

**FEDERAL STATE BUDGET EDUCATIONAL INSTITUTION OF
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GENERAL RECIPE

Educational allowance

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The educational-methodical manual on the general and medical compounding for students of medical, pediatric and medical-prophylactic faculties.

FOREWORD

The manual is made by the staff of the Department of pharmacology with clinical pharmacology of the North Ossetian state medical Academy in order to optimize the process of assimilation of the rules of prescribing medicines.

The manual describes in detail the rules of prescribing for various dosage forms, to consolidate the skills obtained there are tasks for independent work of students on General and medical prescription.

The manual is intended for students of medical, pediatric, dental, medical and pharmaceutical faculties of medical schools.

It is recommended by the Educational and methodical Association for medical and pharmaceutical education of Russian universities as a textbook for students of medical universities.

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INTRODUCTION TO THE GENERAL RECEPTURE

The general recipe is a section on the pharmacology of the rules for prescribing prescription drugs in certain dosage forms.

A medicinal substance is an individual chemical compound of natural or synthetic origin that, when interacted with the body, causes a characteristic biological effect and is used to treat, prevent or diagnose diseases. Medicinal substances are obtained by chemical synthesis or from medicinal raw materials. As a medicinal raw material used medicinal plants, animal organs, products of mineral, fungal and bacterial origin.

The medicinal substance is the active start of **medicinal products**. The medicament may include one or more drugs.

A medicinal preparation is a drug prepared in the form of a certain dosage form, i. E. convenient for practical use of the form given to medicinal products for achievement of necessary medical or prophylactic effect. Along with the medicinal substances, the composition of the medicinal product includes the auxiliary substances necessary for the preparation of the drug in the finished dosage form.

Depending on the consistency, the dosage forms are divided into solid (powders, tablets, dragees, capsules, pills, granules), soft (ointments, pastes, suppositories, patches) and liquid (solutions, infusions, decoctions, tinctures, extracts, mucus, emulsions , suspensions, medicines, liniments, novogalenov preparations, liquid organopreparations). By the way of application, medicinal forms for external use, internal use, for inhalations, for injections, etc. are distinguished.

The list of the most used medicines with their higher single and daily doses and a number of other parameters (methods of manufacturing, determination of the quality and activity of various dosage forms, etc.) is listed in the special guide - The State Pharmacopoeia.

Pharmacopoeial article - the state standard of a medicinal product, containing a list of indicators and methods of quality control of a medicinal product.

The International Nonproprietary Name (INN) is the name of a drug recommended by WHO and accepted for use worldwide. INNs are used in educational and scientific literature for ease of identification by belonging to a certain pharmacological group. In the English-language literature, INN is often referred to as the "generic name".

A trade name or a proprietary commercial name is a name given to a medicinal product by a pharmaceutical manufacturing company and is its commercial property protected by a patent.

Reproduced medicinal product (generic) is a medicinal product that has come into circulation after the expiry of the exclusive patent right and contains a medicinal substance identical to the original preparation.

A pharmacy is an institution engaged in the manufacture, control, storage and dispensing of prescription drugs. The pharmacy provides the population with ready-made dosage forms, produced by the chemical-pharmaceutical industry.

RECIPE. RULES OF RECORDING AND RELEASE DRUGS

Recipe – this is a written request from a doctor to a pharmacy on the preparation and / or dispensing to the patient of the medicinal product in a certain dosage form, indicating the method of its use.

The recipe is a legal document and is issued in accordance with the rules established by the Order of the Ministry of Health of Russia on December 20, 2012 N 1175n "On the approval of the order of prescribing and prescribing of medicinal products, as well as forms of prescription forms for medicinal preparations, the procedure for registration of these forms, their recording and storage." This order approved:

- instruction on the order of prescribing medicines and prescribing them;
- forms of prescription forms;

- the order of registration of prescription forms, their registration and storage.

The prescription can be prescribed by the attending physician, including a private practitioner, if there are appropriate indications.

It is forbidden to write prescriptions:

- in the absence of medical indications;
- on medicinal products not approved for use on the territory of the Russian Federation
 - for medicines used only in hospital (fluorotane, fentanyl, propanidide, ketamine, etc.);
 - narcotic drugs and psychotropic substances in list II of the list of narcotic drugs, psychotropic substances and their precursors subject to control in the Russian Federation: for drug addicts; private practitioners.

Recipes are issued on special forms according to the forms approved by the Ministry of Health of Russia. At present, the following forms of prescription forms have been approved: N 148-1 / U-88, N 148-1 / y-04 (L), N 148-1 / y-06 (Л) and N 107-1 / y. Narcotic and powerful psychotropic drugs of list II, with the exception of medicines in the form of transdermal therapeutic systems, are issued on a special prescription form in the form approved by the order of the Ministry of Health of the Russian Federation of August 1, 2012. N 54n "On the approval of the form of prescription forms containing the prescription of narcotic drugs or psychotropic substances, the procedure for their manufacture, distribution, registration, recording and storage, as well as the rules for registration."

Forms of prescription form №148-1 / y-88 are designed for prescribing and dispensing narcotic and psychotropic medications in the form of transdermal therapeutic systems; psychotropic substances and other medicinal products subject to subject-quantitative accounting; drugs that have anabolic activity; medicinal preparations of individual manufacture, containing narcotic or psychotropic substance, subject to subject-quantitative accounting.

Forms of the prescription form №148-1 / y-04 (л) and № 148-1 / y-06 (л) are intended for prescribing medicines to citizens who have the right to receive medicines free of charge or receive medicines at a discount.

All other medicines, including lists A and B, as well as containing ethyl alcohol, are written out on forms №107-1 / y.

The recipe for preferential and free drugs is issued in 2 copies (for a copy), for a full price - in a single copy. The prescription is written out legibly, clearly, no corrections are allowed. Only one name of a medicinal product is allowed on one form. The form of payment is underlined, the unnecessary is crossed out, the full name of the patient, his age, address and number of the outpatient card are fully indicated. The full name of the doctor is indicated; The signature of the doctor must be certified by his personal seal. Recipes written on letterheads of forms No. 148-1 / y-88; №148-1 / y-04 (л); №148-1 / y-06 (л) are additionally certified by the seal of the preventive treatment facility "For prescriptions".

The form of prescription form No. 107-1 / y is made in a similar way. On one prescription form it is allowed to prescribe not more than 3 simple and not more than 2 medicines of lists A and B. Ethyl alcohol is prescribed on a separate prescription form and is certified additionally with the stamp of the treatment and prophylactic institution "For prescriptions". The full name of the doctor is indicated; The signature of the doctor must be certified by his personal seal.

Schedule II narcotic drugs and psychotropic substances should be prescribed on special prescription forms. This form is pink, it must have a stamp of medical and preventive institutions, letter series and number, the degree of protection. A prescription for a narcotic drug and a psychotropic substance in schedule II must be written with a ballpoint pen in the hand of a doctor who signed it, and affixed his own seal. This prescription is signed by the chief physician of the polyclinic or his Deputy (head of the Department) and certified by the round seal of the medical institution.

The prescription is issued taking into account the possibility of obtaining medicines for it within 5 days from the date of issuance.

A recipe that does not meet at least one of these requirements is considered invalid. All wrong prescriptions are repaid with the stamp "Prescription is not valid", are registered in a special journal, information about them is transferred to the head of the relevant medical institution. Doctors and specialists with secondary medical education are responsible for unreasonably and incorrectly written out a prescription in accordance with the legislation of Russia

The structure of the recipe

I. Inscriptio (a title).

Includes:

- stamp of medical institution;
- date of prescription;
- Name of the patient, age, address or number of outpatient card;
- Doctor's name.

II. Praepositio s. invocation.

Appeal-Recipe (Rp.:) – take

III. Designatio materialiarum s. ordination = enumeration of the ingredients in the recipe. In this case, in a certain order indicate:

- 1) a Basic medicinal substance (remedia cardinale s. basis).
- 2) Auxiliary substance (remedia adjuvantia s. adjuvans).
- 3) Correcting taste, smell (remedia corrigentia s. corrigens).
- 4) of the Forming substance (remedia constituentia s. constituents).

All hard and soft dosage forms are prescribed in grams or fractions of a gram, liquid - in ml or drops.

