State Budgetary Educational Institution
Higher Professional Education
«Orenburg State Medical University»
Russian ministry of health
Department of pharmacology

TOTAL RECIPE

Textbook for faculty of foreign students

Orenburg 2016

УДК 615.11(07)
ББК 52.829
К 89

Kuz'min O.B. Textbook / O.B. Kuz'min, V.V. Shesha, V.V. Belyanin, N.V. Buchneva, L.N. Landar, S.V. Serdyuk; Orenburg state medical university. – Orenburg: Publisher OrSMU. – Orenburg, 2016. – 83 p.
- ISBN

Reviewers:
Dubishchev A.V. – head of Department of Pharmacology SBEI HVE «Samara State Medical University», d.m.s., professor.
Korovina I.A. – head of Department of Foreign Languages, SBEI HVE «Orenburg State Medical University», c.p.s., associate professor.
San'kov A.N. – head of Department of management and economy pharmacy, pharmaceutical technology and pharmacognosy SBEI HVE «Orenburg State Medical University», c.m.s., associate professor.

Kuz'min O.B., Shesha V.V., Belyanin V.V., Buchneva N.V., Landar L.N., S.V. Serdyuk
К89 Total recipe. – Orenburg: Publisher OrSMU. – Orenburg, 2016. – 83 p. ISBN

The textbook consists of three sections. The first section is devoted to the rules of registrations of recipes for various dosage forms and contains the requirements for registration of recipes, information on the nomenclature of drugs and elements of Latin grammar. The second section contains the tasks for writing out prescriptions of various dosage form. They provide independent decision students, who have mastered the theory of formulation, of questions to determine rational volume dosing of liquid dosage forms, dosage calculation of liquid and solid dosage forms depending on dose, type of packaging and so on. The third section contains ready prescriptions dosage forms created on the instructions of the second section. This section is intended for self-examination of the work performed by students when writing prescriptions to various dosage forms, specified in the second section.

The textbook allows to developing the strong skills for prescribiting in various dosage forms.

Designed for foreign faculty students.

УДК 615.11(07)
ББК 52.829

РИС № 447 от 8 декабря 2015 г.

ISBN Publisher OrSMU, 2016

FOREWORD

Total recipe is an introduction into medical recipes and allows to the rules of construction and design of the recipes. Textbook adapted for students of foreign faculty designed to provide the most optimal way to a deep and strong assimilation of educational material. The manual gives students not only an opportunity for independent work on mastering the total recipe, but also allows to independently control for correctness of writing prescriptions for a variety of dosage forms.

The first section is devoted the rules of registration of recipes for various dosage forms, contains the requirements for registration of recipes, information on the nomenclature of drugs, summary of the formation of recipes for different dosage forms and checklists for each chapter. In the most difficult chapter "Solutions" presents didactic scheme of prescriptions for topical application solutions, solutions for enteral administration and injections, which are designed to develop student's logical thinking in the preparation of prescription formulations.

The second section shows the tasks for the recipe of various dosage forms. They provide an independent decision of students, who mastered the theory of total recipe, of questions to establish rational volume of liquid dosage forms, calculation of liquid and solid dosage forms, depending the dose and so on.

The third section contains ready-prescription recipes created on the instructions of the second section and intended for self-examination of the work performed by students when writing prescriptions for various dosage forms. This approach to the organization of independent work of students enhances the effectiveness of training and greatly simplifies the task of teachers, freeing them from the laborious process of checking homework.

QUESTIONS PREPARE FOR PRACTICAL TRAINING

Feature recipe as medical and legal document. Structure of recipe. Requirements for prescription of recipes.
The nomenclature of drugs. Case endings Latin declensions. Symbols and abbreviations in the recipe.
The system measures of the quantitative notation of drugs in recipe.

Liquid dosage forms

Solutions. Characteristics of the solutions. Solutions for external application. Characteristics of solvents. Methods of expressing the concentration of active components. Officinal solutions. Prescription forms.
Oral solutions. Methods of dosing, chose of volume selection criteria. Prescription forms.
Therapeutic enema. Features absorption of drugs from the rectum. Methods prescription.
Solutions for injections. Requirements for solutions for injections. Requirements for prescribiting and dispensing solutions in general flask. from pharmacy. Advantages of dosage forms for injections. Prescribing forms solutions in ampoules and bottles. Especially prescribing and use of suspensions.
Infusions and decoctions. The basic technology and preparation, duration of storage, dosing, feature prescribing.
Tinctures and liquid extracts. General idea of the manufacturing, technology, extractors, duration of storage, feature prescribing. Prescription of mixtures from tinctures and liquid extracts.

Mixtures. Characteristics of dosage form, dosing. prescription rules. Flavoring agents: (mucus, syrups, aromatic water) and their amount in mixtures.

Solid dosage forms

Classification. Finished solid dosage forms: tablets, dragee, capsules. Characteristics, rules of prescription.
Powders for oral administration. Dosed and undosed powders. Weight of powder for oral administration. Features prescribiting powder with a small dose of drugs. Types of packing powders. Prescription of powders in special packing.
Powders for sprinkling.

Soft dosage forms

Classification. Ointments. Characteristics of dosage form, ointment basics. Prescription of official and magistral ointments.
Paste. Difference from ointments. Prescription of official and magistral paste.
Liniments. Feature dosage form, composition. Prescription of official and magistral liniments.
Rectal and vaginal suppositories, massing basics. Prescription of official and magistral suppositories.

Section 1
RULES OF RECIPES FORMALIZATION FOR VARIOUS DOSAGE FORMS

Recipe structure

Recipe – a written request from doctor to pharmacist with the request for the extradition of the drug in a particular dosage form with indicating its dosage and method of application.

Example recipe

	“____” _____		
	20____ year		
	Ivanov S.M,	36 years	
	Petrov A.P.		
Rp.:	Natrii bromidi	2,0	*basis*
	Coffeinum-natrii benzoatis	1,0	*adjuvans*
	Aquae Menthae	15 ml	*corrigens*
	Aquae destillatae ad	150 ml	*constituens*
	M.D.S. Take 1 tablespoon 3 times per day.		

Recipe includes the following parts.

Inscriptio. It consists of hospital stamp, the date of issuance of the prescription, the name, initials and patient’s age, name and initials of the doctor.

