 5.0

Natrii hydrocarbonatis 20.0
Aquae destillatae ad 200 ml
M.f. mixture
S. Inside for one reception.
Shake before use

If the composition of the mixture includes difficult-to-dissolve substances, then in the signature it is necessary to indicate: _____, and mixtures with infusions, decoctions, emulsions—

2.3.3. Infusion

They are used for animals of all types _____, less often _____. Externally, infusions are used for _____, for _____, etc. For their preparation, tender parts of plants are used:

Infusions are prescribed in _____ form, _____ method for 2-3 days, as they deteriorate quickly. It is necessary to keep them in _____, about which a corresponding entry is made in the signature.

When writing a prescription for infusion, you need to know _____, _____ for one dose. The first number in the recipe indicates _____, the second - _____. At the same time, it is assumed that the infusion, which includes non-poisonous plants, is prescribed relative to _____; from St. John's wort, lily of the valley, ergot, valerian root and rhizome, senegal root - _____, and from poisonous plants (digitalis leaf, thermopsis grass) - _____.

Examples of recipes.

1. Task: Prescribe the infusion of shepherd's purse grass to the cow 3 times a day.

Calculation: 20.0 is needed for the intake of cow grass of shepherd's bag for 3 intakes - 60.0. The infusion is prepared relative to _____. So, the whole infusion will be _____ for 3 doses, or _____ glass per dose.

To cows

Rp.: Infusi h.erbae Bursae pastoris ex 60.0 – 600 ml

D. S. 1 glass at a time 3 times a day.

If the volume of infusion for 1 dose does not correspond to the volume of the required measure, then you can deviate from the official ratio and write the required amount.

3. Task: Prescribe 4 doses of sage leaf tincture to the calf.

Apply 2 times a day for 2 days.

Calculation: a calf needs 7.5 g of sage leaves per intake, and 30 g for 4 intakes. If you prepare an infusion of _____, it will be 300 ml, and for an intake of 300: 4=75 ml, the measure is inconvenient. Therefore, you can take _____ glasses, or only _____ ml.

To calves

Rp.: Infusi folii Salviae ex 30.0 – 400 ml

D. S. 1/2 cup per reception 2 times a day for 2 days.

When prescribing complex prescriptions, the composition of which includes, in addition to the infusion, other substances, _____ is first prescribed, and then the other components of the prescription are listed. This mixture is _____ and therefore the recipe ends with the expression _____ or _____.

To sheep

Rp.: Infusi corticis Quercus ex 30 -300 ml

Ichthyoli 10.0

M.f. mixture

D. S. Inside for one reception.

If the amount of medicinal substance is not indicated in the infusion, then it is prepared relative to _____ (except for the potent one).

2.3.4. Broth – _____

_____ (see the method, instructions for the LYAR course).

To prepare decoctions, use _____

Decoctions are prescribed and used in the same way as infusions.

Examples of recipes.

To calves

Rp.: Decocti corticis Frangulae ex 30.0 – 400 ml

D. S. Inside, 1 glass a day.

#

To horse

Rp.: Decocti seminis Lini 200 ml

Tannins 7.0

M. D. S. Inside for one appointment.

2.3.5. Emulsion – _____

_____.

There are two types of emulsion: _____ i

1. True emulsions are obtained from _____.

_____ The seeds also contain mucilaginous substances of a protein nature, which have the properties of an emulsifier. Therefore, when preparing true emulsions, emulsifiers are not used.

If the recipe does not specify the amount of seeds for preparing the emulsion, the pharmacist is guided by the pharmacopoeial rule. and will produce it relative to _____.

Most often used for cooking:

1. _____
2. _____
3. _____

2. When prescribing **fake emulsions**, the recipe indicates:

1. _____;
2. _____;
3. _____ – to give them stability and keep a homogeneous mass,
as _____ the _____ latter,

_____ is used. The emulsifier helps break up the oil particles and prevents them from sticking together.

Emulsions are _____ if the ratio of all components included in them is:

2 parts oil: 1 part emulsifier: 17 parts water.

All emulsions are prescribed _____

They use _____, less often _____.

Other medicinal substances can be introduced into the emulsion, in which case a mixture is formed and the recipe ends with the expression _____ (see mixtures).