1,0 - one gram (1000 mg)

0,1 - one decigram (100 mg)

0,01 - one centimetre (10 mg)

0,001 - one milligram (1 mg)

0,0001 - one decimillimeter (0,1 mg)

0,00001 - one antimalignant (0,01 mg)

0,000001 - one microgram (0,001 mg)

The number of drops is indicated by a Roman numeral, before which gtts is written (the abbreviated designation of the word guttas - drops - in the accusative case of the plural), for example, gtts V (drops five).

When prescribing drugs, dosed in units of action (ED), in the recipe instead of weight or volume amounts indicate the number of ED. (the designation may be in international-ME - or international –IE - units.)

Sometimes the doctor does not give the amount of formative substance (for example, in suppositories), giving the pharmacist the right to take as much as necessary. In this case write **q. s. (quantum satis)**, that is, as long as it is required, but this applies only to indifferent substances.

If several drugs are prescribed in the same dose, its digital value is indicated only once after the name of the last substance. To indicate that the marked amount applies to all the above names, put the sign **āā**, which means **ana** - equally.

IV. Praescriptio s. subscription – prescription of the doctor to the pharmacist about preparation of the corresponding dosage form and its release in a certain quantity.

For example:

M.f. pulvis (Misce fiat pulvis) - mix, get powder

D.t.d. N.10 (Da tales doses) - give me 10 of these.

V. Signatura (S.) – doctor's order to the patient about the method of taking medication. This part of the recipe is short but exhaustive:

1) a single dose in the measurement, clear for the patient (1 table., 1 teaspoon, ½ Cup, etc.);

2) the time and frequency of taking the drug (how many times a day, before or after a meal, at night, etc.);

3) the method of application of the drug (inside, subcutaneously, intravenously bolus or drip, slowly, etc.).

VI. Nomen medici – doctor's signature and personal stamp.

A BRIEF GRAMMAR COMMENTS, CONCERNING THE RECIPE.

There are five declensions in Latin (table 1). The largest number of drug names refers to 1 and 2 declination. Much less commonly used 3 declination and rarely 4 and 5.

By 1 declension are feminine nouns ending in the nominative case of the singular on the "a", in the genitive case of the singular on the «ae» (Tinctura, Pilula, Belladonna, Mentha, Cera, Ipecacuanha, Agua).

By 2 declension are feminine nouns ending in " us» (Hyoscyamus, Numerus), less often on "er", and middle - genus nouns-on" um "(Leun, Acidum, Linimentum, Infusum, Opium); in the genitive case of the singular they end with "i". The exception is the word bolus (wives.Rhoda) - clay.

By 3 declension are nouns, which in the nominative case of the singular have different endings, and in the genitive case of the singular they end in "is". For example, ending with:

“o” - Carbo, onis (m); Mucilago, inis (f); Sapo, onis (m); Solutio, onis (f).

“os” - Flos, oris (m).

“or” - Liguor, oris (m).

“er” - Acther, eris (m); Papaver, eris(n); Piper, eris (n).

“is” - Dosis, is (f); Pulvis, eris (m); Adonis, idis (m).

“s” - Adeps, ipis (m).

“x” - Filix, icis (f); Radix, icis (f); Nux, nucis (f); Pix, picis (f); Cortex, icis (m).

“e” - Secale, is (n).

“l” - Sal, is (n).

“n” - Alumen, inis (n); Semen, inis (n).

“ur” - Sulfur, is (n).

Note: m - genus masculinum, f-genus femininum, n-genus neutrum.

The 4 declensions include masculine nouns with “us” (Spiritus, Luctus), neuter nouns with “u”, in the genitive singular ending with “us”, and feminine noun Quercus.

5 declension includes feminine nouns ending in the nominative case of the singular on the “es” (Species, etc.), and in the genitive case on the “ei”.

Some words are not declined, e.g., Gummi, Cacao, Salep etc. Adjectives always agree with the noun to which they refer, and are placed after it (Aqua destillata).

In recipes use some degree of comparison of adjectives, as well as conjunctions and prepositions: purissimus - the purest, subtilissimus - the smallest, ut - to, ad - to, to (with the accusative case), e, ex - of, cum - C, pro - for (with the creative case).

Table 1.

Summary table of case endings of Latin declensions.

Case	Declination				
	I	II	III	IV	V
NUMERUS SINGULARIS					
	f	m.n.	m.f.n.	m.n.	f
N.	-a	- us, -er, -um	Разные окончания	Us, -u	-es
G.	-ae	-i	Is	-us	-ei
D.	-ae	-o	-i	-ui, -u	-ei
Acc.	-am	-um	-em(im)-м.и ж.р.	-um, -u	-em
Abl.	-a	-o	ср.р. = nom е (i)	-u, -u	-e
NUMERUS PLURALIS					
N.	-ae	-i, -a	-es, - a (ia)	-us, -ua	-es
G.	-arum	-orum	-um (ium)	-uum	-erum
D.	-is	-is	-ibus	-ibus	-ebus
Acc.	-as	-os, -a	-es, -a (ia)	-es, -ua	-es
Abl.	-is	is	-ibus	-ibus	-ebus

The most important prescription abbreviations

Reduction	Full writing	Translation
Aa	Ana	by, equally
ac., acid.	Acidum	acid
amp.	Ampulla	ampoule
aq.	Aqua	water
aq. Destill.	aqua destillata	distilled water
but.	Butyrum	oil
comp.,cps.,cpt.	Compositum	complex
D.	Da, Detur, Dentur	Give out. Let it be issued. Let them be issued.
D.S.	Da. Signa.	Give out. Denote.
D.t.d.	Da tales doses	Give those doses
extr.	Extractum	extract
f.	Fiat	Let it form
Gtt.	gutta, guttae	drop

inf.	Infusum	infusion
in amp.	in ampullis	in ampoules
in tab.	in tabulettis	in tablets
lin.	Linimentum	liniment
liq.	Liquor	liquid
M.	Misce; Misceatur	Mix. Let it mix.
m. pill.	massa pilularum	pill weight
n.	Numero	number
ol.	Oleum	oil (liquid)
past.	Pasta	paste
pct., praec.	Praecipitatus	besieged
pil.	Pilula	pill
pulv.	Pulvis	powder
p.aeq	partes equales	equal parts
q.s.	quantum satis	how long will it take
Rp.	Recipe	Take it
rep.	repete, repetatur	Repeat. Let it be repeated
S.	Signa	Denote.
sem.	Semen	seed
simpl.	Simplex	simple
sir.	Sirupus	syrup
sol.	Solution	solution
supp.	Suppositorium	suppository
tab.	Tabuletta	tablet
t-ra, tinct.	Tincture	tincture
ung.	Unguentum	ointment
vit.	Vitrum	Flask

SOLID MEDICINAL FORMS

Tablets - Tabulettae

Nominative, single number – *Tabuletta*.

Accusative, plural number- *Tabulettas*.

Ablative, plural number – *in tabulettis*.

Tablets-a solid medicinal form obtained by pressing drugs and excipients. This dosage form is manufactured by the pharmaceutical industry according to standard prescriptions, so when writing out tablets, auxiliary substances are not indicated in the prescription. Depending on the method of application of the tablets are divided into: tablets for oral administration, sublingual, latch, vaginal, etc. Tablets may be coated.

There are several options prescription tablets.

The 1st variant is the most common. It indicates the name of the drug in the genitive case and its single dose, followed by a prescription on the number of prescribed tablets - D.t.d. N. ... in tabulettis (give such doses number ... in tablets) and a signature.

For example:

Prescribe 10 tablets containing 0.5 g analgin (Analginum). Assign 1 tablet for pain.

Rp.: Analgini 0,5

D.t.d. N.10 in tabulettis

S. Assign 1 tablet for pain.

To prescribe 30 tablets, each containing 0.006 g of thiamine bromide (Thiamini bromidi), 0.005 g Riboflavin (Riboflavinum), 0.1 g of ascorbic acid (Acidum ascorbinici). Assign 1 tablet 3 times a day.

Rp.: Thiamini bromidi 0,006

Riboflavini 0,005

Acidi ascorbinici 0,1

D.t.d. N.10 in tabulettis

S. Assign 1 tablet 3 times a day

The 2nd version of the prescription of tablets begins with the indication of the dosage form in the plural - tabulettas (wines.p. PL.h), then indicate the name of the drug, its single dose and the number of tablets. Recipe finish designation D. S. (Give. Denote.) and signature.