Invocatio. Appeal of the doctor to pharmacist. Expressed as a Latin word “Recipe” or usually abbreviation “Rp.”.

Designatio materiarum. Include name drugs with their amounts (dosages). Name drugs that are part of the recipe are written in Latin with capital letters in genitive. In complex recipies involving several ingredients, drugs listed in certain sequence. The first specifies the primary (main) drug substance (basis). Then indicated adjuvant drug (adjuvans). After that,

written materials, correcting the taste and smell prescribers dosage form (corrigens). The latter indicates a substance which gives drugs a specific dosage form (liquid, solid or soft).

Subscriptio. Here in Latin is instructed pharmacist about dosage form of the drugs, the method of its preparation and the number of delivered doses of medication.

Signatura. Part of the recipe, where in Russian or other national language is instructed how to use the medicine (method of dosing, the number of receptions and conditions of drug's reception - at night, pain in the heart, etc.).

Subscriptio medici – signature of physician and his personal seal.

At one prescription form issued only one poisonous substance from the list of "A" and no more than two other drugs. One dosage recipe is separated from other sign #. When writing a prescription, you can use standart abbreviations.

The content of the recipe is entered in the medical history of the patient or outpatient medical card.

Requirements for registration of recipes

Recipes are issued on prescription forms designed to release drugs in adults or children, and special prescription form designed to release drugs, containing narcotic substances. Prescription be written clearly and legibly in ink or ballpoint pen with obligatory filling all graphs in the recipe. Corrections are not allowed.

Registration of prescription of recipe begins with documentary part where indicate the data of writing prescription, surname, first name and age of patients, as well as surname, first name of the physician prescribing the recipe.

Future filled Latin (medical) part of recipe. The composition of medication, the designation of dosage form and contacting a doctor to a pharmacist about manufacturing and issuing medicines are written in Latin. Using the Latin

abbreviations of this sings is permitted only accordance with accepted in medical and pharmaceutical practice (see table). Name of toxic and narcotic drugs are written at the beginning of the recipe, and then – all other ingredients.

Then issued a signature, which sets out recommendations for use of the drug. Future, in the national language indentified as follow: mode of dosing, route of administration, the number of times per day or reception time. If necessary, specify a connection with meals or special pathological conditions (for example, at pain in the heart or at attack of angina pectoris).

Formulated recipe ends the personal signature and personal seal of the doctor. If necessary, emergency medicine sick leave at the top of the prescription form affixed notations "Cito" (Quickly) or "Statim" (Immediately).

The amount of liquid substances in the recipe is indicated in ml (0,1 ml; 1 ml; 20 ml) or drops (gtts X), and other substances – in grams (0,001; 0,01; 0,1; 1,0; 20,0) or units activities (UA).

Narcotic and psychotropic drugs for outpatients are issued only on special prescription form with application of the established sample stamp, seal of the hospital and personal signature and seal of the doctor. Each recipe after it has been received on drugs subject to strict accounting.

Prescriptions for medications, which include poisonous drugs list "A" (codeine, codeine phosphate in mixture with other drugs, hypnotics, neuroleptics and antidepressant drugs, steroids, tranquilizers, and medicines, containing ethanol) are written on the prescription forms with printing hospital seal "For recipe", signature and personal seal of the doctor.

Recipes for other drugs, which include potent drugs are prescribed on prescription forms with hospital stamp, signature and personal seal of the doctor.

The physician is personally responsible for wrong prescriptions written. The recipe that does not meet at least on one of the requirements of these regulations or contains

incompatible drugs is considered invalid and medicine on it is not made and release. In these case, the pharmacist must contact with doctor to write out the wrong prescription, specify the name of the drug, its dose, pharmacological compatible and then release the drug to the patient. In the absence of designated drug pharmacist must agree the possibility of replacing its analogue.

Major Latin prescription reductions

Reduction	Total writing	Translation (english, russian)
aa	ana	equally (поровну)
ac.acid.	acidum	acid (кислота)
amp.	ampulla	ampoule (ампула)
aq.	aqua	water (вода)
aq. destill.	aqua destillata	distilled water
but.	butyrum	butter [масло (твердое)]
comp., cps	compositus (a, um)	composite (сложный)
D.	Da (Detur, Dentur)	Give [Выдай (пусть выдано, пусть будет выдано)]
D.S.	Da, Signa Detur, Signetur	Give. Denoting (Выдай, обозначь)
D.t.d.	Da (Dentur) tales doses	Give such doses [Выдай (Пусть будут выданы) такие
Dil.	dilutus	diluted (разведенный)
div.in p.aeq.	divide in partes aequales	is divided into equal parts (раздели на равные части)
extr.	extractum	extract (экстракт, вытяжка}
f.	fiat (fiant)	let the image [пусть
qtt.	qutta, guttae	drop, drops (капля, капли)
inf.	infusum	настой
in amp.	in ampullis	in ampoules (в ампулах)
in tabl.	in tab(u)lettis	in tablets (в таблетках)
lin.	linimentum	liniment (жидкая мазь)
liq-	liquor	liquid (fluid) (жидкость)
m. pil.	massa pilularum	pill bulk (gross) (пилюльная
M.	Misce, Misceatur	Mix [Смешай (Пусть будет
N.	numero	Number (числом)

ol.	**oleum**	**oil liquid [масло (жидкое)]**
past.	**pasta**	**paste (паста)**
Pil.	**pilula**	**pill (пилюля)**
p.aeq.	**partes aequales**	**equal parts (равные части)**
ppt., praec.	**praecipitatus**	**precipitated (осажденный)**
pulv.	**pulvis**	**powder (порошок)**
q.s.	**quantum satis**	**as required (сколько потребуется, сколько надо)**
r., rad.	**radix**	**root (корень)**
Rp.	**Recipe**	**Get (Возьми)**
Rep.	**Repete, Repetatur**	**Repeat [Повтори (Пусть будет повторено)]**
rhiz.	**rhizoma**	**rhizome (корневище)**
S.	**Signa, Signetur**	**Denoting [Обозначь (Пусть будет обозначено)]**
sem.	**semen**	**seed (семя)**
simpl.	**simplex**	**simple (простой)**
sir.	**sirupus**	**syrup (сироп)**
sol.	**solutio**	**solution (раствор)**
supp.	**suppositorium**	**suppository (свеча)**
tabl.	**tabuletta**	**tablet (таблетка)**
t-ra, tinct.	**tinctura**	**tincture (настойка)**
unq.	**unquentum**	**ointment (мазь)**
vitr.	**vitrum**	**bottle (склянка)**

Drugs nomenclature. Some elements of Latin grammar

In medical practice used drugs, having an international non-proprietary name (International Non-proprietary Name, INN), and drugs with patented commercial name (Brand name), which produced various commercial firms. Drug names are written in Latin. International non-proprietary name of the medicines, registered with the World Health Organization, is used throughout the world for easy identification of the drugs and their classification in certain pharmacological groups. These names are recommended to use for the prescription of

various drugs. In absence of such drug in pharmacies its can be replaced similar drug with generics commercial name.