Examples of recipes.

1. Abbreviated prescription of true emulsion

To sheep

Rp.: Emulsi seminis Cannabis 200 ml

D. S. Inside for one reception.

2. Abbreviated prescription of false emulsion

To sheep

Rp.: Emulsi Olei Ricini 300 ml

D. S. Inside for one reception

3. Expanded prescription of true emulsion

To sheep

Rp.: Seminis Cannabis 20.0

Aq. distillates ad 200 ml

M.f. emulsion

D. S. Inside for one reception

4. Expanded description of false emulsion

To sheep

Rp.: Olei Ricini 30 ml

Gelatosae 15.0

Aq. coctae ad 300 ml

M.f. emulsion

D. S. Inside for one reception.

2.3.6. Tincture – _____

They cook mainly on _____.

This is an official form.

The tincture is prescribed as an official form -

At the same time, it is necessary to know _____ and _____ tinctures for reception, _____ receptions.

Tincture – _____

Tinctures are prepared from non-potent medicinal raw materials in the ratio _____, and from potent - _____.

When prescribing an alcohol tincture, no special instructions are given about this, but when prescribing an etheric tincture, this is noted in the recipe. It is prescribed by _____ or _____, the dosage is indicated in the signature:

Examples of recipes.

1. Alcohol tincture:

To dogs

Rp.: Tincturee Valerianae 40 ml

D. S. Inside, 20 drops 3 times a day for 10 days.

2. Essential tincture:

To dogs

Rp.: Tincturee Valerianae aetherae 40 ml

D. S. Inside, 15 drops 3 times a day for 10 days.

2.3.7. Extracts – _____

Depending on the extracting liquid, the following are distinguished:

1. _____;
2. _____;
3. _____.

Taking into account the degree of extraction (by consistency):

1. _____
2. _____
3. _____

Liquid extracts are prepared relative to _____ or _____. When the liquid extract is evaporated to the consistency of molasses or honey, _____ is obtained, and when it is dried, _____ extract is obtained, which belongs to _____ forms.

In order to prescribe extracts, it is necessary to know _____ for admission and _____. Liquid extracts are prescribed in the same way as tincture - _____ and _____, thick and dry - _____ in the form of _____.

In the recipe, it is necessary to specify _____.

Examples of recipes.

1. Liquid extract

Task: prescribe 10 doses of liquid aloe extract to the calf. One time dose – 5 ml Apply 3 times a day.

Calculation: the dose of liquid aloe calf extract is 5 ml at one time (teaspoon). For 10 receptions - _____ml.

To calves

Rp.: Extracti Aloes fluidi 50.0

D. S. One teaspoon 3 times a day.

2. Thick extract:

To horse

Rp.: Extracti Beladonnae spissi 4.0

Farinae Tritici et

Aquae coctae q.s.

Ut f. bolus

D.t.d.N. 4

S. 1 bolus 2 times a day for 2 days.

3. Dry extract (cm TLF):

Task: prescribe a dry extract of uterine horns to a cow for 6 doses. A single dose of 5.0.

To cows

Rp.: Extracti Secalis cornuti sicci 5.0

D.t.d.N. 6

S. 1 powder 3 times a day.

Extracts are stored in _____

_____.

Slime _____

_____.

Mucus is obtained:

1. by _____ method _____

from vegetable raw materials:

1. _____
2. _____
3. _____
4. _____

2. by way of _____ or _____ comedy:

1. _____
2. _____
3. _____

It is prescribed by _____ and _____ as anti-inflammatory (for diseases of the gastrointestinal tract) and enveloping agents. By covering the inflamed tissue, it protects it from _____

_____. Most often, in prescriptions, mucus is prescribed together with _____ to restrain the effect. In this case, it is taken _____ times more than the medicinal product.

All slime is official.

Mucus is prescribed in _____ form with the indication of only _____.

An example of a recipe.

To calves

Rp.: Mucilaginis Amyli 100.0

D. S. For one appointment

2.8.9. Novogalen preparations

These are official forms, prepared for

_____, used _____ and _____. Write _____ without using the word _____.

Examples of recipes.