For example:

Prescribe 10 tablets containing 0.01 g of fenkarol (Phencarolum).

Assign 1 tablet 3 times a day.

Rp.: Tabulettas Phencaroli 0,01 N.10

D. S. Assign 1 tablet 3 times a day.

The 2nd version of the prescription When writing out coated tablets, the word obductas is written between dose and number of doses.

For example:

To write 100 tablets were chimes 25 mg coated. Assign inside 2 tablets 3 times a day for 1 hour before meals.

Rp.: Tabulettas Curantili 0,025 obductas N 100

D.S. Assign inside 2 tablets 3 times a day for 1 hour before meals.

Dragee - Dragée

Nominative, single number – *Dragée*.

Accusative, single number – *Dragée*.

Dragee - firm dosed out pharmaceutical form for internal use received by multiple layering of medicinal and auxiliary substances on sugar granules (pelleting). Dragee is made by the factory method.

There is only one form of recipe dragee. The recipe begins with the indication of the dosage form (*Dragée* - accusative, single number), then follows the name of the drug, its single dose., designation of the number of pills (D.t.d. N. ...) and a signature.

For example:

Prescribe 10 pills, containing 0.025 g of chlorpromazine (Aminazinum). Assign 1 dragee inside 3 times a day.

Rp.: Dragée Aminazini 0,025

D.t.d. N. 10

S. Assign 1 tablet inside 3 times a day.

Powders - Pulveres

Nominative, single number – *Pulvis*.

Genitive, single number – *Pulveris*.

Powders - a solid dosage form for internal and external use, which has the property of flowability. In this dosage form can be written various synthetic substances, substances of plant and animal origin, products of microorganisms.

Distinguish:

- 1) *powders are simple* (consisting of one substance)- *pulveres simplices*.
- 2) *complex powders consisting of two or more substances* - *pulveres compositi*.
- 3) *powders, undivided (underdosed)*- *pulveres indivisi*.
- 4) *Powders divided (dosed)*– *pulveres divisi*.

Powders for external use are discharged in the form of fine powders (pulveres subtilissimus) undivided doses total amount of from 5.0 to 100.0 g. the prescription shall indicate the name of medicinal substance, the degree of grinding and the total amount.

Recipe simple undivided powder

For example:

Prescribe 10.0 g of fine powder of resorcinol (Resorcinum). For application to the wound surface.

Rp.: Resorcini subtilissimi 10,0

D.S. For application to the wound surface.

Recipe unrequited complex powder

For example:

Write out 100.0 g of the smallest powder containing 5% streptocid (Streptocidum) on the wound surface.

Rp.: Streptocidi 5,0

Talci ad 100,0

M.f. pulvis subtilissimus

D.S. For application to the wound surface.

If the powder consists of one drug and auxiliary substances, it is possible to reduce the recipe. In the recipe, the word *Aspersionis* (powder) is indicated first, then the name of the drug, its concentration and total amount.

For example:

Write out 100.0 g of the smallest powder containing 5% streptocid (Streptocidum) on the wound surface.

Rp.: Aspersionis Streptocidi 5%-100,0

D.S. For application to the wound surface.

Powders for internal use can be undivided into doses (unproven) and separated (dosed). In the form of undivided powders, substances are prescribed, the dosage accuracy of which is not of great importance (magnesium oxide, sodium sulfate)

For example:

To write down 20.0 g of magnesium sulfate (Magnesii sulfas). Dissolve in 100 ml of water and take inside.

Rp.: Magnesii sulfatis 20,0

D.S. Dissolve in 100 ml of water and take inside.

When writing a prescription for a divided powders, after “Rp.: ” indicate the name of the drug and its single dose. The mass of the separated powder should be at least 0.1 g and not more than 1.0 g. If the dose of the drug is less than 0.1 g (for powders of plant origin less than 0.05 g), to increase the mass, it is necessary to add indifferent substances (sugar or glucose) in an amount of 0.2-0.3 g. when writing complex powders in the recipe indicate M. f. pulvis (Misce ut fiat pulvis.- Mix to get the powder), then give an indication of the amount of powder (D. t.d. N. ...), and signature.

Recipe simple undivided powder

For example:

Prescribe 10 powders containing 0.2 g of trimethadione (Trimethinum). Assign one powder inside 3 times a day.

Rp.: Trimethini 0,2

D.t.d. N. 10

S. Assign one powder inside 3 times a day.

Recipe of complex divided powder

For example:

Prescribe 20 powders containing 0.05 g of Dimedrol (Dimedrolum). Assign 1 powder inside 3 times a day.

Rp.: Dimedroli 0,05

Sacchari 0,2

M.f. pulvis

D.t.d. N. 20

S. Assign 1 powder inside 3 times a day.

Prescribe 10 powders containing 0.25 g of analginum (Analginum) and aminopyrine (Amidopyrinum). Take 1 powder inside for pain

Rp.: Analgini

Amidopyrini aa 0.25

M. f. pulvis

D. t.d. N. 10

S. Take 1 powder inside for pain

The prescription of powders of plant origin begins with the word "Pulveris", then indicate part of the plant, its name and a single dose.

For example:

Prescribe 10 powders containing 0.05 g of digitalis leaf powder (Pulvis folii Digitalis). Assign one powder inside 2 times a day.

Rp.: Pulveris folii Digitalis 0.05

D. t.d. N. 10

S. Assign one powder inside 2 times a day.

Volatile and hygroscopic substances are prescribed in waxed or waxed paper, as indicated in the recipe (D. t.d. N. ... in charta cerata or in charta paraffinata).

For example:

To write in waxed paper 50 powders containing 0,05 g of ascorbic acid (Acidum gnesium ascorbinicum). Assign one powder inside 2 times a day.

Rp.: Acidi ascorbinici 0,05

Sacchari 0,2

M.f. pulvis

D.t.d. N. 50 in charta cerata

S. Assign one powder inside 2 times a day.

Capsules - Capsulae

Nominative, single number – *Capsula*.

Genitive, single number – *Capsulae*.

Capsules are gelatin and polymer shells for dosed drugs of different consistency, intended for oral administration. The capsules produce drugs that have an unpleasant taste, smell or irritating effect, as well as to obtain an intestinal drug form resistant to the action of gastric juice.

For example:

Write 10 powders containing 1.0 g of reduced iron (Ferrum reductum) in gelatin capsules. Assign 1 capsule 3 times a day after meals.

Rp.: Ferri reducti 1,0

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

S. Assign 1 capsule 3 times a day after meals.

Prescribe 20 elastic gelatin capsules containing 1 ml of castor oil (Oleum Ricini). Take 5 capsules inside daily.

Rp.: Olei Ricini 1 ml

D. t.d. N. 20 in capsulis gelatinosis elasticis

S. 5 capsules inside daily.

Granules - Granulae

Nominative, single number – *Granulum*.

Genitive, single number - *Granuli*

Genitive, plural number – *Granulorum*.

Granules - underdosed medicinal form, so the recipe indicates the total weight of the granules. The granules are most often dosed with teaspoons. Some types of granules before use are dissolved in water and taken as liquid dosage forms (tea or tablespoons). Discharged granules is only a shortened way.

For example:

Prescribe 50,0 g of granules laminaria (Laminaridum). Take 1-2 teaspoons inside, drinking 1/4 Cup of water.

Rp.: Granulorum Laminaridi 50,0

D.S. Take 1-2 teaspoons inside, drinking 1/4 Cup of water.