Word endings in Latin

Most of the names of drugs are neuter nouns 2nd declension (Nitroglycerinum, Furosemidum, Validolum). Names acid are expressed by adjectives, nouns agreed (Acidum nicotinici). The Latin name of the salts is based on the following principle: the name of cation (alkaloid or metal) is placed on the first place and expressed a noun in the genitive case, and the name of anion – a noun in the nominative case (Codeini phosphas, Morphini hydrochloridum).

Number	Case	Declension (Склонения)				
		I	II	III	IV	V
Number only	Nom.	a	us, um	different endings	us	es
	Gen.	ae	i	is	us	ei
	Acc.	im	us			
	Abl.	a	o			
Number multiple	Nom.	ae	i, a			
	Gen.	arum	orum			
	Acc.	as	os. a			
	Abl.	is	is			

Name of anion depends on its structure and is formed by adding suffixes to the different roots:

- idum (gen. case - i) – to oxygen-free acids with inorganic bases (Natrii bromidum);
- prefix “hydrum” and suffix “idum” have names anions of oxygen-free acids with inorganic bases (Adrenalini hydrochloridum);

- as (gen. case - atis) – for anions of salts of oxygen acids with maximum oxygen content (arsenas, nitras);
- is (gen. case - itis) – for anions of salts of oxygen acids with a lower oxygen content (arsenis, nitris).

For oxides are used international Latin names oxydum (oxide), peroxydum (peroxide) and hydroxydum (hydroxide).

The names of drugs and other used in the recipe words (names of dosage forms, plants and etc.) decline to generally accepted rules of Latin grammar. The table shows those declination case endings, that can occur when writing a prescription.

It should be remembered that prepositions “in” and “cum” require ablative case, and expression “ut fiat” - nominative case standing after them noun.

Test questions and home work

1. What are the requirements for registration of a prescription?
2. How to speak to a pharmacist about need to urgent issue of drugs?
3. Specify the order of writing the ingredients included in the recipe of the drug?
4. What words in the recipe written with a capital letter?
5. In which case is written the name of the drug in the recipe?
6. Write genitive endings I, II and III declinations?
7. In what units indicates the number of dry substances in recipes? Write in numeric expression 1g, 1 dg, 1 cg, 1 mg, 25 mg, 1 mcg.
8. In what units indicates the number of liquid substances in recipes? Write 1 ml, 10 drops.

Formation formulations of dosage forms

For the convenience of doctors and pharmacists prescribiting of dosage forms can be **shortened** or **expanded.**

Shortened form of recipe used in prescription officinal liquid, solid and soft dosage forms, infusions, decoctions and tinctures.

Scheme of shortened recipe

Dosage form	**Drug**	**Concentration**	**Amount**
D. t. d. N. (for ampoule's solutions) **S.** **(D.S.)**			

According to this scheme are written solutions, suspensions, ointments, liniments and sprinkle powders.

Prescription of certain other dosage forms deviates from this general pattern:

1. When making a prescription for tinctures, liquid extracts, officinal and patented drugs (ointments, pastes, liniments) concentration is not specified. Similarly, only with amount of drug to prescribe tablets, pills, granules, suspensions.

2. In the recipe of infusions and decoctions concentration is replaced weight quantity of plant used to prepare dosage form.

Expanded form of recipe is used for the prescribiting dosage forms manufactured in pharmacies.

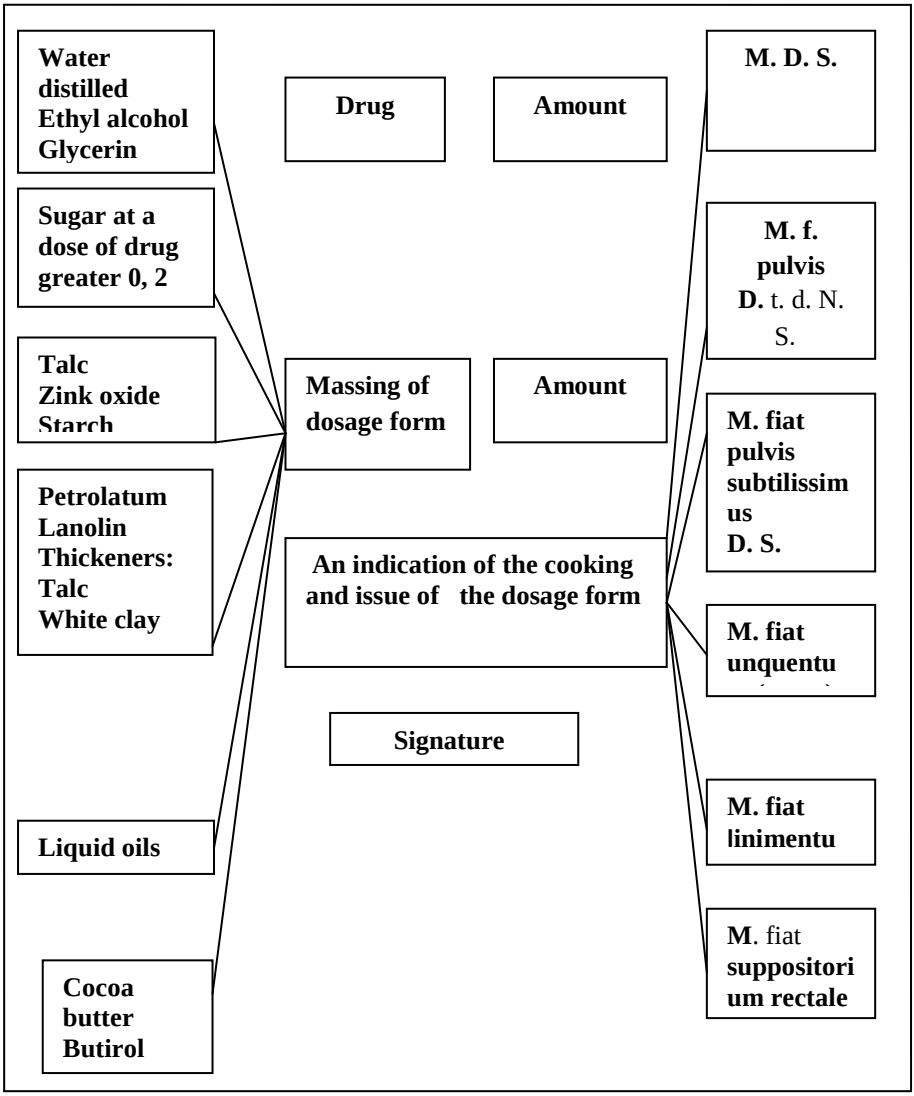
When making such prescription in Latin part of recipe lists all the ingredients and their quantity in a strict sequence. On the first place is written the basic medicine. On the second place – adjuvant, on the third – correctives that corrects the taste or other negative features of the previous drug substances.

