

GENERAL PRESCRIPTION

LESSON 1. INTRODUCTION. PRESCRIPTION. SOLID MEDICINAL FORMS

Objective: To study the structure of the prescription, learn the rules and get practical skills in writing out solid medicinal forms in prescription.

To carry out practical tasks on prescriptions it is recommended to use Appendix 1.

Key questions:

1. Pharmacology as a science and the basis of therapy. Main development milestones of modern pharmacology. Sections of Pharmacology.
2. The concept of medicinal substance, medicinal agent (medicinal drug, drug), medicinal form.
3. The concept of the pharmacological action and types of the action of drugs.
4. The sources of obtaining drugs.
5. International and national pharmacopeia, its content and purpose.
6. Pharmacy. Rules of drug storage and dispensing.
7. Prescription and its structure. Prescription forms. General rules for writing out a prescription. State regulation of writing out and dispensing drugs.
8. Name of medicinal products (international non-proprietary name - INN, trade name).
9. Peculiarities of writing out narcotic, poisonous and potent substances in prescription.
10. Drugs under control. Drugs prohibited for prescribing.
11. Solid medicinal forms: tablets, dragee (pills), powders, capsules. Their characteristics, advantages and disadvantages. Rules of prescribing.

Write out prescriptions for:

1. 20 tablets of Sertraline 0.1 g. 1 tablet orally once a day.
2. 20 coated tablets of Ticlopidine 0.25 g. 1 tablet orally once a day during or immediately after a meal.
3. 10 chewable tablets of Montelukast 0.0005 g. For the children 6-15 years old, 1 chewable tablet once a day in the evening.
4. 10 tablets of Nystatin 100000 IU. For intravaginal use 1 tablet 4 times a day.
5. 20 tablets of Verapamil retard 240 mg each. Take 1 tablet orally once a day.
6. 10 tablets of «Co-trimoxazolium». Combined drug. 1 tablet orally 2 times a day.
7. 50 capsules of Zidovudine 0.25 g. 1 capsule orally 6 times a day.
8. 20 dragees of Chlorpromazine 0.25 g. 1 dragee orally 1 time a day.
9. 5 powders of Codeine 0.015 g. 1 powder orally twice a day.
10. 10 powders of Didanosine 0.25 g in sachets to prepare solution for internal use. Accept inside twice a day one sachet powder after dissolution in a glass of boiled water.
11. Powder of Azithromycin 0.46 g in the bottle to prepare suspension 100 mg/5 ml. Dissolve the contents of the bottle in boiled water. Take orally 5 ml once a day 1 hour before meals or 2 hours after a meal, for 3 days.
12. 50 mg of Alteplase powder in the bottle. Dissolve the content of the bottle in 50 ml of saline. First 15 ml introduce intravenously streamly, then intravenous drip.
13. 5 sachets containing 100 mg of Nimesulide granules. Take 100 mg orally (1 sachet) 2 times a day after dissolving the granules in half a glass of water.
14. 50 caramels of Dequalinium chloride 0.015 g. Take one caramel every 4 hours (kept in the mouth to complete resorption).

LESSON 2. LIQUID MEDICINAL FORMS

Objective: To learn the rules and get practical skills in writing out liquid medicinal forms in prescription.

Key questions:

1. General characteristics and rules of writing out liquid medicinal forms. Dosage.
2. Solutions for external and internal use. Solvents. Official solutions. Suspensions.
3. Liquid medicinal forms made from plant medicinal material: infusions, broths, teas, galenic (tinctures, extracts) and neogalenic drugs, mucus, emulsions, liniments.
4. Mixtures.

Write out prescriptions for:

1. 25 ml of a 0.05 % solution of Chlorhexidinum. To rinse the oral cavity 3 times a day.
2. 10 ml eye drops 0.3 % solution of Gentamycin. By 1 drop into both eyes 3 times a day.
3. 10 ml 0.0009 % oil solution of Alfacalcidol. By 3 drops orally once a day in the morning.
4. 10 ml of 2 % alcoholic solution of Mentholum in a vial. Rub into the affected joint area 2 times a day.
5. 180 ml solution of Potassium iodide, for the patient to get 0.45 g of potassium iodide per one dose. 1 table spoonful orally 3 times a day.
6. 50 ml 0.08 % syrup of Ondansetron. Orally 2.5 ml once a day.
7. 240 ml 1 % suspension of Nevirapine. Orally 20 ml once a day.
8. 200 ml emulsion from 30 ml Oleum Ricini. Orally for 3 doses.
9. 200 ml of decoction from 20 g of the root of the Polygala (Radices Polygalae). Apply orally 1 tablespoon 4 times a day.
10. 25 ml tincture of Echinopanacis. 35 drops orally 2-3 times before meals.
11. 15 ml of Adonisidum. 15 drops orally 2-3 times a day.
12. The mixture containing 180.0 ml infusion from 0.45 g herba Thermopsisidis and 0.2 g Codeini phosphas. 1 table spoonful orally 3 times a day.
13. 100 ml mixture containing 2.0 g of Chloralum hydratum and equal amounts of Amylum and distilled water. For 2 enemas.
14. 50 ml of 70 % Spiritus aethylicus. For processing of the surgical field.

<p>PRESCRIPTION</p> <p>Date «__» _____ 20__.</p> <hr/> <p>Full name of the patient _____</p> <p>Age _____</p> <hr/> <p>Full name of the doctor _____</p> <hr/> <p>Rp.: _____</p> <p>Rp.: _____</p> <p style="text-align: right;">Signature of the doctor</p>	<p>PRESCRIPTION</p> <p>Date «__» _____ 20__.</p> <hr/> <p>Full name of the patient _____</p> <p>Age _____</p> <hr/> <p>Full name of the doctor _____</p> <hr/> <p>Rp.: _____</p> <p>Rp.: _____</p> <p style="text-align: right;">Signature of the doctor</p>
<p>PRESCRIPTION</p> <p>Date «__» _____ 20__.</p> <hr/> <p>Full name of the patient _____</p> <p>Age _____</p> <hr/> <p>Full name of the doctor _____</p> <hr/> <p>Rp.: _____</p> <p>Rp.: _____</p> <p style="text-align: right;">Signature of the doctor</p>	<p>PRESCRIPTION</p> <p>Date «__» _____ 20__.</p> <hr/> <p>Full name of the patient _____</p> <p>Age _____</p> <hr/> <p>Full name of the doctor _____</p> <hr/> <p>Rp.: _____</p> <p>Rp.: _____</p> <p style="text-align: right;">Signature of the doctor</p>

LESSON 3. MEDICINAL FORMS FOR INJECTIONS. SOFT MEDICINAL FORMS

Objective: To learn the rules and get practical skills in writing out prescription for soft medicinal forms and medicinal forms for injections.

Key questions:

1. The base for preparation of soft medicinal forms.
2. Ointments, pastes. Rules of prescribing them.
3. Dosed soft medicinal forms — suppositories. Types of suppositories. Rules of prescribing them.
4. Basic medicinal forms for injections.
5. General characteristics and requirements to medicinal forms for injections.
6. Rules of writing out injection forms manufactured at the plant and made at the pharmacy.