**TASKS FOR INDEPENDENT TRAINING
THE PRESCRIPTION FOR SOLID DOSAGE FORMS.**

Prescribe:

1. 100 tablets containing 1 centigram of propranolol (Anaprilinum). Assign 1 tablet 1 time per day.
2. 50 tablets containing 5 milligrams of prednisolone (Prednizolonum). Assign 1 tablet 1 time per day.
3. 15 tablets containing 300 milligrams of amidopyrin (Amidopyrinum) and 50 milligrams of caffeine (Coffeinum). Assign 1 tablet for headaches.
4. 30 tablets, each containing 6 milligrams of thiamine bromide (Thiamini bromidum), 5 milligrams Riboflavin (Riboflavinum) and 1 decigram of ascorbic acid (Acidum gnesium ascorbinicum). Assign 1 tablet 3 times a day.
5. 20 tablets containing 5 milligrams of sibazone (Sibazonum). Assign 1 tablet 2 times a day.
6. 40 tablets containing 5 decimalsymbol nitroglycerin (Nitroglycerinum). Assign 1 tablet under the tongue.
7. 50 tablets containing 2 decigrams of Riboxin (Riboxinum). Assign 1 tablet 3 times a day.
8. 20 tablets containing 2 decigrams of thyroidin (Thyreoidinum). Assign 1 tablet 3 times a day.
9. 10 pills of rhubarb (radix Rhei) for 5 d-GS. Assign 1 tablet 2 times a day before meals.
10. 10 tablets containing 1 gram of mercury dichloride. (Hydrargyri dichloridum). Dissolve the tablet in 1 liter of water. Applied for disinfection of patient-care items, bedding and clothing.
11. 50 pills, containing 4 milligrams of Bromhexine (Whomeet). Assign 1 tablet 4 times a day.

12. 20 tablets Bisacodyl (Bisacodilum) at 5 milligrams. Assign 1 tablet per night.
13. 100 pills ferropex (Ferropex). Assign 1 pellet 3 times a day after meals.
14. 50.0 g of fine powder of resorcinol (Resorcinum). Apply to the wound surface.
15. 50,0 g of powder containing 5% of soap (Streptocidum). Apply to the affected areas of the skin.
16. 50.0 g of the tooth powder containing 20% of magnesium carbonate (Magnii hydrocarbonas) placing the substance lithium carbonate. (Litii carbonas). Assign to clean teeth.
17. 30.0 g of fine powder norsulfazola (Norsulfazolum). Assign to apply to the wound.
18. 30.0 g sodium sulfate (Natrii sulfas). Assign 1 tablespoon to the reception, dissolving in 1/2 Cup water.
19. 20 Riboflavin powders (Riboflavinum) by 1 milligram. Assign 1 powder 2 times a day.
20. 100 powders containing 50 milligrams of ascorbic acid (Acidum ascorbinicum) (taking into account its hygroscopicity). Take 1 powder 3 times a day.
21. 50 powders containing rutin (Ruthinum) and ascorbic acid (Acidum gnesium ascorbinicum), 50 milligrams. Assign 1 powder 3 times a day after meals.
22. 20 capsules containing 250 milligrams of oxacillin sodium salt (Oxacillini-natrii). Assign 2 capsules 1 hour before or 2 hours after meals.
23. 20 powders containing 100 mg of theophylline (Theophyllum) and 25 milligrams of diphenhydramine (Dimedrolum). Assign 1 powder inside 2-3 times a day.
24. 30 powders containing 25 centigrammes of bromkamfora (Bromcamphora) in waxed paper. Assign 1 powder 2-3 times a day.
25. 10 powders containing 3 decigrams of rhubarb root powder (radix Rhei), magnesium oxide (Magnii oxydum) and 15 milligrams of krasavka extract (extractum Belladonnae). Assign 1 powder 3 times a day.

26. 20 powders of iron, reduced (Ferrum reductum) at 1.0 g in a gelatin capsule. Assign 1 capsule 3 times a day after meals.

27. 30 quinine powders (Chininum) of 0.2 g in capsules. Assign 1 capsule 2 times a day.

28. Of 100.0 g of granules of calcium glycerophosphate (Calcii glycerophosphas). The contents of the bottle dissolve in boiled water and take 1 tsp 2 times a day.

SOFT MEDICINAL FORMS

Soft medicinal forms include ointments, pastes, creams, suppositories and patches.

Ointments – Unguenta.

Nominative, single number - *Unguentum*.

Genitive, single number - *Unguenti*/

Ointment-a mild medicinal form for external use, having a viscous consistency. Consists of one or more medicinal substances (basis) and form-building substances (ointment base) (constituens). As an ointment base is most often used vaseline, lanolin, pork fat.

Vaseline (Vaselinum) is a product of oil refining. From the surface of the skin is almost not absorbed, so it is used for the preparation of ointments acting on the surface of the skin.

Lanolin (Lanolinum) is a fat - like substance obtained from the washing waters of sheep's wool. Easily penetrates through the skin and is well preserved. In pharmaceutical practice is to use anhydrous lanolin (Lanolinum anhydricum) or lanolin water (L. hydricum).

Pork fat (Adeps suillus). Well absorbed through the skin. Unstable on storage, quickly go rancid, so the ointment prepared on this basis, is unsuitable for long-term storage.

In addition to vaseline, lanolin and pork fat for the preparation of ointments use vaseline oil (Oleum Vaselini), solid paraffin (Paraffinum durum), beeswax, spermaceti.

There are simple and complex ointments. A simple ointment consists of one medicinal and one form-forming substance. Complex ointment includes more than two ingredients.

Ointments are issued in two ways: in the form of a shortened or expanded recipe.

The reduced form of a recipe is used at writing of the official ointments issued by the pharmaceutical industry in a ready look. In this case, the recipe begins with the indication of the dosage form in the genitive case, then indicate the drug, its percentage concentration (if the ointment is produced with different drug content) and the total amount of ointment.

For example:

Prescribe 30.0 g of official zinc ointment (Unguentum Zinci). For application to the affected areas of the skin.

Rp.: Unguenti Zinci 30,0

D.S. For application to the affected areas of the skin.

Write 60,0 g ointment containing 10% streptocid (Streptocidum). Apply to the affected areas of the skin.

Rp.: Unguenti Streptocidi 10% - 60,0

D. S. For application to the affected areas of the skin.

The expanded recipe is used for prescribing main ointments in recipes. In this case, all the ingredients are listed: a medicinal substance (one or more) and an ointment base with the designation of their quantity in units of weight. The recipe ends with the prescription of M. f. unguentum (Misce ut fiat unguentum.- Were mixed to prepare an ointment). If the recipe of the main ointment ointment ointment ointment is not specified, the ointment is prepared on vaseline. All complex ointments, which are prepared on other ointment bases, write only in the expanded form.

For example:

Write out 50.0 g of ointment containing 10% dermatol (Dermatolum). For application to the wound surface.

Rp.: Dermatoli 5,0
Vaselini ad 50,0
M.f. unguentum

D.S. For application to the wound surface.

Write out 30.0 g of ointment containing 10,000 units of erythromycin (Erythromycinum) in each gram. For application to the affected areas of the skin.

Rp.: Erythromycini 300000 ED
Vaselini ad 30,0
M.f. unguentum

D.S. For application to the wound surface.

Prescribe 30.0 g of ointment in a petrolatum and lanolin equal, contains 10% tannin (Tanninum). For application to the wound surface.

Rp.: Tannini 3,0
Vaselini
Lanolini āā ad 30,0
M.f. unguentum

D.S. For application to the wound surface.

Write 10.0 g ointment containing 20% sulfacil-sodium (Sulfacylum-natrium). Under the eyelid 3 times a day

Rp.: Unguenti Sulfacylum-natrium 20% - 10.0
D. S. under eyelid 3 times a day

Pastes – Pastae.

Nominative, single number – *Pasta.*

Genitive, single number – *Pastae.*

Paste-a thick, dough-like consistency ointment containing 25 to 60% of powdery substances. Due to the high content of powdered substances, pastes have pronounced drying and adsorbing properties, and therefore they are most often used for the treatment of wet wound surfaces. There are main and officinal recipe pastes.

The officinal pastes are discharged only a shortened way of indicating the medicinal substance and its total (paste complex structure – author's name or the business name).

Main pastes are prescribed in an expanded form indicating all the ingredients and their weight quantities. If the content of the powdered substance in the paste is less than 25%, to obtain the desired density, one of the indifferent powders such as starch (Amylum), zinc oxide (Zinci oxydum), white clay (Bulus alba) is added. As an ointment base for paste use vaseline or lanolin, and in dentistry – glycerin. Prescription finish prescription M. f. pasta (Misce ut fiat pasta.- Mix to get a paste).

For example:

Example of a main recipe:

Prescribe 100.0 g of paste containing 5% streptocidum (Streptocidum). Apply to the affected areas of the skin.

Rp.: Streptocidi 5.0

Amyli 20,0

Vaselini ad 100,0

M. f. pasta.

D. S. Apply to the affected areas of the skin.

In the above task was not specified the density of the paste, so take an arbitrary value of the indifferent powder (starch) - 20%. If a certain density is specified in the task, it is necessary to calculate the amount of indifferent powder required to obtain the desired consistency of the paste.