The formulation ends designation of dosage form massing. Each of ingredients in a recipe writes a new line. Concentrations and doses relating to him not are carried on another line. Follow the instructions on the preparation of appropriate dosage form.

Liquid dosage forms

Liquid dosage forms include solutions, suspensions, infusions, decoctions, tinctures, fluid extracts, mucus, emulsions and mixtures.

Scheme of expanded recipe



Solutions

Solutions used external, orally and for injections. The mode of application defines some features of prescription.

Solutions for external application

Solutions for topical application are undosed dosage form. When making a registration indicates concentration of the medicine, since it affects the strength and character of its action.

The concentration of the drug may be designated as a percentage or as a ratio of solute and solvent. When the concentration of solution terms in percentage the amount of solvent is constant, equal 100 and number percent means the amount dissolved in this bulk drug substance. In the second method, the constant and equal 1sets the amount of dissolved drug and the solvent volume is variable. This way of expressing concentration is only used when prescribing solutions for external application, if the concentration of solution is very small (less 0,1%).

Amount of solution is determined by the method of application and the affected area of the skin and mucous. Drops (in eye, ear and nose) are issued in a amount of 5-10 ml, and the solutions for the washing wounds treatment skin, rinses (полосканий, промываний), lotions (примочек), douching (спринцеваний) – 50-500 ml. In solutions for external application as a solvent, apart from distilled water, are widely used ethyl alcohol, glycerol, vegetable and mineral oils.

Scheme prescribing solutions for external application

Date	**Concentration (a %)** **Volume (V)**	
Dosage form	**Shortened**	**Expanded (deployed)**
Calculations	**No**	**a – 100** **x – V**

When prescribing simple or officinal solutions most convenient is a shortened form of a prescription. When making a recipe for a simple solution pharmacist invited to give the right amount of solution with predetermined concentration.

For example. Prescribe 5 ml 1% pilocarpine hydrochloride solution for eye installation 3 times per day.

Rp. : Solutionis Pilocarpini hydrochloridi 1% - 5 ml

D.S. Take 1-2 drops to both eyes 2 times per day.

For example. Prescribe 200 ml ethacridine lactate solution diluted 1: 2000 for washing wounds.

Rp. : SoIutionis Aethacridini lactatis 1:2000 - 200 ml

D.S. For washing wounds.

In the above cases, the solvent is distilled water. If used as a solvent 70% alcohol, a liquid oil or glycerin, then it is necessary to make a special designation in the recipe. Definitions “spirituosae”, “oleosae” “glycerinosae” are written in Latin after the name of the drug.

For example. Prescribe 0,5% oil solution of menthol for installation into the nose.

Rp.: Solutionis Mentholi oleosae 0.5% -10 ml
D.S. Take 3-4 drops 4 times per day.

Officinal solutions, i.e. solutions, the composition of which is known, are written without designation of concentration.

For example. Prescribe 40 ml camphor alcohol for wiping (протирания) the skin.

Rp.: Spiritus camphorati 40 ml
D.S. For wiping the skin.

Expanded form of recipe used for writing out complex solutions and solutions with a special solvent (alcohol different concentrations, special oils). In this case, lists all ingredients in the medicine (active substances and solvent) and their quantities are indicated.

For example. Prescribe eye drops containing 0,3% zinc sulfate and 2% boric acid.

Rp: Zinci sulfatis 0,03
Acidi borici 0.2
Aquae destillatae I0 ml
M.D.S. Take 1-2 drops to both eyes 2 times per day.

The total amount of solution in the prescription is taken arbitrarily in the range for conventional eye drops. The principles of calculating the amount of zinc sulfate and boric acid are shown in scheme prescription solutions for external application.

The same recipe can be written at a half shorthand method. In this case, one of the active substances prescribes in solution and another adds to solution in dry form.

Rp.:	Solutionis Zinci sulfatis	3%-10 ml
	Acidi borici	0.2
	M.D.S. Take 1-2 drops to both eyes 2 times per day.	

Test questions

1. Solutions for external application are undosed or dosed dosage form?
2. What are the initial data necessary for prescribing solution for external application?
3. What is the principle design of shortened recipe?
4. What is the principle design of expanded recipe?
5. In some cases, for prescribing solutions for external application use shortened form of recipe, and what – expanded form?
6. Write a Latin expression “alcoholic solution”, “oil solution”, “glycerol solution”.
7. What amount of solution adopted to prescribe depending of the purpose of its use?
8. How to calculate when prescribing expanded form of solution the amount of drug in a given volume of solvent, if known its concentration?

Solutions for enteral application

The solutions may be introduced into the gastrointestinal tract through the mouse and into the rectum by enema. Solutions for oral administration are undosed dosage form, which is dispended in the bottle for several applications. Therefore, the doctor who ordered the medication should be clear to what volume of solution contains a dose of the drug.

Principle calculations when prescribing oral solution is presented in the following scheme.