Write out prescriptions for:

1. 20.0 g 1 % ointment of Dequalinium chloride. Assign to handle the corners of the mouth and lips (for fungal infections).
2. 30.0 g 3 % ointment of Tetracycline. Apply to the affected skin area 2 times a day.
3. 5.0 g 1 % eye ointment of Pilocarpine. Apply in the conjunctival sac every 4 hours.
4. 30.0 g (30 000 IU/1.0 g) ointment of Amphoterecin B. Apply a thin layer to the affected skin area 1-2 times a day.
5. 30.0 g 2.5 % liniment of Griseofulvin. Apply a thin layer to the affected skin area at a daily dose of not more than 30 g.
6. 25.0 g of a 25 % Zinci oxydum paste. Apply to the affected area of the skin 2 times a day.
7. 10.0 g paste based on vaseline and lanoline (equally) containing 5 % Benzocaine. Apply to the affected skin area.
8. 50.0 g of 5 % Ibuprofenum cream. Apply to the affected area of the skin 3 times a day.
9. 50.0 g of 1 % gel of Indometacinum. Rub into the skin in the affected area 2 times a day.
10. 12 rectal suppositories containing 0.1 g Tramadol. 1 suppository into the rectum 2 times a day.
11. 20 vaginal suppositories containing 0.5 g Metronidazolom. 1 suppository into the vagina at bedtime.
12. 20 rectal suppositories of Ultraproct. Combined drug. 1 suppository into the rectum 2 times a day.
13. 10 ampules containing 10 ml 1 % solution of Ciprofloxacinum. 10 ml intravenously 2 times a day.
14. 10 ampules containing 1 ml 2.5 % solution of Progesterone in oil. 1 ml intramuscularly once a day.
15. 5 bottles containing 5 ml of a 3 % solution of Emoxipinum. Intravenously 5 ml, 2 times a day.
16. 10 ampules containing 0.1 g Doxycycline. The content of the ampule to be dissolved in 100 ml of isotonic solution NaCl 1 mg/ml. Intravenously drip-feed.
17. 10 vials containing 0.5 g of Cefotaxim powder. Dissolve the contents of the vial in 5 ml of water for injection. Inject slowly intravenously 0.5 g 2 times a day.

GENERAL PRESCRIPTION

INTRODUCTION

General Prescription contains the structure of the prescription, rules of making a prescription and writing out a prescription of some medicinal forms. It is the part that starts up the course in Pharmacology. Student after studying general prescription should be able to write out prescriptions for drug administration in different medicinal forms.

The authors suppose this material to be of help not only in the study of Pharmacology, but also as a source of information on the rules of writing out prescriptions in the future study of clinical medicine.

The main pharmacological concepts are as follows: medical substance, drug and medical form.

Medical substance is a specific chemical compound with pharmacological or/and biological effect.

Medicinal product is a pharmacological substance containing one or several medicinal substances used for treating some diseases.

Medicinal drug – is medicinal product in definite drug formulation.

Due to the consistency, we can distinguish solid, liquid or soft medical formulation. There are medicinal forms for external or internal usage, for inhalations and injections according to administration routes.

PHARMACOPEIA

Pharmacopeia (via Merriam-webster dict.) is a book describing drugs, chemicals and medical preparations, issued by an officially recognized authority and serving as a standard.

There exist two types of pharmacopeia: international and public.

International pharmacopeia consists of different types of recommendations and general principles of creating/distribution of different medicinal formulation and drugs. It's a type of informative paper. World Health Organization (WHO) is responsible for international pharmacopeia.

Public pharmacopeia is based on the international one and is an example of legislative paper. Each country has its own public pharmacopeia.

PRESCRIPTIONS

Prescription is a written application of a medical doctor to a pharmacist which contains information about the drug in a definite formulation and description of administration route.

In the following piece of information, we are going to describe certain rules to write out a prescription correctly.

To write out a prescription, MD has to fulfill a special medical form. For addictive substances, MD has to use a pink-paper prescription form (the color may vary in different countries). The prescription should be fulfilled without any correction. In one prescribed form, not more than two normal drugs or one addictive substance can be prescribed.

Every prescription can be divided into five parts.

The 1st one – *inscription* (lat. inscription) – contains the information on date, the name, surname and age of the patient, as well as the name and surname of MD.

The 2nd one – *compellation* (lat. compellatio, invocatio) – is a compellation of MD to a pharmacist. MD writes **Recipe (Rp.)** here, which means “take”.

The 3rd part – *prescription* (lat. praescriptio) – is a list of medicinal substances of definite medicinal drug.

The 4th part – *subscription* (lat. subscriptio) – is an instruction to a pharmacist about medicinal formulation of the drug.

The 5th part – signature, designation (lat. *signatura, designatio*) – is instruction to the patient on the drug intake – the quantity of tablets, drops, milliliters, etc. and the frequency.

The first four parts are written by MD for a pharmacist in the Latin language, whereas the 5th one is addressed to the patient in one of national languages.

MD should finish the prescription with subscribing it and putting his own seal.

The names (trade names) of all active compounds and medicinal drugs, botanic names of drugs components should be written with a capital letter.

Doses of drugs should be written only in grams (for example 0.1, 0.002, 1.0, 10.0, etc.), units of activity (UA), international units (IU) or in milliliters for liquid medicinal formulations (0.2 ml, 2.0 ml, etc.).

In the last part of prescription, MD should write the information about:

1. The route of administration (orally, intravenously, subcutaneously, etc.)
2. The dose of a drug (1 tablet, 5 ml, one table-spoon, 6 drops, etc.)
3. The frequency of administration (2 times per day, every 8 hours, before meal, in the morning, etc.).

SOLID MEDICINAL FORMS

Powder is free-flowing medicinal formulation resulting from mixing of one or several powdered medical substrates. There exist powders for external and internal usage; they can also be complex (powder mixture with two and more active compounds) and simple (one active compound). Powders can be divided and not divided into doses. If powder is divided, it can be written out in packs for internal use. Their weight ranges from 0.1 to 1.0 g.

Powders not divided into doses are usually prescribed for the whole treatment course, and their weight ranges from 5.0 to 100.0 g. In prescribing simple powders, MD should write the name of a drug, its dose and quantity of packs with it. If the weight of active compound is less than 0.1 gram we should add 0.3 gram (minimum) of some inactive substance (sugar or fructose).

Rp.:	Codeini phosphatis 0,015 Sacchari 0,3 M.f. pulvis D.t.d. N 10 S. Принимать внутрь по одному порошку 3 раза в день	R.	Codeine phosphate 0,015 Sugar 0,3 Mix to make powder Give such a dose in the amount 10 Label: Take orally one powder 3 times a day
------	---	----	--

Rp.:	Kalii permanganatis 5,0 D.S. Порошок для приготовления раствора	R.	Potassium permanganate 5,0 Give. Label: Powder for solution
------	--	----	--

Advantages of powders:

1. Precise dosing
2. Rather long shelf-life
3. Easy to prepare
4. Relatively inexpensive

Astringent powder - this powder is administered for external use. The composition of the powders is provided in Pharmacopoeia. They contain one or more medicinal substances mixed with inert powders (talc, starch). Talcum powder is harmful if inhaled since it may cause aspiration pneumonia or granuloma. Astringent powders are applied as an antiseptic and anti-inflammatory medication. *Baby powder* is an astringent powder used for preventing diaper rash in children, as a deodorant, and for other cosmetic purposes. Pediatricians generally prefer cornstarch to talc because

it is unlikely to be easily inhaled. Baby powder can also be used as a shampoo, cleaning agent, and freshener. Powders are written out both official and mainly undivided.