Prescribe 50,0 g of paste containing 10% of novocaine – Novocainum- (thickness of the paste 50%). Apply to wound.

Rp.: Novocaini 5,0

Amyli 20,0

Vaselini ad 50,0

M. f. pasta

D. S. Apply to the wound.

Example of official recipe:

Write: 50.0 g of official zinc-salicylic (*Zincum salicylas*) paste. Apply to the wound surface.

Rp.: *Pastae Zinci salicylatis* 50.0

D. S. Apply to the wound surface.

Example of prescription paste for dentists:

Write out 10.0 g paste containing 75% strontium chloride (*Strontii chloridum*). Rub into the hard tissues of the tooth.

Rp.: *Strontii chloridi* 7.5

Glycerini ad 10 ml

M. f. pasta

D. S. to Rub the hard tissues of the tooth.

Suppositories - Suppositoria

Nominative, single number - *Suppositorium*

Accusative, single number – *Suppositorium*

Accusative, plural number – *Suppositoria*

Suppositories are a dosage form, solid at room temperature and melting at body temperature. There are rectal suppositories (candles) – *Suppositorium rectale*, intended for administration to the rectum, and vaginal – *Suppositorium vaginale* - for administration to the vagina. They consist of one or more medicinal substances (base substance) and a base. As a basis, cocoa butter (*Oleum Cacao*) and other auxiliary substances and their alloys are used. The weight of rectal suppositories ranges from 1.1 g to 4.0 g, vaginal 1.5 g-6.0 g. If the doctor does not specify their weight, rectal suppositories are made weighing 3.0 g, and vaginal-4.0 g.

Suppositories, which are prepared in pharmacies on the main prescription, are prescribed in an expanded form.

The expanded recipe provides for a list of all ingredients with their single doses. The following is a recommendation of *M. f. suppositorium rectale (vaginale)* (Mix to get a

suppository) and an indication of the number of candles D. t.d. N....(Give such doses of number...). If the number of form-building substances is not indicated, use q.s. (quantum satis – as needed).

For example:

Write 10 rectal suppositories containing 1 decigram of promedol (Promedolum). To prescribe on 1 candle in a rectum.

Rp.: Promedoli 0,1
Olei Cacao 3,0
M.f. suppositorium rectale
D.t.d. N. 10
S. To prescribe on 1 candle in a rectum.

Suppositories (candles), produced by the pharmaceutical industry, are prescribed in a shortened form. At the same time, the recipe begins with the name of the medicinal form – Suppositorium (wine. units. h. p.), followed by the preposition "cum" (with), the name of the pharmaceutical substance (in the TV. p. u. h.) and its dose. The recipe ends with the prescription-D. t. d. N. ... and signature.

For example:

Write 10 rectal suppositories containing 0.1 g anestezina (Anaesthezinum). Assign 1 candle for pain in the rectum.

Rp.: Suppositorium cum Anaesthezino 0,1
D.t.d. N.10
S. Assign 1 candle for pain in the rectum.

TASKS FOR INDEPENDENT PREPARATION

Prescribe:

1. 50.0 g ointment containing 10% streptocidum (Streptocidum). For application to the affected areas of the skin.
2. 30.0 g of ointment containing in each gram 10,000 UNITS of erythromycin (Erythromycinum). For application to the affected areas of the skin.
3. 30.0 g ointment containing 10% dermatol (Dermatolum). For application to the wound surface.
4. 50.0 g of official zinc ointment (Unguentum Zinci). For application to the skin.
5. 5.0 g of ointment containing 5% etazol (Aethazolum). Eye ointment.
6. 50,0 g ointment on vaseline and lanolin (equally), containing 10% tannin. (Tanninum). To lubricate the affected areas of the skin.

7. 50.0 g paste on vaseline and lanolin (equally) containing 5% anesthetic (Anaesthesinum). For application to the affected areas of the skin.
8. 50,0 g paste on vaseline containing 2% salicylic acid (Acidum Acetylsalicylicum), 25% zinc oxide (Zinci oxydum) and 25% starch (Amylum). For application to the affected areas of the skin.
9. 50.0 g of the paste on naphthalan ointment containing 8% of Ichthyol (Ichthyolum). For application to the affected areas of the skin.
10. 25.0 g of zinc paste (Pasta Zinci). For application to the affected areas of the skin.
11. 10 rectal suppositories containing 5 decigrams of anesthetic (Anaesthezinum). 1 suppository into the rectum 1 time per day.
12. 10 official suppositories containing 50 milligrams of indomethacin (Indometacinum). 1 suppository into the rectum 2 times a day.
13. 6 rectal suppositories containing 50 milligrams of Barbitol sodium (Barbitalum-natrii). One suppository to the rectum for the night.
14. 12 rectal suppositories, containing 1 decigram of the powder of the leaves of Foxglove (Digitalis Pulvis folii). One suppository into the rectum 3 times a day.
15. 6 rectal suppositories containing 10 milligrams of the dry extract of belladonnae siccum and 12 milligrams of omnoponum. 1 suppository into the rectum at night.
16. 12 vaginal suppositories containing 30 milligrams of quinozol (Chinozolum) and 1 decigram of boric acid (Acidum boricum). 1 suppository into the vagina 1 time a day.
17. 6 vaginal suppository containing 25 centigrammes aminoakrihina (Aminoacrichinum). 1 suppository in the vagina of 1 times in 2 days.
18. 10 vaginal suppositories containing 25 cm each of osarsol (Osarsolum) and boric acid (Acidum boricum). 1 suppository into the vagina at night.

LIQUID MEDICINAL FORMS

Liquid dosage forms include solutions, mucus, emulsions, suspensions, infusions, decoctions, tinctures, liquid extracts, mixtures, aerosols.

Solutions – Solutiones.

Nominative, single number – *Solutio*.

Genitive, single number – *Solutionis*

A solution is a liquid medicinal form obtained by dissolving a medicinal substance in a liquid. As a solvent, distilled aqua (Aqua destillata), ethyl alcohol 70%, 90%, 95% (Spiritus aethylicus), glycerin (Glycerinum) and liquid oils are used: vaselini (Oleum Vaselini), olive (Oleum Olivarum), peach (Oleum Persicorum). True solutions are always transparent.

Solutions are intended for external, internal use and for injections. Solutions for external use include eye and ear drops, nose drops, as well as solutions for lotions,

washing, douching, etc. Drops are prescribed in an amount of 5-10 ml, solutions for other purposes – in an amount of 50-100 ml.

Write the solutions in simplified and flattened forms.

When using a shortened form of recipe after Rp.: indicate the name of the dosage form, then the name of the drug, the concentration of the solution and its amount in milliliters. Concentrations indicate most often in percentages, at least – in the relationship (for example, 1:1000; 1:5000).

The reduced form of a recipe of solutions use in those cases when the choice of solvent is defined by factory technology or is provided to the employee of a drugstore. If the solution is aqueous, the type of solvent in the shortened recipe recipe is not specified. If the solution is oil or alcohol, then after the name of the drug, the designations – oleosae (oil) or spirituosae (alcohol) follow. In the abbreviated form and write official solutions, usually without the designation of the concentration, indicating only the name of the drug and its amount.

For example:

To prescribe 500ml of 0.02% solution of DIACID (Diocidum). For the treatment of hands.

Rp.: Solutionis Diocidi 0,02% - 500 ml
D.S. For the treatment of hands.

Write out 10 ml of 1% oil solution of menthol (Mentholum). Assign 5 drops in each nasal passage.

Rp.: Solutionis Mentholi oleosae 1% - 10 ml
D. S. 5 drops in each nostril.

Write out 10 ml of 1% alcohol solution of boric acid (Acidum boricum). Assign 3-5 drops in each ear 2 times a day.

Rp.: Solutionis Acidi borici spirituosae 1% - 10 ml
D. S. 3-5 drops in each ear.

The expanded form of a recipe is used in those cases when the solution has to be prepared with application of a certain liquid oil or alcohol of a certain concentration.

For example:

Write 50 ml of 1% solution of methylene blue (Methyleni coerulei) in 70% ethyl alcohol. Assign to lubricate the affected skin.