Scheme prescribing solutions for enteral and parenteral application

Date	**Dose (d_1)**	**Volume per one reception (V_1)**	**Number of drug receptions (n)**	
Dosage form	**Shortened**		**Expanded**	
Calculations	**Calculation % concentration of the solution:** **x – 100** **d_1 – V_1**	**Calculation of the total amount of the solution:** **V_1 x n**	**Calculation of the total amount of the solution:** **V_1 x n**	**Calculation of the total amount of the drug:** **d_1 x n**

As shown in the scheme, for prescribing oral solutions must know a single dose of the drug (**d_1**), the amount of solvent in which it must be dissolved (**V_1**), and the total number of receptions (**n**). Single doses of drugs taken from reference books/ and in process of learning by students of total recipe are given quantity. Oral solutions dosed:

– Spoons: teaspoons (5 ml), desert spoons (10 ml) and a table spoons (15 ml);

– Graduated beakers in the some amounts, which are commonly use in the hospital;

– Drops (10 or 20 drops). It should be known that 1 ml aqueous solution contains 20 drops.

Choice of solvent volume is dependent on the dose of drug. If the dose is equal or more than 0,05 (that is large enough), the solution prescribed by spoons (beakers): children up to 5 years – a teaspoons, for children up to 10 years – dessert spoons. Children older 10 years and adults solution dosed tablespoons.

Solutions dosing spoons discharged for 10-12 receptions. If the dose of medicine small (less than 0, 05) the solution should be

appointed drops. Drops for oral administration are prescribed by 10-30 receptions, so the total amount of the drug is 5-30 ml. For prescribing simple solutions used shortened or expanded form, complex solutions – expanded or half a shorthand form.

For example 1. Prescribe calcium chloride solution (a single dose [s.d.] 1,5) orally 3 tines per day.
Work on the prescription of the recipe consists of 4 stages.
1. Specification of the necessary values.
2. The choice of form of the prescription.
3. Carry out the necessary calculations.
4. Registration of recipe.

In this example, the initial values are as follow:

d_1 - 1,5; v_1 - tablespoon (15 ml); n - 10 receptions

Possible shortened and expanded forms of prescription. For prescribing of shortened recipe it's necessary to calculate of % concentration of solution and its overall amount. To determine the concentration of solution is necessary to calculate how many grams of the drug contained in 100 ml of solution, provided that the single dose (1,5) dissolved in 1 tablespoon (15 ml). Make up and solve proportion.

d_1 - v_1 1,5 - 15 ml
x - 100 ml

x = 1,5 x100 / 15 =10. So, the concentration of solution is 10%.
The total amount of solution: v_1 x n = 15 x10 receptions = 150 ml.

Rp.: Solutionis Calcii chloridi 10% - 150 ml
D.S. Assign 1 tablespoon 3 times per day.

To place an expanded prescription should be calculate the total amount of drug and solvent on 10 receptions.

d_1 x *n* = 1,5 x 10 приемов = 15,0
v_1 x n = 15мл x 10 приемов = 150 мл

Rp.: Calcii chloridi 15,0
Aquae destillatae ad 150 ml
M.D.S. Take 1 tablespoon 3 times per day.

In this recipe before the amount of solution set an excuse "ad" translated "to". It means that the distilled water needs to be added so, that total solution volume was 150 ml. This indication is given when the amount of drugs is large (equal to or greater than 5%) and may affect the total solution volume.
For example 2. Prescribe plathyphyllium hydrorartrate solution (s.d. 0,005) for oral administration 3 tines per day.
With this s.d. of drug the solution must be administered by drops, but no spoons. Such solutions are assigned to 10 or 20 drops.

So, specifies the condition of the task:

d_1 - 0,005
v_1 - 10 drops (0,5 мл)
n - 20 receptions.
For prescribing shortened form of recipe calculate percentage concentration of the solution and its overall amount.
1. d_1 - v_1 0,005 - 0,5 ml (10 drops)
x - 100 ml
x = 0,005 x100 / 0,5 = 1.

So, the concentration of solution is 1%.
2. v_1 x *n* = 0,5 ml x 20 receptions = 10 ml.

Rp.: Sol. Platyphyllini hydrotartratis 1% - 10 ml
D.S. Take 10 drops 3 times per day.

Expanded form of this recipe is as follows:

Rp.: Platyphyllini hydrotartratis 0,1
Aquae destillatae 10 ml
M.D.S. Take 10 drops 3 times per day.

The total amount of the drug was calculated by multiplying of its single dose (0,005) on 20 receptions. The amount of water is estimated in a similar manner.

Medical enemas are commonly used for resorptive action of the drugs, that is, their. action after absorption into the bloodstream. Therefore, medical enemas are prescribed by the rules prescribing oral solution. **The volume of drug enema ranges from 50-100 ml.**

Test questions and home work

1. What are the raw dates necessary for prescribing oral solutions?
2. How dosed oral solutions?
3. What are the volumes of tea, desert and a tablespoon?
4. What droplets contained in 1 ml of distilled water?
5. How to solve the problem of dosing solution spoon of drops?
6. In how many drops single dose of drug is dissolved?
7. How do you calculate the necessary amount of medication and water
when prescribing oral solution?
8. How many receptions are prescribed solutions which are dosed spoons?
9. How many receptions are prescribed solutions which are dosed drops?
What can be the total amount of such solution?
10. What is the volume of drug enema?
11. Solve the tasks:
a) What quantity of drug necessary to dissolve in 10 ml for the preparation of a 3% solution?
b) What is a dose of medicine if the patient injected 1 ml of 5% solution?

c) What is the concentration of the solution if tablespoon contains 1,5 grams of the drug?
d) What dose contains 10 drops of 0,1% solution?

Solutions for injection

Solutions for subcutaneous, intramuscular, intravenous and other types of injections are prepared pharmaceutical plants and pharmacies. The main feature of their solutions is sterile.

Nonampouled solutions

Nonampouled solutions manufactured in pharmacies if necessary leave solutions that are not available in ampoules. These solutions are sterilized and dispensed in hermetically sealed bottles with capacity 5-1000 ml.
Solutions for injections made in pharmacy, are written by shortened or expanded way with the general scheme of prescribing solutions to resorptive action. Hence, for the prescribing of recipe is necessary to know the single dose of drug, **the volume of solvent per 1 injection** and number of injections. Typically, the injection volume for subcutaneous administration is 1 ml, intramuscular – 3-5 ml and intravenous – 5-10 ml. Solutions for subcutaneous and intramuscular injections are prepared for to 5-10 injections, for intravenous administration – only 1 injection (repeated intravenous injections from the opening bottles allowed). When prescribing a recipe must be specify that **the drug should be sterilized**.