Rp.:	Aspersionis Dermatoli 50,0 D.S. Присыпка для детей	R.	Dermatoli 50,0 Give. Label: Baby powder
------	---	----	--

Capsule is a cover for different types of medicinal compounds in different medicinal formulations: liquids, powders, hygroscopic etc. Capsules prevent drugs from irritating the mucous membrane, enamel and taste receptors. Capsules are prescribed for oral administration. They can be prepared from starch, gelatin or some other components. The two main types of capsules are:

- Hard-shelled capsules, which are typically made using gelatin and contain dry, powdered ingredients or miniature pellets made by processes of extrusion or spheronization. These pellets are made in two halves: a lower-diameter "body" that is filled and then sealed using a higher-diameter "cap".
- Soft-shelled capsules, primarily used for oils and for active ingredients that are dissolved or suspended in oil.

Rp.:	Chloramphenicoli 0,25 D.t.d. N 20 in capsulis gelatinosis S. Принимать внутрь по одной капсуле 3 раза в день	R.	Capsules of Chloramphenicol 0,25 in amount 20 Give.Label: Take orally 1 capsule 3 times a day
Rp.:	Capsulam Chloramphenicoli 0,25 D.t.d. N 20 S. Принимать внутрь по одной капсуле 3 раза в день		

Pearl is a kind of hard gelatin capsules. They have a circular shape and can contain small amounts of drugs. They are used when assigning into vitamin oils. Pearls are prescribed similarly to officinal capsules.

Cachets are a kind of hard starch capsules. They are intended for oral administration. Cachets have a larger volume, but they are rapidly dissolved in the stomach. In this regard, the drug is absorbed faster and has a more intensive effect. Cachets are prescribed as officinal capsules as well.

Pellets implantable are sterile capsules used for drug delivery implant, often hormones. When replanting under the skin pellet creates a depot from which the drug is slowly absorbed and has an effect for several months. Pellets are prescribed as officinal capsules as well.

Spansules are hard gelatin capsules which are filled with a mixture of several kinds of dragee or granules. Typically, each kind of granules is painted in different colors. One spansule may contain from 50 to 400 granules. Spansules are appointed for oral use and are prescribed as officinal capsules as well.

Tablet is an officinal pre-dosed preparation of solid medicinal formulation. Tablets can be prescribed for internal, sublingual, intravaginal usage or for the solution. They are stored in special packs called push-trough pack or blisters. Some tablets have special cover, they are called coated tablets. That cover protects the active component of a drug against acid gastric contents.

Tablets are simple and convenient to use. They provide an accurately measured dosage of the active ingredient in a convenient portable package, and can be designed to protect unstable medications or disguise unpalatable ingredients. Colored coatings, embossed markings and printing can be used to aid tablet recognition.

Rp.:	Phenacetini 0,3 D.t.d. N 10 in tabulettis S. Принимать внутрь по одной таблетке 3 раза в день	R.	Tablets of Phenacetin 0,3 in amount 10 Give. Label: Take orally one tablet three times a day
Rp.:	Tabulettas Phenacetini 0,3 N 10 D.S. Принимать внутрь по одной таблетке 3 раза в день		

Rp.:	Tabulettam Tetracyclini obductas 0,25 D.t.d. N 20 S. Принимать внутрь по одной таблетке 4 раза в день после еды	R.	Tetracycline coated tablets 0,25 in amount 20 Give. Label: Take orally one tablet 4 times a day after meal
------	---	----	--

Most complex tablets have trade names. To write out a prescription of such tablets, MD should write the trade name of a drug in quotes without changing the suffix and then indicate the number of tablets.

Rp.:	Tabulettas «Nicoverinum» N 20 D.S. Принимать внутрь по одной таблетке два раза в день	R.	Nicoverin tablets in amount 20 Give. Label: Take orally one tablet two times a day
------	--	----	---

Sugar-coated pile (dragee) is an officinal pre-dosed solid medicinal preparation. Dragee have more than one active compound, and to prevent unwanted pharmacological interaction we divide them by a layer of inert compound (sugar, etc.).

Rp.:	Dragee Chlorpromazini 0,25 D.t.d. N 20 S. Принимать по одному драже 3 раза в день	R.	Dragee of Chlorpromazine 0,25 in amount 20 Give. Label: Take 1 dragee three times a day
------	---	----	---

Microdragee is a dosage form which is produced by coating a drug and an adhesive substance with small grains of sugar. With the aim of prolonged action, microdragee may be coated for retarding dissolution and absorption of the drug. It is possible to pick up a mixture of uncoated microdragee with different time-release drugs and prolongate its duration.

Pellets are small particles which have the form of grains. Graining make hygroscopic agents or mixtures more resistant to adverse environmental factors. The unpleasant smell or taste of drugs included in the granules can be adjusted by the addition of sugar or aromatic compounds. If necessary, they can be coated with protective films or membrane intended for indigestion. Pellets are dosed in pieces, by a special spoon or measuring cup. Sometimes, they are used for the preparation of solutions, syrups, medicines.

Caramel is a sort of solid medicinal formulation that contains a mixture of medicinal substances and additives (sugar, syrup, etc.).

Pastilles are produced in tablet form. They are slowly absorbed, and therefore can have a lasting effect on the oral mucosa, allowing their use in dentistry, for the treatment of sore throat and respiratory diseases. Pastilles are appointed for internal use in case of diseases of the gastrointestinal tract and for resorptive action. A pastille is prescribed as an officinal medicinal form.

Solvets are tablets, readily soluble in water. They are intended for the preparation of solutions used topically (as gargles, eye drops, nasal drops, etc.). Solvets are prescribed by the same rules as officinal tablets.

Poultice is a semi-solid mass. Poultices are intended for external use like an application. Usually such applications on the skin cause congestion, improve blood circulation, have anti-inflammatory, antiseptic and protective action. Poultices are prescribed as an officinal medicinal form.

Lamellae or disks are a form of eye and are used in ophthalmic practice. They consist of the drug substance, gelatin and water. Lamellae have the shape of a disk with a diameter of 3 mm and are placed for eyelid. Lamellae are prescribed by rules prescribing the officinal formulations.

Salts are effervescent powdered mixture consisting of drug substance, sodium hydrogen carbonate and tartaric or citric acid. When dissolving them in water, a large number of bubbles of carbon dioxide (the interaction with sodium hydrogen carbonate acid) are formed. The effervescent salts are written out as other officinal forms as well.

Medicinal pencils are designed for external use. They are shaped rod with a pointed ending. The dosage form of pencils includes substances with astringent or cauterizing action. They are applied for lubricating the skin or mucous membranes.