Rp.: Methyleni coerulei 0.5
Spiritus aethylici 70% ad 50 ml

M. D. S. to lubricate the affected areas of the skin.

When prescribing oral solutions, a single dose of the drug should be contained in the volume of the solution intended for one reception. In this case, the following conventional values are used:

- 1 tablespoon-15 ml solution
- 1 dessert spoon-10 ml
- 1 teaspoon-5 ml
- 1 ml of aqueous solution-20 drops
- 1 ml of alcohol solution-50 drops

For example:

Write out 150 ml of potassium chloride solution (Calcii chloridum) in such a way that the patient received 0.75 g of the drug. Assign 1 tablespoon 3 times a day.

Rp.: Solutionis Kalii chloridi 5% - 150 ml.

D. S. 1 tablespoon 3 times a day.

The calculation of the concentration of the solution in percent:

1 tablespoon (15 ml) contains 0.75 g of the drug, and in 100 ml – x.

(15 ml - 0,75)

(100 ml - x)

Solution concentration = 5%.

$$x = \frac{100 \cdot 0,75}{15} = 5$$

Suspensions – Suspensiones

Nominative, single number– *Suspensio*,

Genitive, single number– *Suspensionis*

Suspension (suspension) - a liquid dosage form in which the solid insoluble drugs are in a liquid in a suspended state. There are suspensions for external, internal and parenteral use.

Prescribe suspensions in two forms: reduced and expanded. The reduced form is possible when the dispersion medium is water.

For example:

Prescribe 10 ml of an aqueous suspension containing 0.5% hydrocortisone acetate (Hydrocortisoni acetat). To appoint in each eye, 2 drops 4 times a day. Shake before use.

Rp.: Suspensionis Hydrocortisoni acetatis 0,5% - 10 ml

D. S. For 2 drops in the eye 4 times a day. Shake before use.

The main suspensions, which are prepared on various forming substances (glycerin, vaseline oil, etc.) are discharged only in the expanded form.

For example:

Write a 50 ml sterile suspension in liquid paraffin containing 0.5% of trichomonacide (Trichomonacidum). To appoint for the introduction into the bladder of 10 ml. shake Before use.

Rp.: Trichomonacidi 0.25
Olei Vaselini ad 50 ml
M. f. suspension
Sterilisetur!
D. S. for administration into the bladder. Shake before use.

Infusions and decoctions - Infusa et Decocta.

Infusion - Nominative, single number - Infusum.
Genitive, single number - Infusi

Broth - Nominative, single number - Decoctum.
Genitive, single number - Decocti.

Infusions and decoctions are liquid dosage forms that are obtained by extracting biologically active substances from plant raw materials.

Infusions are prepared from tender parts of plants: flowers (flos-floris), leaves (folium-folii), herbs (herba-herba). Raw materials for the preparation of decoctions are rough parts of plants: root (radix-radici), rhizome (rhizoma-rhizomatis), bark (cortex-corticis).

Dose infusions and decoctions for ingestion with spoons (tablespoons, desserts, tea). In addition, they are used to rinse, lotions, douches, etc.

These dosage forms are unstable, so they are prescribed for 3-4 days with a total of not more than 200 ml. infusions and decoctions are Prescribed only in a reduced way, indicating the amount of medicinal raw materials in grams and the total amount in milliliters. The accepted concentrations of a number of infusions and decoctions are indicated in the ratios (for example: 1:10, 1:30, etc.). In these cases, it is necessary to recalculate in mass-volume value.

For example:

Write 200 ml of a decoction of 5.0 g leaves of the mother and stepmother (Folium Farfarae). Assign 1 tablespoon after 2-3 hours.

Rp.: Decoctum foliorum Farfarae 5.0-200 ml
D. S. 1 tablespoon every 2-3 hours.

For example:

Write out 200 ml of decoction of oak bark (cortex Quercus) in a dilution of 1:10.

Rp.: Decocti corticis Quercus 20.0-200 ml
D. S. For rinsing.

Write 150 ml of infusion of plantain leaves large (folium Plantaginis majoris) in a concentration of 1:20. Assign 1 tablespoon 4 times a day.

Rp.: Infusi folium Plantaginis majoris 7.5-150 ml
D. S. 1 tablespoon 4 times a day.

Tinctures – Tincturae.

Tincture - Nominative, single number – *Tinctura*.

Genitive, single number – *Tincturae*.

Tincture-a liquid dosage form, which is obtained by insisting plant materials on ethyl alcohol, diethyl ether or alcohol-ether mixture. All tinctures are official, so when they are prescribed in the recipes used only a shortened form of prescription indicating the dosage form, the name of the plant and the total amount of tincture. Most often, the infusion is administered orally, rarely used to rinse, lotions, etc. Dose of tincture for oral drops.

For example:

Write out 40 ml of calendula tincture (Calendula). To appoint 10 drops per reception 3 times a day.

Rp.: Tincturae Calendulae 40 ml
D. S. 10 drops 3 times a day.

Write 15 ml of tincture of Valerian (Valeriana) and tincture of Lily of the valley (Convallaria) equally. Assign 20 drops 3 times a day.

Rp.: Tincturae Valerianae
Tinctura Convallariae aa 15 ml
M. D. S. To Appoint on 20 drops 3 times in day.

Emulsions – Emulsa.

Nominative, single number – *Emulsum.*

Genitive, single number – *Emulsi.*

An emulsion is a liquid dosage form in which water insoluble liquids are suspended in an aqueous medium.

There are oil emulsions (*Emulsa oleosa*) and seed emulsa (*Emulsa seminalia*). Most often oil emulsions are used, which are prepared from liquid oils: castor oil (*Oleum Ricini*), almond (*Oleum Amygdalarum*), fish oil cod (*Oleum jecoris Aselli*), etc.

Oil emulsions consist of oil, emulsifier and water. The emulsifier maintains the smallest oil particles in the water in a suspended state. For emulsification take 2 parts of oil, 1 part of the emulsifier and 17 parts of water. As emulsifiers use gum or gelatose, which has a powder form (the product of incomplete hydrolysis of gelatin).

Write out the emulsion in a reduced and expanded forms. In the abbreviated recipe after the name " *Emulsi* " indicate the name of the oil, its amount and the total amount of emulsion.

In the expanded recipe separately indicate all the components: oil, emulsifier and water with an indication of their quantity.

For example:

Write out 200 ml emulsion of 20 ml castor oil (*Oleum Ricini*). Assign to 1 appointment.

Expanded form of recipe:

Rp.: Olei Ricini 20 ml
Gelatosae 10,0
Aquae destillatae ad 200 ml
M. f. emulsum
D. S. on 1 reception inward.

The short form of the recipe:

Rp.: Emulsi olei Ricini 20 ml-200 ml
D. S. On 1 reception.

Seed emulsions are rarely used. Unlike oil, emulsifiers are not added to seed emulsions, since the seeds from which they are made (flax, pumpkin, almonds), themselves have emulsifying properties.

Extracts - Extracta

Nominative, single number - *Extractum*

Genitive, single number – *Extracti*

Extracts are concentrated extracts from medicinal plant materials. Depending on the consistency, there are extracts liquid (fluidum), thick (spissum) and dry (siccum). As an extractant, ethyl alcohol is used in the production of liquid extracts. In the preparation of thick extracts-water, ethyl alcohol, ether. Dry extracts are prepared by drying thick extracts.

All extracts are official, so when they are prescribed in the recipe do not indicate either the nature of the plant raw materials or the concentration of extracts. After the name of the dosage form should be the name of the plant, an indication of the nature of the extract and its amount. Liquid extracts are dosed in drops. Thick and dry extracts are prescribed in capsules, powders, tablets, suppositories, pills.

For example:

To write a 20 ml extract of buckthorn (*Frangula*) liquid. To appoint 20 drops 3 times a day.

Rp.: *Extractum Frangulae fluidi* 20 ml
D. S. At 20 drops per reception 3 times a day.

Novogalenovy drugs.

Novogalenovy preparations obtained by special processing of herbal raw materials. From galenic preparations (infusions, extracts), they are highly purified from ballast substances and, in this regard, can be used both orally and parenterally. All such drugs are official, so when they are prescribed in the prescription indicate only their name and number.

For example:

Prescribe 20 ml laneside (*Lantosidum*). Assign 20 drops 2 times a day.

Rp.: *Lantozidi* 20 ml
D.S. Assign 20 drops 2 times a day.