For example. Prescribe sodium nucleonic (s.d. 0,05) for intramuscular injection
2 times per day.

Initial data: d_1 - 0.05; v_1 – 2 ml; n = 10.
Expanded recipe form

Rp.: Natrii nucleinatis 0,5
Aquae destillatae 20,0 ml
M. Sterilisetur!
D.S. Enter 2ml intramuscularly 2 times per day.

Shortened recipe form

Rp.: Sol Natrii nucleinatis 2.5% - 20 ml
Sterilisetur!
D.S. Enter 2ml intramuscularly 2 times per day.

Calculation of the solution concentration:

d_1 - v_1 0,05 - 2 ml
x - 100 ml

0,05 x 100 / 2 = 2,5%

Calculation of the total solution volume:

v_1 x n = 2 ml x 10 receptions = 20 ml.

When administered the large volumes of solution instead of distilled water as a solvent used isotonic solutions of sodium chloride or glucose. Isotonic sodium chloride solution is called in Latin Solutio Natrii chloridi isotonica (or 0,9%), isotonic glucose solution – Solutio Glucosi isotonica (or 5%).

For example. Prescribe 200 ml 0,5 % lidocaine solution prepared in isotonic sodium chloride solution for the infiltration anesthesia.

In this case, the solvent is as an isotonic sodium chloride instead of distilled water. This recipe taken to prescribe half a shorthand way

Rp.: Lidocaini 1,0
Sol. Natrii chloridi isotonicae 200 ml
M. Sterilisetur!
D.S. For the infiltration anesthesia

For recipe design is necessary to calculate how much of the lidocaine should be dissolved in 200 ml solution for 0,5% of its concentration.

Ampouled solutions

Ampouled solutions are ready-dosed dosage form (on each ampoule is indicated concentration and volume of the solution intended per one administration).
Ampouled solutions, as well as other finished dosage forms, are prescribed only shortened way.
Since the single dose of drug and its amount contained in the ampoule can't be same it's necessary for the registration of signatures to calculate the volume solution per one administration. The number of ampoules discharged patients depends on the duration of treatment. Ampoules are packaged in boxes of 5, 6 and 10 pieces.

Scheme prescribing of ampoule solutions

Date	**Dose of drug ($d_{1)}$**	**% solution concentration (A)**	**Solution volume in ampoule (Vamp)**
Dosage form	**Shortened**		
Calculations	**Calculation of the solution volume per one injection based on single dose ($v_{1)}$** **A - 100** **d_1 - v_1** **$v_1 = d_1 \times 100 / A$**		

For example. Prescribe 10 ampoules containing 2 ml 0,025% solution of digoxin (s.d. 0,0003). Administered by slow

intravenous injection. Before use, diluted in 10 ml of isotonic glucose.
Initial data: d_1 - 0.0003; Vamp - 2 ml; % concentration – 0.025.
For registration of recipe is necessary to calculate the volume of solution per one introduction (v_1), that is, the volume contained single dose at a known concentration of solution.

0.0003 - v_1

$v_1 = 0.0003 \times 100 / 0.025 = 1.2$ ml

0.025 - 100

Rp.: Sol. Digoxini 0.025% - 2 ml
D.t.d. N. 10 in amp.
S. Enter slowly intravenously 1,2 ml. Before use, diluted in 10 ml of isotonic glucose.

When prescribing medication in ampoules is no need to sterilize the drug since all the medicines in ampoules and vials are sterilized at the factory.
Solutions dispensed in ampoules may be trade name. In this case, in the recipe only indicates name of drug and number of ampoules.
For example. Prescribe 10 ampoules containing 1 ml of cordiamin (s.d. 0.5 ml). Administered subcutaneously 3 times per day.

Rp.: Cordiamini 1 ml
D.t.d.N. l0 in amp.
S. Enter subcutaneously 0,5 ml 3 times per day.

Sterile powders in ampoules and vials

Drug, which are rapidly destroyed in the solution made at the pharmaceutical factory in form of sterile powders in ampoules and vials. In this case, the solution is prepared immediately

prior to injection. For this purpose, the solvent is introduced into the vial.
When prescribing in recipe sterile powder in vials specifies the name of drug in genitive case and its amount in grams or international units of action (IE). On a separate line gives an indication of drug amount in take (D.t.d. N.). The word "vial" in the recipe isn't used. The signature is issued traditionally with indication of dose, mode and frequency of administration.

For example. Prescribe 20 vials containing 0,5 Ampicillin sodium salt (Ampicillini-natrium, s.d. 0,25). Introduce intramuscularly 4 times day.
For prescribing should specify the amount of solvent and calculate the required amount of solution to one injection on the basis of single dose of drug. For the intramuscular injections typically take the solvent an amount of 3-5 ml. Usually, as a solvents are used water for injection or 0,25-0,5% solution of novocaine.

Calculation of amount solution for injection on the basis of single dose:

dv - Vs ,
d_1 - x

where: dv - dose in vial, Vs - amount of solvent, d_1-single dose

$x = d_1 \times Vs / dv$ $x = 0,25 \times 5$ ml $/ 0,5$ $x = 2,5$ ml

Rp.: Ampicillini-natrii 0,5
D.t.d. N. 20
S. The contents of vial is dissolved in 5 ml of water for injection. Introduce intramuscularly 2,5 ml 4 times per day.

Suspensions

For subcutaneous and intramuscular injections except solutions also are used sterilized suspended small particles – suspensions. Suspensions are dispensed in ampoules or vials and are written by shorthand way with an indication of the dosage form, concentration and number. Before use, they must be shaken.

For example. Prescribe 5 vials containing 5 ml 2,5% of cortisone acetate suspension (s.d. 0,1). Introduce intramuscularly 1 time per day.

Calculation of amount suspension for injection on the basis of single dose:

0,1 – v_1

2,5 – 100

v_1 = 0.1 x 100 / 2,5 = 4 ml

Rp: Susp. Cortisoni acetatis 2.5% - 5 ml
D.t.d. N. 5
S. Enter intramuscularly 4 ml 1 time per day.