Names of the solid drug forms

Russian	Latin	English
глоссета	glossetta	glossette
гранула	granulum	granule
драже	dragee	sugar-coated pile, dragee
карамель	caramel	caramel
карандаш лекарственный	stylus medicinalis	stylus, medicated pencil
капсула	capsula	capsule
кахета	cacheta	cachet
ламелля (диск глазной)	lamella	lamell (ophthalmic disc)
пастилка	trochiscus	pastille
пеллета	pelleta	pellet
перла	perla	pearl
порошок	pulvis	powder
припарка	cataplasma	poultiche
соль шипучая	sal effervescens	effervessent salt
сольвелла	solvella	solution-tablet
таблетка	tabuletta	tablet

LIQUID MEDICINAL FORMULATIONS

Solution is a medicinal formulation received after dilution of solid, liquid or gaseous compounds in the water or other solvents. As a solvent, we can use distilled water, ethanol, glycerin and different oils.

We can write the concentration of a solution in different ways: in percentages, in ratio (for example 1:500), and sometimes in mass/volume ratio (for example 0.1 – 500 ml).

There exist two types of solutions: for **oral administration** and **for external use**.

Solutions **for external use** are as follows: lotions, eye, nose and ear drops. The volume of lotions is from 50 to 500 ml, drops usually prescribed in 5-10-20 ml.

Solutions may be prescribed by expanded manner - showing the number of solute and solvent or shortened - indicating the concentration.

Rp.:	Furacilini 0,1 Aquae destillatae ad 500 ml M.D.S. Для полосканий горла	R.	Furacilin 0,1 Distilled water 500 ml Mix to make solution Give. Label: For gargle
------	--	----	--

Rp.:	Sol. Furacilini 0,02% - 500 ml D.S. Для полосканий горла	R.	Solution of Furacilin 0,02% - 500 ml Give. Label: For gargle
Rp.:	Sol. Furacilini 1:500 - 500 ml D.S. Для полосканий горла	R.	Solution of Furacilin 1:500 - 500 ml Give. Label: For gargle
Rp.:	Sol. Furacilini 0,1 - 500 ml D.S. Для полосканий горла	R.	Solution of Furacilin 0,1 - 500 ml Give. Label: For gargle

For external application and rinses can be used officinal solutions, the concentration of which is determined by Pharmacopoeia. In this case, only the name of solution and its quantity are prescribed. Such solutions are available in ready-official forms for external use.

Colliers are solutions of medicinal substances used as washes and lotions for the eyes.

Collodion is a nitrocellulose solution in alcohol and ether (1: 7), to which are added drugs.

Collutory is a liquid mouthwash. Collutories are used as aqueous solutions of antiseptic and binders and usually have a complex structure.

Gargles are liquid preparations intended for rinsing the mouth and throat. They cannot be swallowed.

Glycerin is an antiseptic solution, and a binder in glycerol.

Irrigation is a liquid formulation intended for washing the surface of the skin and wounds.

Lotions are liquid preparations for application to the skin. They provide cooling or antiseptics. Some lotions are prepared specifically for flushing eyes, ears, nose and throat.

Paints are alcoholic, alcohol-aqueous or aqueous solutions of organic dyes intended for the lubrication of infected wounds.

Spray is an aqueous, alcoholic or oily solution of drugs for nose or throat. It is used by means of a track sprayer as well as for application to the skin.

Oleates are solutions of alkaloids or metal oxides in oleic acid.

Soap is a medical preparation based on a conventional soap with the addition of drugs.

Applications are the official medicines of liquid or pasty consistency, intended for application to the skin or to kill parasites.

Liniment is thick liquid or gelatinous mass, applied topically. Liniments can be solutions, emulsions or combined dispersions.

Solutions *for oral administration*. We can dose this type of solutions with different spoons: tea-spoon (5 ml), dessert-spoon (10 ml), table-spoon (15 ml). One drug is usually prescribed for 10-15 administrations. The range of the volume of the solution is from 50-60 ml to 180 ml.

Rp.:	Sol Natrii salicylatis 10% - 180 ml D.S. Принимать внутрь по одной столовой ложке три раза в день	R.	Solution of Sodium salicylate 10% - 180 ml Give. Label: Take one table-spoon three times a day
------	--	----	---

In case that single dose is tiny, we can use drops. Such types of solutions are prescribed from 5 ml to 20 ml. You should remember that 1 ml of water solution contains 20 drops, 1 ml of oily solution – 30 drops and 1 ml of spirituous solution – 60 drops.

Rp.:	Sol. Atropini sulfatis 0,1% - 10 ml D.S. Закапывать по одной капле в оба глаза три раза в день	R.	Solution of Atropine sulfate 0,1% - 10 ml Give. Label: Instill the one drop three times a day
------	---	----	--

Suspension is a liquid medicinal formulation received from the mixture of insoluble solid compounds with different liquids. Suspensions can be prescribed for oral administration, in the

form of ear drops, nasal drops or eye drops, for enteral and parenteral use intravenously/intramuscularly/subcutaneously.

There are two ways of writing out a prescription:

Expanded form:

Rp.:	Hydrocortisoni acetatis 0,05 Aquaе destillatae 10 ml M.f. suspensio D.S. Закапывать в оба глаза по две капли два раза в день. <u>Перед использованием взболтать</u>	R.	Hydrocortisone acetate 0,05 Distilled water 10 ml Mix to make suspension Give. Label: Instill in the eyes two drops two times a day. <u>Shake before use</u>
------	--	----	---

Short form:

Rp.:	Suspensionis Hydrocortisoni acetatis 0,5% - 10 ml D.S. Закапывать в оба глаза по две капли два раза в день. <u>Перед использованием взболтать</u>	R.	Suspension of Hydrocortisone acetate 0,05 – 10 ml Give. Label: Instill in the eyes two drops two times a day. <u>Shake before use</u>
------	--	----	--

Emulsion is a liquid medicinal formulation received from the mixture of insoluble liquid compounds in liquids, so the active compound is in form of tiny drops.

There are emulsions for oral administration, for external use and for intramuscular injections. They can have oily and seed base.

All oily emulsions consists of water, oil and emulgator in the ratio of 17 parts of water, 2 parts of oil and 1 part of emulgator.

For the preparation of oily emulsion, different types of oils can be taken:

1. Castor oil – oleum Ricini
2. Almond oil – oleum Amygdalarum
3. Apricot kernel oil – oleum Persicorum
4. Liquid paraffin – oleum Vaselini

Rp.:	Emulsi olei Amygdalarum 200 ml D.S. Принимать внутрь по одной столовой ложке три раза в день	R.	Emulsion of Almond oil 200 ml Give. Label: Take orally one table-spoon three times a day
------	---	----	---

If the methods of preparations, doses of active components and its concentrations are described in pharmacopoeia – such drugs are called **officinal**. When we are going to write out a prescription of officinal drug we just have to write the name and the quantity.

Rp.:	Solutionis Formaldehydi 200 ml D.S. Для хирургического отделения	R.	Solution of Formaldehyde 200 ml Give. Label: For department of surgery
------	---	----	---

The following drug forms are available in ready-official formulations for oral administration:

Draught - liquid medicine, intended for a single oral administration.