1. Novogalen preparation for internal use:

To dogs

Rp.: Adonisidi 20.0

D. S. Inside 10 drops 3 times a day for 10 days

2. Novogalenov preparation for injections:

To horse

Rp.: Strophanthini K 1.0

D.t.d.N. 4 in ampullis

S. The contents of 2 ampoules should be injected intravenously slowly with 200 ml of 10% glucose solution once a day for 2 days.

2.8.10. Aerosols - _____

Aerosols with solid particles formed by fragmentation are called _____, and those formed as a result of condensation are called _____. An aerosol consisting of liquid droplets is _____.

Aerosols are obtained by _____ and with the use of aerosol generators and compressors.

Aerosols are released in _____
_____. It is in
cylinders _____
_____.

The mixture is under a pressure of 2-3 atmospheres.

Depending on the nature of the particles of the medicinal substance, aerosols are distinguished:

- _____;
- _____;
- _____;
- _____ etc.

Advantages of aerosols:

1. _____;
2. _____;
3. _____

Disadvantages:

1. _____;
2. _____;
3. _____.

Prescriptions are written in abbreviated form.

Examples of recipes.

To calves

Rp.: Aerosol "Cametonum" 30 ml

D. S. For inhalations 3 times a day for 2 days.

#

To cows

Rp.: Aerosoli "Iodopharmum" N.1

D. S. Enter intrauterine.

Tasks for self-training

Topic: LIQUID MEDICINAL FORMS CONTROL QUESTIONS:

1. Solution.
2. Solvents
3. Application solutions
4. Concentration designation
5. Dosage district

№ question	Answer (give a definition + Latin, answer the question)

2. TASKS ON THE RECIPE OF RLF

1. Pigs NSA Ceperinum in fl. 1.0. Administer intravenously 2 r × 5 days. R-1 - water for injections.
2. Cows 5000.0 0.5% Lysolum solution. For douching.
3. Calves: infusion h. Hyperici with 20.0(1: 10); Phthazinum no. 2.0 (for 6 others).
4. Calves 4% solution of Gentamycini sulfatis in amp. 1 ml each (r.d. 0.12) V/m x 2 years x 5 days.
5. Pigs 100.0 liquid ek-hta Extr. Polygonii hydropiperis. 5 ml x 2 r x 5 days.
6. Pigs gorm. avenue Pituitrinum in amp. 1 ml each (per day 2.0 p/up to 2 years x 2 days).
7. Horses for 6 others: n-ku Crataegi – 5.0; Kalii bromidum - 10.0; water - 200.0