Test questions and home work

1. In what volumes taken to dissolve the single dose of drug foe parenteral administration? What determines the choice of volume?
2. How many injections are prescribed solutions for subcutaneous, intramuscular and intravenous administration in general bottle?
3. Write the Latin name of isotonic sodium chloride solution. What percentage concentration of this solution?
4. Write the Latin name of isotonic glucose solution. What percentage concentration of this solution?
5. What form should be selected when you make the recipe for ampouled solution?

6. What does it mean the figure after concentration solution when prescribing ampouled solutions: the ampoule volume of volume for one injection?
7. How to calculate the amount of solution per one injection when prescribing ampouled solutions?
8. What are the characteristics of prescribing drugs in vials?
9. How prescribed the suspensions?

Infusions and decoctions

Infusions and decoctions are aqueous extract of medicinal substances from plant material obtained by boiling.
Infusions and decoctions are prepared in a boiling water bath for 15 min and 30 min respectively. After this period infusions and decoctions insist and filter: infusions in hot after 15 min, decoctions – after complete cooling, which occur in about 45 min. The main drawback of infusions and decoctions – small shelf life: no more than 3-4 days in the refrigerator.
Infusions and decoctions are prescribed only a shorthand way that is somewhat different from that in prescribing solutions. Formulated recipe begins with the name of dosage form in Latin Infusi (Decocti) highlighting the need for boiling and other activities in the preparation of these dosage forms. Percentage concentration adapted in solution replaced in this case the amount of the parts of the plant from which is prepared this dosage form. Infusions and decoctions are dosed only spoons and are written with the instability of their dosage forms not more than 10-12 receptions (3-4 times daily).

For example. Prescribe infusion of leaves bear ears (Uva ursi, s.d. leaves 1,0). Assign 3 times per day.

d_1 – 1,0
V_1 - tablespoon (15ml)
n - 10

d_1 x n = 1,0 x 10 = 10.0
V_1 x n = 15 ml x 10 = 150 ml

Rp.: Infusi foliorim Uvae ursi 10.0 - 150 ml
D.S Take 1 tablespoon 3 times per day.

Tinctures and liquid extracts

Tinctures and liquid extracts combine the two concepts. On the one hand they – finished liquid dosage forms, which are generally alcoholic extracts from plant materials. On the other – medicines (called "Galen preparations") with doses, expressed in drops, persistent during storage and are manufactured in pharmaceutical factories. Tinctures and liquid extracts are issued as officinal dosage forms, i.e. shorthand way without specifying the percentage concentration of the drug with putting only its total amount. Because these drugs are dosed drops, the amount dispensing pharmacy, should be within 5-30 ml.
For example.
Prescribe tincture lily of the valley (Convalaria, s.d. 20 drops). Assign 3 times per day.

Rp.: Tincturae Convalariae 15 ml
D..S. Assign 20 drops 3 times per day.

For example. Prescribe motherwort liquid extract (Leonurum, s.d. 15 drops). Assign 4 times per day.

Rp.: Extracti Leonuri fluidi 20 ml
D.S. Assign 15 drops 4 times per day.

Pharmaceutical factories except liquid extracts produce dry and thick extracts. So, note "fluidi "(liquid) is completely mandatory.
When prescribing a mixture of tinctures or liquid extracts their amounts should be taken in the same ratio as their single doses. For convenience, you can use the following rule: when writing

out a mixture of tinctures (liquid extracts) each of them issued in the amount of milliliters as how many drops dosed and administered in dose equal to the sum of their single doses.
For example. Prescribe tincture lily of the valley (Convalaria, s.d. 15 drops) with valerian tincture (Valeriana, s.d. 20 drops). Assign 3 times per day.

Rp.: Tincturae Comallariae 15 ml
Tincturae Valerianae 20 ml
M D.S. Take 25 drops 3 times per day.

Mixtures

Mixtures – liquid dosage forms, which are obtained by mixing several dosage forms (solid and liquid or liquid only). They include infusions, decoctions, tinctures, liquid extracts, soluble and insoluble powders. Mixtures most commonly used orally, less rectally or for external application. Mixtures are written by expanded or half shorthand ways.
Recipes of mixtures for oral use prescribed according to the rules of writing the solutions for resorptive application. The initial date must be known single doses of drugs included in the mixture, the amount of mixture at 1 reception and number of receptions. Mixtures dosed only spoons and appointed on 10-12 receptions. In order to eliminate the unpleasant taste and odor in mixtures for oral use are added correcting substances: syrups and aromatic water, give them a pleasant taste. For this purpose, the most commonly used simple syrup (sirupus simplex) and water mint (aqua menthe). They are added in an amount of 5-20% of the total amount of mixture.
If the composition of mixture included infusion or decoction, they perform two functions: produce a therapeutic effect and are solvent in mixture. In recipe infusion (decoction) are written shorthand way and then lists all the remaining ingredients included in the medicine.

For example. Prescribe infusion of herbs spring Adonis (s.d. of herbs 0,5) with tincture of valerian (s.d. 15 drops), sodium bromide (s.d. 0,1) and simple syrup. Assign 3 times per day.
doses:
d_1 - 0,5; d_2 – 15 drops.; d_3 - 0.1
V_1 - tablespoon (15 ml)
n -10

Rp.:	Infusi herbae Adonidis vernalis	5.0 - 150 ml
	Tincturae Valeriane	3 ml
	Natrii bromidi	1.0
	Sirupi simplicis	15 ml
	M.D.S. Take 1 tablespoon 3 times per day.	

Tincture, leading into the mixture, calculated to the same number of receptions what all that mixture. Amount of valerian tincture is calculated as follow.

d_2 x n = 15 drops. x 10 receptions = 150 drops : 50 drops = 3 ml.
It must be remembered that in 1 ml of any tincture contain in average 50 drops. So, in this mixture is necessary to add 3 ml tincture. Simple syrup in medicine was added 10% of the total amount of mixture, that is, 15 ml.
If the medicine included drugs irritating mucous membranes, as flavoring agents used mucous. For this purpose, the most commonly used starch mucus (Mucilago Amyli), which is added in an amount of 30-50% of the total amount of mixture.