Liquors - water and alcohol solutions of one or more drugs.

Limonades - sweet acidified liquid intakes. They are prepared by dissolving in water and hydrochloric simple syrup, citric, tartaric, phosphoric or lactic acid.

Wines medical. Pharmacopoeia of some countries provides medical drug wines as herb infusions prepared from grape wine or dissolving the drug in the wine.

Magma is water precipitates, similar large-particulate suspensions intended for oral administration.

Gels are semi-colloidal formulations, which can be regarded as a variety of suspensions. They are used inside and externally.

Jellies are homogeneous masses like gels.

Lavations are solutions for administration in the rectum as nutritional or therapeutic enema.

LIQUID DOSAGE FORMS IS OBTAINED FROM HERBAL RAW MATERIALS

Infusions and decoctions are liquid medicinal forms preparing in a drugstore from the different types of herbs. They are water extracts from medical herbs. These medicinal formulations contain a lot of active compounds. The sources for infusions are leaves, flowers and herbs. All of them contain a lot of glycosides and ether oils.

For preparing the decoctions, we can use solid parts of plants: roots, rootstocks and cortex. Active compound can be extracted only under high temperature and prolonged heating.

Infusions and decoctions are usually administered orally and sometimes for gargling. For oral administration infusions are prescribed for 10-12 administrations because a ready form can be used only during 3-4 days.

Infusions and decoctions

Medicinal formulation	Parts of plants	Extracting liquid	Heating time	Cooling time	How to use
Infusion	leaves, flowers, herbs	distilled water	15 min	45 min	cold
Decoction	cortex (bark), roots, rootstocks	distilled water	30 min	10 min	hot

Rp.:	Infusi herbae Thermopsidis 0,6 - 180 ml D.S. Принимать внутрь по одной столовой ложке 6 раз в день	R.	Infusion of Thermopsis herb 0,6 - 180 ml Give. Label: Take it orally one table-spoon 6 times a day
------	---	----	---

Rp.:	Decocti corticis Quercus 200 ml D.S. Для полосканий горла	R.	Decoction of Oak bark 200 ml Give. Label: For gargling
------	--	----	---

Aromatic waters are water extracts from plant material containing ester oil. They are transparent, slightly opalescent and have the smell of their constituent substances.

Aromatic water is generally used to correct the taste or odor of drugs. Some of them have an independent therapeutic effect, due to the presence of antiseptic properties and ability to increase locomotor activity and the suction capacity of the gastrointestinal tract.

Aromatic water is officinal non-dosed dosage form:

Rp.:	Aquae Foeniculi 100 ml D.S. Внутрь по одной чайной ложке три раза в день	R.	Fennel aromatic water 20 ml Give. Label: Take orally one tea-spoon 3 times a day
------	---	----	---

Medicinal pickings are officinal non-dosed dosage forms. It is a mixture of milled parts of dried herbs sometimes mixed with ester oils and solid crystalline substances. Medicinal pickings are the oldest and simplest forms of use of medicinal plants. They are designed for making infusions or decoctions at home and are used orally or topically in the form of lotions, rinsing baths. There are medicinal herbal mixtures for smoking. Medicinal pickings are released in carton boxes or bags to 50.0; 150.0; 200.0. Since the drug charge dosing makes the patient him-self, the composition of medicinal pickings does not include toxic and potent plants. The signature must specify the method of preparation and usage of drugs.

Rp.:	Specierum polivitaminicarum 100,0 D.S. 1 столовую ложку заварить в одном стакане кипятка и принимать в охлажденном виде по 1/2 стакана 2 раза в день	R.	Multivitamin medicinal picking 100.0 Give. Label: 1 tablespoon brewed in one glass of boiled water and take in the chilled 1/2 cup 2 times a day
------	---	----	---

Galenic drugs (in honor of ancient Roman scientist) are tinctures, extracts and spirituous. All the Galenic drugs are officinal. **Neo Galenic drugs** are like **Galenic** ones, but they are more purified due to modern manufacturing processes.

Tincture is a liquid medicinal form, spirituous infusion from the different parts of plants made with no heating. Tinctures are usually more concentrated than other types of solutions, that's why they are prescribed in bottles of 5-30 ml and are administered in drops.

Rp.:	Tincturae Valerianae 20 ml D.S. Принимать внутрь по 25 капель 3 раза в день	R.	Valerian tincture 20 ml Give. Label: Take orally 25 drops 3 times a day
------	--	----	--

Extract is concentrated infusion of active components from different types of plants. The making process is the same as that in tinctures, but extract concentrate remains much more under high temperature. Extracts have liquid, thick and moisture-free forms depending on the technology.

Rp.:	Extracti Viburni fluidi 20 ml D.S. Принимать внутрь по 20 капель 3 раза в день	R.	Liquid extract of Viburnum 20 ml Give. Label: Take orally 20 drops 3 times per day
------	---	----	---

Syrup is concentrated solution of sugar with addition of some active compounds.

Rp.:	Sirupi Sennae 150 ml D.S. Принимать внутрь по одной чайной ложке 3 раза в день	R.	Senna syrup 150 ml Give. Label: Take orally one tea-spoon 3 times a day
------	---	----	--

Spirituous are alcohol or water-alcohol solutions of different ethers or other volatiles. Usually, they are prescribed for external applications, rarely as a component of injections. All the spirituous are officinal.

Rp.:	Spiritus camphorati 50 ml D.S. Для растирания суставов	R.	Camphor alcohol 50 ml Give. Label: For the massage of joints
------	---	----	---

Balsams are liquids with an aromatic odor. A balsam is composed of essential oils, resins, aromatic compounds, esters. Balsams have antiseptic properties, eliminate odors, have anesthetic and expectorant activity, and increase urination.

Elixirs are tinctures, which contain essential oils and tar extracts.

Drinks are a liquid dosage form, which comprises an active substance, water and various syrups.

Mucilage is a thick viscous liquid obtained by dissolving in water gums, starch or treating plant material comprising mucous substances. Mucous substances are nitrogen-free organic compounds such as high polymer polysaccharides. The most important mucilages are those of acacia, Irish moss, starch, althaea root.

Mucilage has a shielding effect, reduces inflammation and irritation, makes difficult absorption of co-administered drugs, delay onset of effect and prolong their action. This makes it possible to achieve more uniform dosing suspension.

Mucilage drugs should not be prescribed together with alcohol, acids, alkalis, large amounts of electrolytes. This causes coagulation of proteins and damages the mucus. All mucilages are officinal. When prescribing them, the dosage form, the name of the medicinal plants and the total amount of mucus are indicated. Mucilage may be prescribed alone as a coating agent for acute gastritis, poisoning, but mostly it is a part of the medicines containing drugs with an irritating effect.

Resin is a concentrated alcohol extract from plant material the preparation of which is followed by evaporation and precipitation of active substances in water.

Oleoresins - liquid extracts containing volatile oils or resins.

Fluid glycerin is a liquid preparation obtained by extraction of plant material with a mixture of glycerol and water.

Mixture is a blend of different medicinal formulations one of which is liquid. We can mix some solid active components with the liquid ones. Mixtures are usually prescribed for oral administration, rarely for external use.