8. Intravenous cows: Ac. ascorbinicum - 2.0; Glucose 100.0; District Izot Solution of Na Cl 0.9%-300 ml
9. Pigs r. Calcii gluconas 10% 10 ml R.d. 5.0 for 2 IV injections.
10. Pig infusion of chamomile flowers - fl. Chamomillae with 1.00,0(1: 10). For douching.
11. Pigs gorm. Ave. Pituitrinum in amp. 1 ml (r.d. 2.0) for 4 IV injections (2 years x 2 days).
12. Pigs Novogal. pr-t Celanidum in fl. 25.0. 2 ml each x 1 year x 5 days.
13. Pancreatic Myarsenolum at 0.15 (powder in amp.) r.d. 0.3. To enter in/m 1 year. x 5 days R-1 – iso.r-r of NaCl. Conc-i otr. solution - 10%. Cordiaminum in ampoules in ampoules of 1 ml (r.d. 2.0) in/m x 1 year x 5 days.
14. Pancreatic r. Ac. nicotinicum 1% in ampoules of 1 ml (r.d. 0.03) in/m x 1 year x 20 days.
15. For 10 others: nasturtium - 1. Absinthii - 2.0, Sal carolinum - 5.0, water - 100.0.
16. Proposolum aerosol in 50.0 bottles. For wrapping damaged areas of the skin.
17. Pancreatic: 100.0 flaxseed mucus, 5.0 Chloralum hydratum (rectally).
18. Hypopigmentation 50.0 g Hydrogenii peroxydi diluta 3%. For wrapping a purulent wound.
19. Pharmasinum pork belly - 50 in a bottle. 50 ml in 1 ml of aqueous solution - 50,000 ED, r.d. 500,000 units. Administered intravenously, 1 year x 5 days. (It is prescribed underdosed!)
20. Calves 50.0 2% glycerol solution of Tanninum. For rinsing the oral cavity.
21. Calf extract Extr. Eleuterococci liquid 100.0 per 5 ml for 2 years x 5 days.
22. Telyati novogal.pr-t in fl. Lantosidum 100.0 (2 ml for 2 years per day x Judn.).
23. NSA calves in fl. 0.5 r.d. 0.02/kg Weight 100 kg Introduction. 3 years in/m x 5 days. R-1 - water for injections. NSA – Ampicillinum natrium
24. Calves of bitter tincture - t - ra amara - 5.0; Magnesium sulfas - 10.0; water - 100.0 (for 6 in.).
25. Calves Dr. Coffeini - natrium benzoas 20% in amp. 2 ml (r.d. 1.2) p/up to 1 year x 3 days.
26. Calves for 2 others: starch mucus 200.0; 10 drops of 5% Iodum solution.
27. Sheep NSA Streptomycini sulfas in fl. 0.25. Intravenous administration 2 r x 5 days. The solvent is water for injections.
28. Horm. avenue Oxytocinum in amp. per 1 ml (5 units) r.d. 10 UNITS Enter n/up to 2 r per day.
29. Sheep for 4 others: n-ku Absinthii 3.0; Ac. lacticum 5.0; water - 50.0.
30. Sheep mixture: sunflower oil emulsion – 100.0, Phenasamm 5.0 (for 2 in.).
31. Sheep r. Gentamicini sulfas 4%o in amp. 2.0 (r.d. 0.08) 2 years x 5 days. Mind.
32. Sheep Novogalenov. pr-t Cordigidum in fl. 20.0 (2 ml each x 2 years x 5 days).

33. Sheep for 2 intravenous injections of 10% solution of Norsulfazolum natrium (r.d. 5.0).
34. Sheep (in the rectum): 100.0 starch mucus, Chloralum. hydratum 5.0.
35. Pancreatic solution Ac.nicotinicurn 1% in amp. 1 ml (r.d. 0.02) p/up to 1 year x 20 days.
36. 250,000 units of NSA Benzylpenicillinum natrium for the pig (n.d. 500,000 units). Intravenous injection. 4 years x 5 days. R-1 - 0.5% r-r novocaine.
37. Pancreatic 100.0 starch mucus and 3.0 Chloralum hydratum. Rectal.
38. Pancreatic for 6 others: n-ku Gentianae 2.0; Sodium sulfas 5.0; water - 50 ml
39. Pancreatic novogalenov.pr-t Lantosidum 20.0. 2 ml x 2 r x 5 days.
40. Pancreatic 4 boluses with Extr. Belladonae thick 5.0.
41. Pancreatic 50.0 10% alcoholic solution of Iodum. For skin treatment.
42. 200.0 pumpkin seed emulsions and 2.0 Brovadazolum. For 1 reception.
43. Intravenous calves: Coffemum - 1.0; Glucosum – 20.0, pH – 200.0 iso.p. NaCl.
44. Calves of the NSA Polymyxim M sulfas 500000 units b.d. 1000000 units. U/m 2 years x 5 days. R-1 - 0.5% r-r novocaine.
45. Calves r. Camphora oil. 20% in amp. 1 ml (r.d. 0.6) p/up to 1 year x 3 days.
46. Calves for 10 others: n-ku – t – raHyperici 5.0; Sal carolinum – 10.0, water – 100.0.
47. Calves for 6 in.: decoction of oak bark with 20.0 (1: 10) (s. Quercus), Sulginum 2.0.
48. Calves 10.0 1% alcohol.p-ra Granlycidinum. For wrapping the skin. "
49. For horses, Aethazolum natrium 20% in amp. 10 ml (r.d. 10.0). Intravenous administration x 3 years x 2 days. ! ;"
50. Horses 50.0 2% alcohol solution Viride nitens. For wound dressing.
51. Horse of the NSA Bicillinum– Z in fl. 1,200,000 units per year 3,600,000 units. Administer intravenously 1 r in 7 days. R-1 – isot.r-r Na Cl.
52. For a horse, 10% of Chlorali hydratum r.d. 30.0. Administer intravenously, the solution is prepared aseptically.
53. Horses for 6 receptions: herbal infusion h. Hyperici with 50.0(1: 10); Phenylis salicylas 10.0.
54. Koni Novogalenov, Ergotalum avenue in amp. 1 ml of R.d. 3.0. Intravenous injection 1x2d.
55. Horses 500.0 starch mucus and 20.0 Phenothiazmum. On 1 other
56. Sheep for 2 intravenous injections of 1.0% solution of Urosulfanum soluble (r.d. 5.0).
57. Sheep NSA Cefaloridium in fl. 0.5. Administer intravenously 4 times a day for 5 days. R-1 - leads d/injections.
58. Sheep r. Relanium 0.5% in amp. 2 ml R.d. 0.03. U/m (for premedication).
59. Sheep for douching with Aethacridini lactas 1 : 1000 – 1 l.