Mixtures -Mixturae.

Mixtures is a liquid dosage form obtained by dissolving or mixing several solids in a liquid base or by mixing several liquids. As the liquid base used distilled water, glycerin, vegetable oil, etc. In the mixture composition can include infusions, decoctions, tinctures, mucilage, syrups, etc.

Mixtures contain 3 or more components. Mixtures can be transparent, cloudy and with sediment. The latter should be shaken before use. Use of mixtures internally and externally. Write usually in the expanded recipe (i.e. in the recipe sequentially list all the ingredients included in the mixture, indicating their number), then M. D. S.

Often mixtures are prescribed in polusekretnye recipe. In such cases, part of the ingredients (infusions, decoctions, emulsions, solutions) are prescribed in a shortened form, and the recipe begins with the specified dosage forms. Then the remaining components are listed in the amount calculated on the number of doses, taking into account the single dose and the volume in which it is contained.

For example:

To prescribe medicine for 12 receptions, containing sodium bromide (Natrii bromidum), single dose 0.3 g of caffeine sodium benzoate (Coffeinum-natrii benzoas), single dose of 0.1 g Assign 1 tablespoon 3 times a day.

Rp.: Natrii bromidi 3,6
Coffeini-natrii benzoatis 1,2
Aqua destillatae ad 180 ml
M. D. S. 1 tablespoon 3 times a day.

Calculation:

For 1 reception - 1 tablespoon-15 ml
On 12 receptions - 180 ml
On 12 receptions - sodium bromide 0,3x12=3,6
" " " " " " " " caffeine-0.1x12= 1.2.

To prescribe medicine for 10 receptions, consisting of infusion of grass spring Adonis (herba Adonidis vernalis) in a concentration of 1:30 with the addition of sodium bromide (Natrii bromidum), single dose of 0.2 g of codeine phosphate (Codeini phosphas), single dose, 0.02 g Assign 1 tablespoon 3 times a day.

Rp.: Infusi herbae Adonidis vernalis 5.0-150 ml
Natrii bromidi 2.0
Codeini phosphatis 0.2
M. D. S. 1 tablespoon 3 times a day.

Calculation:

For 1 reception - 1 tablespoon-15 ml

10 receptions-10 tablespoons-150 ml

At 10 -“-“-“-“- sodium bromide-0, 2x10=2,0

At 10 -“-“-“-“- caffeine phosphate-0, 02x10=0,2

If the composition of the mixture includes substances with an irritating effect, then to correct the taste it includes from 20 to 50% mucus - solutions of high-molecular compounds, which are viscous liquids. Most often used mucus apricot gum (*Mucilago Gummi Armeniacae*), gum Arabic mucus (*Mucilago Gummi arabici*), mucus from the root of marshmallow (*Mucilago radice Althaeae*) and mucilage from starch (*Mucilago Amyli*). All mucus officinal and are prescribed with the indication of the names of mucus and its amount in milliliters.

For example:

Prescribe a medicine for 10 receptions, consisting of 5.0 g of bismuth nitrate (*Bismuthi subnitras*), mucus of apricot gum (*Mucilago Gummi Armeniacae*) and water equally Appoint 1 tablespoon 3 times a day.

Rp.: Bismuthi subnitratis 5.0
Mucilaginis Gummi Armeniacae
Aquaе destillatae AA ad 150 ml
M. D. S. 1 tablespoon 3 times a day.

Lines - Linimenta.

Nominative, single number – *Linimentum*.

Genitive, single number – *Linimenti*.

Liniment (liquid ointment) is a medicinal form for external use, Most liniments are homogeneous mixtures in the form of thick liquids (liniment of syntomycin, liniment balsamic for A.V. Vishnevsky, liniment of aloe, etc.). Lines can be in the form of jelly-like masses, melting at body temperature. Such liniments are soft medicinal forms.

To obtain liniments, vegetable oils (sunflower oil - *Oleum Helianthi*; linseed oil - *Oleum Lini*; olive oil - *Oleum Olivarum* or vaseline oil - *Oleum Vaselini*) are used.

The liniments prescribed in the expanded and condensed forms.

In the expanded form write out the main lines. In this case, after specifying the ingredients of the liniment and their quantities, write M. f. linimentum (Mix, get liniment). Then point to D. S. (Issue. Denote.) If the recipe does not specify the basis, the liniment is prepared on vaseline oil.

For example:

Write 100 ml of liquid ointment containing 10% Novocain (Novocainum). Moisten the tampons and apply to the wound.

Rp.: Novocaini 10.0
Olei Vaselini ad 100 ml
M.f. linimentum
D.S. Moisten the tampons and apply to the wound.

In the reduced form write out lines produced in finished form industry. At the same time, begin with the name of the drug form in words, then indicate the drug and its concentration in percentage (if several types of liniments with different drug content are produced) and the total amount of liniment.

For example:

Write: 100 ml of official liquid streptocid ointment (Streptocidum). For the treatment of wound surface.

Rp.: Linimentum Streptocidi 100 ml
D. S. For treatment of the wound surface

Write out 100 ml of 5% officinal liquid ointment sintomitsina (Synthomycinum). For wetting tampons.

Rp.: Linimenti Synthomycini 5% - 100 ml
D. S. for wetting tampons.

MEDICINAL FORMS FOR INJECTIONS

As medicinal forms for injections, water and oil solutions, as well as suspensions, are used. They must meet certain requirements: to be sterile, stable, non-pyrogenic, free from mechanical impurities. Dosage forms for injection are produced in the factory or made in a pharmacy. In medical practice, mainly used for the injection of dosage forms of industrial production: ampoules, bottles, syringe tubes. A number of drugs are prescribed in ampoules or vials in dry form and a solution or suspension is prepared immediately before their use. As solvents use water for injections, solutions of sodium chloride, glucose, some vegetable oils, sometimes diluted ethyl alcohol (up to 33%).

When writing a shortened prescription for a *solution* or *suspension* in the ampoules, first indicate the drug form and the name of the drug in the genitive singular, the nature of the solution (if it is oil or alcohol), the concentration in percentage and the number of milliliters in one ampoule. After this point out number of vials.

When prescribing a dry *substance for injection*, the name of the drug and its amount in one ampoule are indicated, then the number of ampoules. The dilution procedure and route of administration are indicated in the signature.

For example:

Write 10 ampoules, containing 1 ml of 0.01% solution of cyanocobalamin (Cyanocobalaminum). Assign 1 ml intramuscularly every other day.

Rp.: Solutionis Cyanocobalamini 0.01% - 1 ml
D. t.d. N. 10 in ampullis
S. 1 ml intramuscularly every other day.

Write out 10 ampoules containing 1 ml. 5% oil solution of tocopherol acetate (Tocopheroli acetas). Assign 1 ml intramuscularly 1 time a day.

Rp.: Solutionis Tocopheroli acetatis oleosae 5% - 1 ml
D. t.d. N. 10 in ampullis
S. 1 ml / m 1 time per day.

Prescribe 6 ampoules containing 10 ml of 2.5% suspension of cortisone acetate (Cortisoni acetas). Assign 2 ml intramuscularly 1 time a day.

Rp.: Suspensionis Cortisoni acetatis 2.5% - 10 ml
D. t.d. N. 10 in ampullis
S. 2 ml intramuscularly 1 time per day.

Prescribe 6 ampoules containing 0.005 vinblastine (Vinblastinum). Assign intravenously to 0.005 g 1 once a week, pre-dissolving the contents of the ampoule in 5 ml of isotonic sodium chloride solution.

Rp.: Vinblastini 0,005
D. t.d. N. 6 in ampullis
S. Dissolve the contents of the ampoule in 5 ml of 0.9% sodium chloride solution. Enter 5 ml intravenously 1 time per week.

If the ampoules discharged liquid preparations, novogalenovy drugs and officinal solution, having a commercial name, the recipe specify only the name of the medicinal product and its quantity in milliliters.

For example:

Write 10 ampoules containing 1 ml (5 IU) of oxytocin (Oxytocinum). The contents of the ampoule diluted in 500 ml of 5% sterile glucose solution. Enter intravenously drip.

Rp.: Oxytocini 1 ml (5 ED)
D. t.d. N. 10 in ampullis
S. Dilute the contents of the ampoule in 500 ml of 5% glucose solution.
Enter intravenously drip.