Rp.:	Codeini phosphatis 0,1 Barbitali-natrii 2,0 Sirupi simplicis 15 ml Aquae destillatae ad 150 ml M.D.S. Принимать внутрь по одной столовой ложке три раза в день	R.	Codeine phosphate 0,1 Barbital-sodium 2,0 Sugar syrup 15 ml Distilled water 150 ml Mix. Give. Label: Take orally one table- spoon three times a day
------	--	----	--

Names of the liquid drug forms

Russian	Latin	English
апликация	applicatio	application
ароматная вода	aqua aromatica	aromatic water
бальзам	balsamum	balsam
вино медицинское	vinum medicinale	vine medicinal
гель	gelum	gel
глазные капли	oculoguttae	eye drops
глазные примочки	collyria	eye-wash, eye lotion
глицерин	glycerinum	glycerin
глоток	haustus	draught
души (промывания)	perlutiones	douche
жидкость, ликер	liquor	liquor
капли	guttae	drops
капли для носа	naristillae	nasal drops
клизма	enema	lavage, lavation, lavement
коллодий	collodium	collodion
краска	pigmentum	paint
лимонад	limonatum	limonade
линимент	linimentum	liniment
линктус	linctus	linctus
лосьон	lotio	lotion
магма	magma	magma
масло	oleum	oil
микстура	mixtura	mixture
мыло	sapo	soap
напиток	potio	potion
настой	infusum	infusion
настойка	tinctura	tincture

Russian	Latin	English
обмывание	irrigatio	irrigation
олеат	oleatum	oleate
орошение	nebula	spray
отвар	decoctum	decoction
полоскание для горла	gargarisma	gargle
полоскание для рта	collutorium	mouth- wash
раствор	solutio	solution
сироп	sirupus	syrup
слизь	mucilago	mucilage
смола	resina	resin
спирт	spiritus	spirit
студень	gelatum	jelly
суспензия	suspensio	suspension
ушные капли	auristillae	ear-drop
шампунь	champoo	sampoo
экстракт	extractum	extract
эликсир	elixir	elixir
эмульсия	emulsum	emulsion

MEDICINAL FORMS FOR INJECTION

Injections are groups of drug in different sterile medicinal formulations (solutions, powders, suspensions, emulsions) aseptically packed and used for parenteral infusions.

Drugs for injections can be in ampules or bottles made of special glass in aseptic environment. Drugs for injections usually are prescribed for intravenous, intramuscular or subcutaneous injections, etc. Usually drugs for one injection are administered in ampules, for several injections – in bottles. Nowadays we also can use unit-dose syringe.

Almost all medicinal formulations for injections are officinal. As solvents we can take special water for injections (lat. Aqua pro injectionibus), 5% glucose solution, 0,9% Sodium-Chloride solution, 33% ethyl alcohol, etc.

Advantages of injections are the following:

1. Rapid onset
2. Precise dosing
3. No effects of the enzymes of GI tract on the drug

Rp.:	Solutionis Atropini sulfatis 0,1% -1 ml D.t.d. N 10 in ampullis S. Подкожно 0,5 мл 2 раза в день	R.	Solution of Atropine sulfate 0,1% - 1 ml Send 10 ampoules Give. Label: Subcutaneously 0,5 ml 2 times a day
------	--	----	--

Rp.:	Suspensionis Hydrocortisoni acetatis 2,5% - 5 ml D.t.d. N 10 in ampullis S. Вводить в полость сустава по 5 мл один раз в неделю	R.	Suspension of Hydrocortisone acetate 2,5% - 5 ml Send 10 ampoules Give. Label: Inject in joint cavity 5 ml one time per week
------	---	----	--

Rp.:	Streptoliasi 250 000 ED D.t.d. N 6 in ampullis S. Растворить содержимое ампулы в 100 мл 5% раствора глюкозы, вводить	R.	Streptoliasse 250 000 UA Send 10 ampoules Give. Label: Dissolve contents of ampule in 100 ml of 5% glucose solution, inject
------	--	----	---

внутривенно капельно	it intravenously, by drop infusion
----------------------	------------------------------------

If we prescribe some drug in powder in bottles we do not write the word “bottle” in our prescription.

Rp.: Benzylpenicillini-natrii 500 000 ED D.t.d N 6 S. Содержимое флакона растворить в 2 мл воды для инъекций, вводить внутримышечно, медленно шесть раз в день	R. Benzylpenicillinum-sodium 500 000 UA Give such a dose in the amount 6 Give. Label: Dissolve contents of bottle in 2 ml of water for injection, give it intramuscular six times per day
--	---

SOFT DRUG FORMS

Soft forms are pastes, ointments, suppositories, plasters, creams etc. They are united within one group. As a basis, they include greases and substances like grease. These substances shouldn't take any harmful effect on the skin, react to the medicinal matters and change during the storage. They must have a capacity of easy joining with drugs, of greasing as well as of melting by the body's temperature. Bases are to be accessible. Depending on the ointment description, some bases have to be well adsorbed by skin, the other by contrast have to remain on the skin like a thin cover. Very important are ointments' abilities of no spoiling clothes, not to leave spots and to be lightly washed off if necessary with the help of soap or without it.

Ointments are drug forms for external use. A soft consistence is their typical feature. Ointments consist of a base and of medical matters which are divided within and belong to undivided drug forms. They are prescribed in a recipe with a common amount. Ophthalmic ointments are prescribed in amount of 5, 0 – 10, 0. Ointments for treating affected parts of skin are prescribed from 20, 0 to 100, 0 and more. An ointment consisting of one medical matter and one base is called a simple one. Such an ointment can be prescribed by two ways: 1) by a developed way and 2) by a shorted one:

Rp.: Anaesthesini 2, 0 Vaselini ad 20, 0 M.f. unguentum D.S. Для нанесения на пораженный участок кожи	R. Anaesthesin 2, 0 Vaseline to 20, 0 Mix to make ointment Give. Label: For putting on the affected part of skin
Rp.: Ung. Anaesthesini 10% - 20, 0 D.S. Для нанесения на пораженный участок кожи	R. Ointment of Anaesthesin 10% - 20, 0 Give. Label: For putting on the affected part of skin

Complex ointments include more than one ingredient. Such ointments are prescribed by a developed way:

Rp.: Acidi borici 2, 0 Prednisoloni 0, 4 Vaselini Lanolini aa ad 20,0 M.f. unguentum D.S. Смазывать пораженный участок	R. Boric acid 2,0 Prednisolone 0, 4 Vaseline Lanolin of each 20,0 Mix to make an ointment Give. Label: Put on the affected part
---	--

Rp.:	Ichthyolammonii 10, 0 Lanolini 45, 0 Paraffini flavi mollis 5.0 Misce fiat unguentum Da. Signa: Прикладывать дважды в день к пораженной коже	R.	Ichthammol 10, 0 Lanolin 45, 0 Yellow Soft Paraffin 5,0 Mix to make ointment Give. Label: Apply twice a day to affected part of skin
------	---	----	---

Officinal ointments are prescribed according Pharmacopoeia name without indication of component parts:

Rp.:	Oculenti Hydrocortisoni 5,0 D.S. Глазная мазь	R.	Hydrocortison oculent 5, 0 Give. Label: Ophthalmic ointment
------	--	----	--

Rp.:	Unguenti Ichthyoli 50,0 D.S. Прикладывать дважды в день к пораженному месту	R.	Ointment of Ichthammol 50, 0 Give. Label: Apply twice a day to affected part of skin
------	---	----	--

Pastes are thick ointments containing 25% and more (60%) of powdery substances. When putting on skin, pasts act longer, they have distinctly expressed abilities of adsorbing and drying to some extent. If powdery substances are at the amount of less than 23%, indifferent powders are added for receiving a paste (talc, zinc oxide, starch).