60. Sheep for 10 others: T – rae Veratri – 1.0; Sodium sulfas - 10.0; water - 100.0.
61. Sheep gorm.pr-t Oxytocinum in ampoules of 1 ml (5 units) r.d. 15 units per 2 p.p. before injection
62. Sheep 200.0 emulsions of castor oil and 5.0 Phenbendazolum (for 2 in.).
63. Sheep 50.0 liquid extract Extr. Polygوني hydropiperis. 5 ml x 2 in. x 5 days
64. Aralia 50.0 n. 2 ml x 2 r x 5 days.
65. Pancreatic solution Cyanocobalaminum 0.003%> in ampoules of 1 ml (r.d. 0.0006) in/m 1 year x 5 days.
66. Subpigmentation NSA Neomycini sulfas in fl. 400,000 units (birth rate 20,000 units/kg, weight 40 kg) V/m x 2 years x 5 days. R-1 - lead for injections.
67. Pancreatic mixture: Thiabendazolum - 5.0; 100.0 emulsions 01. Ricini (per 1 in.).
68. Pancreatic: decoction of Frangula bark with 10 (1: 10), Hydrargyri monochloridum 0.5 (2 in.).
69. Pancreatic r. Natrii salicylas. R.D. 2.0 2 years x 5 days. Put on the table, a spoonful of water (15 ml).
70. 50 ml of 2% alcoholic solution of Gentianvioletum (for wrapping the skin).
71. Adonisidum novgal. pr-t Adonisidum in ampoules of 1 ml (r.d. 2 ml; 1 r x 5 days in/m).
72. Cows r-r in amp. Carbacholimim 0.01% per 1 ml (r.d. 0.003) enter slowly!
73. Cows for 2 intravenous injections of 10% solution of Aethasolum natrium (b.d. D).
74. Cows for 1 in. a mixture consisting of: Creolinum – 10.0, leaf infusion – fol. Menthae piperitae with 100.0 (1: 10).
75. Calves for 2 in.: starch mucus 200.0, 2.0 Phenylli salicilas.
76. NSA dogs Methicillinum natrium in fl. 0.5. Intravenous administration x 4 years x 5 days. R– or – water for injections.
77. Horse aerosol "Livianum" in bal. 70.0. To treat a purulent wound.
78. Cows for 6 others. mixture: n-ky - 1. Strychni 10.0, Natrii sulfas - 20.0; water – 200.0.
79. New Gal horses. pr-t Digoxinum in amp. 1.0 r.d. 4.0 to enter intravenously 1 year x 2 days. with 100 ml of 40% glucose solution.
80. Sheep Hexenalum 1.0 each (powder in a bottle) Weight - 40 kg Dose - 0.025/kg Administer intraperitoneally in 10% p-re on water for injections.
81. Cows on other a mixture consisting of: Creolinum – 10.0; infusion of chamomile flowers fl. Chamomilla with 100.0(1: 1.0).
82. Cow 20%) r.r. Coffeinum natrium benzoas in amp. 10.0 (r.d. 4.0 p/up to 1 year x 5 days)
83. Sheep 10 ml of 2% alcohol solution of Gramycidinum. For treatment of purulent wound.
84. Sheep mixture: n-ku Strophanti! 5.0; Mentholum – 0.1, water – 200.0 (for 6 in.).