Write 10 ampoules, containing 1 ml of the drug digale-neo (Digalen - neo). Assign 1 ml subcutaneously 1 time per day.

Rp.: Digalen-neo 1 ml
D. t.d. N. 10 in ampullis
S. 1 ml subcutaneously 1 time per day.

To write 6 ampoules, containing 1 ml tsititona (Cytitonum). Assign 0.5 ml intravenously.

Rp.: Cytitoni 1 ml
D. t.d. N. 10 in ampullis
S. by 0.5 ml intravenously.

When prescribing medicines in vials, the same rules are observed as when they are prescribed in ampoules, while the designation "*in vials*" in the prescription is not indicated.

For example:

Write 10 bottles containing 600000 ED of bicillin 1 (Bicillinum-1). Assign 600 000 ED intramuscularly 1 time per week, pre-dissolving the contents of the bottle in 3 ml of water for injection.

Rp.: Bicillini-1 600000 ED
D. t.d. N. 10
S. Dissolve the contents of the vial in 3 ml of water for injection. To enter by 600,000 UNITS intramuscularly 1 time per week.

To write 6 vials containing 5 ml (40EД 1 ml) insulin (Insulinum). Assign 0.5 ml subcutaneously 2 times a day.

Rp.: Insulini 5 ml (40 ED)
D. t.d. N. 6
S. 0.5 ml subcutaneously 2 times a day.

When prescribing dosage forms, which are prepared in the pharmacy, the prescription must be an indication of sterilization of the drug.

For example:

Write 500 ml of sterile isotonic sodium chloride solution. Assign to subcutaneous drip.

Rp.: Solutionis Natrii chloridi 0.9% - 500 ml
Sterilisetur!
D. S. to Enter the subcutaneous drip.

Aerosols-Aerosola.

Nominative, single number – Aerosolum.
Accusative, single number – Aerosolum.

An aerosol is a drug form, which is an aerodisperse system in which the dispersion medium is air (or a mixture of gases), and the dispersion phase is particles of solid or liquid substances.

The most widespread were aerosol packages with a valve device and a spray head. The drug is released in the form of an aerosol when the valve is pressed. Some packages are equipped with a device that allows dosing the drug. Aerosols are used for inhalation or for external use.

For example:

Write 1 pack metered-dose aerosol beclomethasone dipropionate (Beclometasoni dipropionas) with the content of 1 inhalation in a dose of 5 mcg of beclomethasone. Assign 3 inhalations per day.

Rp.: Aerosolum Beclometazoni dipropionatis 0,0005 - N. 200
D. S. for inhalations.

TASKS FOR INDEPENDENT PREPARATION

Prescribe:

1. 500 ml of a 3% solution of phenol (Phenolum). To disinfect the room.
2. 100 ml of 0.1% solution of ethacridine lactate (Aethacridini lactas). Assign to rinse the mouth with stomatitis.
3. 10 ml 1% alcohol solution of diamond green (Viride nitens). Assign to lubricate the skin around the mouth.
4. 20 ml of 20% tannin solution (Tanninum) in glycerin (Glycerinum). To lubricate the gums.
5. 5 ml of 30% solution of silver nitrate (Argenti nitras). To let in a dark bottle. Assign to handle the necks of the teeth.
6. 50 ml of the official solution of hydrogen peroxide (Hydrogenii peroxydi diluta). Assign 2 drops in both eyes 3 times a day.
7. 10 ml 1% solution of pilocarpine hydrochloride (Pilocarpini hydrochloridum). Assign 2 drops in both eyes 3 times a day.

8. 10 ml of 0.1% solution naftizina (Naphthyzinum). Assign 2 drops in the nose 2 times a day.
9. 10 ml of 1% oil solution of menthol (Mentholum). Assign 2 drops in the nose 2 times a day.
10. 10 ml of 0.25% solution of sulphate of copper (Cupri sulfas). Bury in the cavity of the conjunctiva 2 times a day for 2 drops.
11. 10 ml 5% alcohol solution Resorcinum (Resorcinum). To treat wounds.
12. 150 ml of a solution of Dibazol (Dibazolium), single dose of which 0.3 g. Assign 1 tablespoon 3 times a day.
13. 180 ml of a 3% solution of sodium bromide (Natrii bromidum). Take 1 tablespoon 3 times a day inside.
14. 100 ml of a solution of analginum (Analginum), a single dose of 0.25 g. Appoint 1 dessert spoon 3 times a day.
15. 10 ml of a solution of phosphate of codeine (Codeini phosphas), a single dose of 0.01 g to 10 drops 3 times a day.
16. 15 ml cardiovalena (Cardiovalenum). 15 drops 2 times a day.
17. 20 ml of Corvalol (Corvalolum). 20 drops 3 times a day.
18. 20 ml of Zhen-Shen tincture (Ginsengi). 20 drops 3 times a day.
19. 20 ml of tincture of peppermint (Mentha piperita). 20 drops 3 times a day.
20. 20 ml of liquid extract of ergot (Secale cornutum). 20 drops 2 times a day.
21. 200 ml of eucalyptus leaf infusion (folium Eucalypti) in a ratio of 1:10. For rinsing.
22. 100 ml of the infusion of the herb thermopsis (murine herba thermopsis) in a ratio of 1: 400. 1 tablespoon 3 times a day.
23. 150 ml decoction of buckthorn bark (Cortex Frangulae). 1 tablespoon per night.
24. 200 ml of decoction of emetic root (radix Ipecacuanhae) in a ratio of 1:400. 1 tablespoon 3 times a day.
25. The mixture, which consists of 180 ml infusion of yarrow herb (herba Millefolii) in a ratio of 1:10 and 5 ml of liquid extract of viburnum (Extractum Viburni). 10 drops 3 times a day.
26. Medicine 40 receptions, which includes aprofen (Aprophenum), a single dose of 0,025 g of papaverine hydrochloride (Papaverini hydrochloridum), a single dose of 0.02 g. 10 drops 3 times a day.
27. 180 ml of a mixture containing diluted hydrochloric acid (Acidum hydrochloridum dilutum), a single dose of 10 drops and pepsin (Pepsinum), a single dose of 0.15 g. 1 tablespoon 3 times a day before meals.
28. A mixture containing 150 ml of rhubarb root infusion (radix Rhei) in a ratio of 1:30, sodium sulfate (Natrii sulfas), a single dose of 3.0 g and 30 ml of simple syrup (Sirupus simplex). 1 tablespoon 3 times a day.
29. Medicine in 3 doses containing chloral hydrate (Chloralum hydratum), single dose 1.0 g and 50% starch slime (Amylum). 1 tablespoon per night.
30. 100 ml emulsion of 10 ml fish oil (Oleum jecoris Aselli). On 1 reception.
31. 200 ml of an emulsion of pumpkin seed (Semen Cucurbitae). 1 tablespoon 4 times a day.
32. 10 vials of suspension is the Protamine - zinc-insulin (Protamin-Zinc-insulini) to 5 ml (40 U in 1 ml). By 20 UNITS (0.5 ml) subcutaneously.

33. 5 vials of 2.5% suspension of hydrocortisone acetate (Hydrocortizoni acetas) in 5 ml 1 ml intrasinovialno.
34. 20 ampoules containing 1 ml of 0.1% oil solution sinestrola (Synoestrolum). 1 ml intramuscularly.
35. 30 ml of 5% solution of barbamyly (Barbamylylum). By 10 ml intravenously.
36. 500 ml of 2% potassium chloride solution (Kalii chloridum). For intravenous drip.
37. 10 ml of a solution of apomorphine hcl (Apomorphini hydrochloridum), a single dose of 0.005 g. to Issue in a dark bottle. 1 ml subcutaneously.
38. 200 ml of 0.5% solution of trimecaine (Trimecainum) for infiltration anesthesia. As a solvent, use 0.9% sodium chloride solution.
39. 10 ampoules containing 5 ml of 2.5% aminazine solution (Aminazinum). 5 ml intramuscularly.
40. 15 ampoules containing 1 ml of 0.1% atropine sulfate solution (Atropini sulfas). 1 ml subcutaneously.
41. 6 ampoules containing 1 ml of cytotonum (cytotonum). By 0.5 ml intravenously.
42. 10 vials containing 2 ml of 20% oil solution of camphor (Camphora). 2 ml subcutaneously.