Many pasts are officinal and are demitted at chemist' shop in ready-made form for use. These pasts are to be prescribed in a shortened way:

Rp.:	Pastae Zinci 25, 0 D.S. Наносить на пораженные участки кожи	R.	Zinc paste 25, 0 Give. Label: Put on affected parts of skin
------	---	----	---

Suppositories are divided drug forms which are solid under room temperature and melting under body temperature. One may distinguish rectal suppositories, vaginal suppositories and small stick-bougies. Suppositories include medical substances as well as a base (mostly cocoa oil or its substitute). Medical matters are used in the suppositories for taking a local and resorption effect. Maintenance of a strict dose measuring by prescribing drastic and virulent matters is highly necessary. Vaginal suppositories can be of different forms: globuli, ovules, pessaries. If the suppositories mass has not been indicated by the physician, the rectal suppositories are made up with a mass of 3 grams, the vaginal ones – with a mass of not less than 4 grams. Suppositories are prescribed by two ways. In the first case, single doses of all ingredients included into a composition are indicated. In the second case, doses are indicated for all the amounts of prescribed suppositories:

Rp.	Chloramphenicoli 0,3 Olei Cacao 3, 0 M.f. supp. rectale D.t.d. N 10 S. По 1 суппозиторию в прямую кишку 2 раза в день	R.	Chloramphenicol 0,3 Cocoa oil 3,0 Mix to make a rectal suppository Give such a dose in the amount 10 Label: One suppository into rectum twice a day
-----	--	----	--

Official suppositories are prescribed in a shorted form:

Rp.	Supp. "Anusolum" N 6 D.S. По 1 суппозиторию в прямую кишку 2 раза в день	R.	Suppositories of Anusol in amount 6 Give. Label: One suppository into rectum twice a day
-----	---	----	---

Plasters are drug forms for external use. There are two kinds of plasters: 1) solid plasters, which are tight by the room temperature and are getting soft by the body temperature 2) liquid or skin plasters. The second sort of plasters is a fluid which retains a film on the skin after a dissolving agent has been evaporated.

Plasters are commonly distinguished as medicinal and non-medicinal ones. Non-medicinal plasters are used for skin protecting against external influence, for fixing a bandage ect.

Medicinal plasters contain pharmacologically active matters. Such plasters are used with the aim of therapeutic influence on skin. Plasters are prescribed according to the rules of the official drug forms.

Creams are ready-made drug forms that are less sticky by their consistence than ointments. Cream composition contains medical matters and a basis as well. Creams are used for the treatment of skin diseases.

Names of the soft drug forms

Russian	Latin	English
крем	cremor	cream
мазь	unguentum	ointment
паста	pasta	paste
пастырь	emplastrum	plaster
суппозиторий	suppositorium	suppository

Samples of the soft drug forms prescription

Rp.:	Cremoris "Locacorten" 15, 0 D.S. Смазывать 2-3 раза в день	R.	Locacorten cream 15 g Give. Label: Apply two or three times daily
------	---	----	--

#

Rp.:	Pastae Xylocaini 15,0 D.S. Для анестезии поверхности слизистой оболочки	R.	Xylocaine Paste 15 g Give. Label: For surface anesthesia of mucosa
------	--	----	---

#

Rp.:	Tubam unguenti "Capsolinum" D.S. Нанести плотным слоем на пораженный участок и растереть	R.	One tube of Capsolin Give. Label: Rub tightly on affected area
------	---	----	---

#

Rp.:	Supp. "Cortisolum" N 10 D.S. Принимать три раза в день	R.	Cortisol suppositories in amount 10 Give. Label: Take three times a day
------	---	----	--

MEDICINAL AEROSOLS

Medicinal aerosols include inhalations, properly aerosols, vapors, vitrellas.

Inhalations are drug forms which are intended for introduction of a drug in the form of the finest drops (not more than a few microns) into inferior parts of respiratory ways. The active

matters take hereby a local effect and can be adsorbed from the lungs into the blood and manifest resorption effect.

Nowadays, the officinal inhalations are used in medicine and are prescribed in accordance with officinal drug form prescriptions. However, magistry mixtures or solutions can be used, too.

Rp.:	Inhalationis Salbutamoli 10 ml D.S. Для ингаляций	R.	Salbutamol inhalations 10 ml Give. Label: For inhalations
------	--	----	--

Aerosols are minute particles of liquid and solid matters which are thinly atomized in a gas or in a gas mixture. Dimensions of aerosol particles are several microns, and when the extent of dispersion is increasing, the drug activity rises as well. Aerosols are used for drug introduction into the alveolar system of lungs or for external use.

Aerosols are prescribed in accordance with the rules of ready drug form prescriptions.

Vapors are officinal drug forms which have solid or liquid consistence under room temperature and begin vaporizing by a small heating. Vapor formed in process of this vaporization is inhaled for receiving a local effect on the respiratory ways. Some preparations are already able to form vapors under room temperature, that's why they are given out in inhalants.

Vitrellas are ampoules of a thin glass which are inserted into a soft tissue and contain volatile matters (liquids). When crushing an ampoule, the liquid impregnates the tissue and is evaporated. A medical effect develops very quickly by inhaling these vapors trough the nose. Vitrellas are prescribed in accordance with the rules of prescribing the officinal drug forms.

Names of drug forms which are similar to aerosols

Russian	Latin	English
аэрозоли	aërosola	aerosols
витрелли	vitrellae	vitrellas
ингаляции	inhalationes	inhalations
пары	vapores	vapors

EXAMPLES OF WRITING OUT PRESCRIPTIONS FOR VARIOUS MEDICINAL FORMS**SOLID MEDICINAL FORMS****Tablets**

- Rp.:* Tab. Atenololi 0,05 N. 20
D.S. Orally 1 tablet once a day.
- Rp.:* Atenololi 0,05
D.t.d. N. 20 in tab. (obductis
(retardis)
(vaginalis)
(buccalis)
(masticalis)
S. Orally 1 tablet once a day.
- Rp.:* Tab. «Co-trimoxazolum» N. 20
D.S. Orally 1 tablet 2 times a day.
- Rp.:* Tab. «Artrotec» N. 20
D.S. Orally 1 tablet 2 times a day.
- Rp.:* Tab. «Sustac-mite» N. 30
D.S. Orally 1 tablet 2 times a day.
- Rp.:* Tab. «Sustac-forte» N. 30
D.S. Orally 1 tablet 2 times a day.
- Rp.:* Tab. «Amoxiclav» 0.875 / 0.125
D.t.d. N. 20
S. Orally 1 tablet 3 times a day.