85. Horses for rectal anesthesia: starch mucus - 500.0; Chloralum hydratum - 50.0
86. Horses: castor oil emulsion - 01. Ricini 200.0; Phenothiazinum - 20.0 (per 1 in.)
87. Calves Cordiaminum in fl. 25 ml (2 ml each x 2 years x 5 days).
88. Calves for 6 in.: infusion fol. Salviae with 20.0 (1: 10) Xeroformium - 0.5.
89. NSA calves Benzylphenicillinum kalium in fl. 1000000 units, in/m x 4 years x 5 days. R-1 0.5% r-r novocaine.
90. Calves r. Thiamini bromidum 5% > in amp. 1.0 (r.d. 0.1) 1 year x 5 days. P/to.
91. Calves for 4 in.: linseed mucus 200.0 Calcii gluconas - 5.0.
92. Calves 50.0 10% alcoholic solution of Ichthyolum (for compress).
93. Calves per 1 in.: flax seed emulsion 200.0 Mebendazolum - 2.0
94. 5 calves of NSA Bicillinum – 600,000 ED each (b.d. 1,200,000 ED) I/m x 1 time. r-1 - water for injections.
95. Calves 30.0 2% glycerin solution of Gentianvioletum for treatment of the oral cavity.
96. 10 podsvinkam 1% r. Vicasolum in amp. per 1 ml of 1 (r.d. 0.02); u/m 1 year x 2 days.
97. Calves: n-ku – t – rae Absinthii – 5.0; Sal carolinum – 10.0, water – 200.0 (for example x2 r x 5 days)
98. Pigs horm.pr-t Mammophysimrm in amp. 1 ml each (per day 2 ml x 1 year x 5 days in/m) y
99. For a horse, 100.0 2% solution of Chloraminum (rinse the wound).
100. Veratri cows - 50.0. 5 ml 1 time x 5 days.
101. Cow's solution Calcii Chloridum 10% in amp. 10 ml each (r.d. 20.0) for 2 IV injections.
102. Cows: Camphora - 4.0; Glucose - 100.0; Spiritus ethylicus 40% - 200.0. Water for injection 500.0. Enter in/st.
103. Cows gorm. avenue Oxytocinum in amp. for 5.0 (25 UNITS) r.d. 50 UNITS For 2 p/before injection.
104. Cow NSA Kanamycini sulfas 1.0 in fl. (r.d. 2.0) U/m 2y x 5 days. R-1 - 5% r-r novocaine.
105. Cows for 4 others: n-ku - t. Verati – 5.0; Natrii sulfas – 40.0, water – 200.0.
106. Cows 20.0 5% solution of oil Anaesthesinum (teat cracks)
107. Cow mixture: Ichthyolum, Ac. lacticum - 10.0 each, infusion fol. Menthae piperitae with 50.0 1: 10 (for example)
108. Cow mucus starch 500.0; Butadionum - 20.0 per 1 in.
109. Pigs for treatment of purulent wound 100.0 3% solution of Sol. Hydrogenii peroxydi dilutae.
110. NSA pigs Streptomucini sulfas at 0.5 (r.d. 1.0) in/m 2 years x 5 days.
111. Pigs 200.0 gum arabic mucus, 5.0 Chloralum hydratum (in the rectum).

- 112. Pigs 100.0 aerosol "Laevianum" (for treatment of skin burn areas).
- 113. Pigs 200.0 pumpkin seed emulsions (per 1 pr.).
- 114. Pigs 2.5% per 1 ml of Pyridoxini hydrochloridum (r.d. 0.05) in /m x 1x 5 days.
- 115. Pigs Novogalenov pr-t Adonisidum 1 ml (per day 2 ml) intramuscularly x 2 years x 5 days.
- 116. Pigs for 4 others: n-ku bitter wormwood - t - ra Absinthii 5.0; sal. carolinum – 10.0, water – 50.0

PRESCRIBE:

№ recipe	Recipe	№ recipe	Recipe

Material support: Tables, scales, mortars, pestles, flasks, test tubes

The work was accepted by " _____ " _____ 202__

Teacher's signature _____