Dragées

- Rp.:* Dragee Ibuprofeni 0,2
D.t.d. N. 100
S. Orally 1 tablet 4 times a day.

Powders**Simple, undivided into dosages**

- Rp.:* Magnesii oxydi 30,0
D.S. Take ¼ tablespoonful 2 hours after meals.

Simple, divided into dosages

- Rp.:* Colestyramini 3,0
D.t.d. N. 24
S. Orally (during meals) as a suspension
(the content of 1 package should be dissolved in 80 ml of water) 3 times a day.

Compound, divided into dosages

- Rp.:* Riboflavini 0,01
Thiamini bromidi 0,02
Sacchari 0,3
M.f. pulvis
D.t.d. N. 30
S. 1 powder 3 times a day.

Capsules

- Rp.:* Omeprazoli 0,02
D.t.d. N. 14 in caps.
S. 1 capsule once a day.

Caramel	<i>Rp.:</i> <i>Caramelis Dequalinii chloridi 0,00015</i> <i>D.t.d. N. 30</i> <i>S. One caramel per cheek or under the tongue every 4 hours. Keep until completely resorbed.</i>
Granule	<i>Rp.:</i> <i>Granulorum Acidi Aminosalicylici 100,0</i> <i>D.S. One teaspoon of granules 3 times per day one hour after a meal (dissolve in ½ glasses and drink immediately).</i> <i>Rp.:</i> <i>Granulorum Ketoprofeni 0,08</i> <i>D.t.d. N. 20</i> <i>S. Inside the contents of one sachet in ½ cup of water 2 times a day.</i>
Film	<i>Rp.:</i> <i>Membranulam ophthalmicam cum Pilocarpini hydrochlorido 0,0027</i> <i>D.t.d. N. 30</i> <i>S. Place the film with eye tweezers behind the lower eyelid once a day.</i>
Lamell	<i>Rp.:</i> <i>Lamellam cum Trinitrolongo 0,001</i> <i>D.t.d. N. 10</i> <i>S. Fix the plate to the upper gum above the fangs until resorption.</i>
Pastille	<i>Rp.:</i> <i>Trochiscos «Septolete» N. 30</i> <i>D.S. Keep in mouth until completely resorbed every 3 hours after eating.</i>

LIQUID MEDICINAL FORMS

Solutions

Concentration of the solution in percent	<i>Rp.:</i> <i>Sol. Nitrofurali 0,02 % — 500 ml</i> <i>D.S. Gargle the throat 4 times a day.</i>
Concentration of the solution in proportions	<i>Rp.:</i> <i>Sol. Nitrofurali 1:5000 — 500 ml</i> <i>D.S. Gargle the throat 4 times a day.</i>
Concentration of the solution in the mass– and volume ratio	<i>Rp.:</i> <i>Sol. Nitrofurali 0,1 — 500 ml</i> <i>D.S. Gargle the throat 4 times a day.</i>
Spirituos (alcoholic) solution	<i>Rp.:</i> <i>Sol. Acidi borici spirituosae 1 % — 10 ml</i> <i>D.S. 3 drops into the ear 2 times a day.</i>
Detailed prescription (in cases when a certain oil or alcohol of a certain concentration is required)	<i>Rp.:</i> <i>Mentholi 0,1</i> <i>Olei Vaselini ad 10 ml</i> <i>M.D.S. 5 drops into the nose.</i>
Suspensions	<i>Rp.:</i> <i>Susp. Hydrocortisoni acetatis 0,5 % — 10 ml</i> <i>D.S. Drop 2 drops into each eye 4 times a day. Shake before using.</i>
Emulsions	<i>Rp.:</i> <i>Emulsi olei Ricini 20ml — 100ml</i> <i>D.S. For 1 administration.</i>
Broths and teas	<i>Rp.:</i> <i>Inf. herbae Thermopsidis 0,5 — 200ml</i> <i>D.S. 1 tablespoonful 4 times a day.</i>

Galenic drugs**Tinctures**

Rp.: Tinct. Valerianae 25 ml
D.S. 25 drops 3 times a day.

Extracts

Rp.: Extr. Frangulae fluidi 25 ml
D.S. 25 drops before bedtime.

Neogalenic drugs

Rp.: Adonisidi 15 ml
D.S. 15 drops 3 times a day.

Mixtures

Rp.: Sol. Natrii bromidi 2 % — 180ml
 Coffeini–natrii benzoatis 0,6
M.D.S. 1 tablespoonful 3 times a day.

SOFT MEDICINAL FORMS**Liniments****Manufactured**

Rp.: Lin. Synthomycini 5 % — 25ml
D.S. Apply on the wound 2 times a day.

Prepared at the pharmacy

Rp.: Chloroformii 20 ml
 Olei Hyoscyami 40ml
M.f. linimentum
D.S. Rub into the joint.

Ointments**Short prescription**

Rp.: Ung. Acicloviri 5 % — 5,0
D.S. Apply to the affected skin areas 5 times a day.

Detailed prescription

Rp.: Benzocaini 0,25
 Mentholi 0,1
 Vaselini ad 20,0
M.f. unguentum
D.S. Smear the nasal mucosa 6 times a day.

Pastes**Manufactured**

Rp.: Pastae Zinci oxydi 40,0
D.S. Apply to the affected surface of the skin.

Prepared at the pharmacy

Rp.: Benzocaini 2,5
 Zinci oxydi 20,0
 Vaselini ad 50,0
M.f. pasta
D.S. Apply to the affected surface of the skin

Suppositories**Manufactured**

Rp.: Supp. cum Metronidazolo 0,5
 D.t.d. N.10
S. 1 suppository before bedtime.

Rp.: Supp. «Bethiolum» N. 10
D.S. 1 suppository 2 times a day.

Prepared at the pharmacy

Rp.: Aminophyllini 0,36
 Olei Cacao q.s.
 ut f. supp. rectale
 D.t.d. N. 12
 S. 1 suppository 3 times a day.

Systema therapeuticum transcutaneum (STT)

Rp.: STT «Durogesic» 0,00005 /h
 D.t.d. N. 5 (five).
 S: To apply in the form of applications on an intact skin surface one patch for 3 days.

MEDICINAL FORMS FOR INJECTIONS**Solutions in ampules**

Rp.: Sol. Diphenhydramini 1 % — 1 ml
 D.t.d. N. 10 in amp.
 S. 1 ml subcutaneously.

Oil solution

Rp.: Sol. Oestradioli dipropionatis oleosae
 0.1 % — 1 ml
 D.t.d. N. 6 in amp.
 S. 1 ml intramuscularly once a day.

Bottled drug

Rp.: Benzylpenicillini 300 000 EД
 D.t.d. N. 12
 S. 300000 units in 2 ml of 0,5 % procaine solution 4 times a day.

Prepared at the pharmacy

Rp.: Sol. Glucosi 5 % — 500 ml
 Sterilisetur!
 D.S. Intravenously drip-feed.

AEROSOLS

Rp.: Aerosolum «Camphomenum» N. 1
 D.S. For inhalations 3 times a day.