For example. Prescribe chloral hydrate (s.d. 1,5) for a single administration in enema. The drug irritates mucous.

Rp.:	Chlorali hydratis	1,5
	Mucilaginis Amyli	

Aquae destillatae aa 25 ml
M.D.S. Enter into the rectum.

Mixture intended for external use, are written, based on the concentrations of active substances.

For example. Prescribe mixture consisting 200 ml of decoction of oak bark (1 : 10), 1% alum and 10% nitroglycerin. For mouthwash.

Rp.:	Decocti corticis Quercus	20.0 - 200 ml
	Aluminis	2,0
	Glycerini	20 ml
	M.D.S. For mouthwash.	

Test questions

1. What form is used for writing down the recipe of infusions and decoctions? How is this different from the recipe of solutions?
2. What are the characteristics of prescribing tinctures and liquid extracts?
3. How calculated the amount of tincture, added to the mixture?
4. Why in mixture added syrups and aromatic water?
5. Why in mixture added mucus? In what quantities they are added to the mixtures? What are the names most commonly used mucus?

Solid dosage forms

Powders

Powders for oral administration may be divided into individual receptions (**dosed**) and undivided (**undosed**).

When prescribing simple dosed powders after the name of drug is indicated by its single dose, indicates the number of powders and filled with the signature. In one recipe usually issued 10-12 powders, but for a long treatment you can write and more: 20, 30 and so on.

For example. Prescribe analgin (s.d. 0,5) in the powders. Take for headache.

Rp.: Analgini 0.25
D.t.d.N. 12
S. Take 1 powder for headache.

If the drug single dose is less than 0,2, for convenience of reception and avoid losses is added 0,2-0,3 indifferent powder. Most often it is beet sugar or milk sugar. In this case, as in the others, when the powder contains more than one ingredient, is added phrase "M. f. pulvis" that means: mixed to form a powder in the pharmaceutical sense, that is perfectly homogenous. The maximum weight of powder does nor exceeded 1,0. Otherwise, it is inconvenient to use.

For example. Prescribe dibazol (s.d. 0,04) in the powders. Take 1 powder 3 times per day.

Rp.: Dibazoli 0,04
Sacchari 0,3
M.f. pulvis
D.t.d. N. 12
S. Assign 1 powder 3 times per day.

Undivided powders for oral administration are prescribed with indication of total weight that can be varied (from 5,0 to 100,0), depending on the application, duration of treatment and other conditions. Patients use such powders as directed by

physician on 1 reception or dosing of teaspoon or other spoons. When prescribing simple undivided powders next to the name of drugs is indicated by its number, and then gives an indication of its delivery and use.

For example. Prescribe 30,0 boric acid. Apply 1 teaspoon per cup of water for rinsing.

Rp.: Acidi borici 30.0
D.S. Apply 1 teaspoon per cup of water for rinsing.

Powders used for external applications (powders for sprinkling), called in Latin Aspersio (Aspersio. - onis). In this dosage form the powders used in the pure substances (for wound) or in a mixture with indifferent powders (talk, corn starch, white clay). Powders for sprinkling must be smallest (pulvis subtilissimus), about this special instruction is given in the recipe.

For example. Prescribe 50,0 powder for sprinkling containing 2% salicylic acid.

Rp.: Acidi salicylici 1.0
Talci ad 50.0
M.f. pulvis subtilissimus
D.S. Sprinkle the affected areas of skin.

The same powder for sprinkling is easier to issue a shorthand way.

Rp.: Aspersionis Acidi salicylici 2% - 50.0
D.S. Sprinkle the affected areas of skin.

Capsules

Powders having an unpleasant taste, odor, irritate the mucous membranes, can be place in the capsules. Now mainly used gelatin capsules. Filling their drug substances produced in the pharmaceutical plants. Therefore, the capsules are the finished dosage form. Prescription drugs in capsules has the following features:

– after the name of the drug is not indicated dose, but the amount of it placed in a capsule;

– at any dose of drug addition of indifferent powder not required;

– necassairly is instructed to issue drug in capsules (D.t.d. N. 10 in capsulis gelatinosis);

– if the dose of the drug greater than the amount that is stored in the capsule at in 1 reception is assigned the required number of capsules.

For example. Prescribe castor oil (s.d. 20,0) in gelatin capsules 1,0. On 1 reception.

Rp.: Olei Ricini 1,0
D.t.d.N 15 in capsulis gelatinosis
S. Take 20 capsules on 1 reception.

Tablets and dragee

Tablets and dragee are ready dosed dosage forms (manufactured at pharmaceutical plants). Dragee are produced by numerous layering drugs and auxiliary substances on sugar granules. Weight dragee ranges from 0,1 to 0,5 g.

Tablets and dragee are written **by shorthand way**. For prescription tablets (dragee) need to know the amount medication contained in a tablet (dragee), the number of tablets

(dragee) in the same package and drug dose at one reception. Usually, the package contains 10, 20 or 30 tablets (dragee).

The tablets (dragee) come in a pharmacy in a finished form, so recommendations pharmacist about the way of their manufacture is not given. In the recipe only indicates the name of a drug (drugs), the amount (amounts) in the single tablet (dt) and the number of tablets (dragee), subject to release. In signature indicates the dosing method of the drug. If the dose of the drug (d_1) more than is contained in tablet prescribe the necessary number of tablets, if the dose is less – a necessary part of the tablet.

Simple (containing one drug) and officinal tablets (with the complex composition and the commercial name) usually prescribe a shorthand way.

For example. Prescribe analgin (s.d. 0,25) in tablets 0,5 in packages 10 pieces. Take for headache.

For prescribing calculate what portion of tablet contains a single dose of the drug.

dt - 0,5; d_1 – 0,25

x = d_1 **:** dt = 0,25 **:** 0,5 = 1/2 tablet.

Rp.: Tabulettas Analgini 0.5
D.t.d.N. 10
S. Take 1/2 tablet for headache.

Officinal tablets (dragee) are issued without drug doses.

For example. Prescribe tablets “Amoxiclav” (included several antimicrobial drugs) in a package in 30 pieces. Take 1 tablet 4 times per day.

Rp.: Tabulettas “Amoxiclav” N 30
D.S. Take 1 tablet 4 times per day.

For example. Prescribe dragee “Panangin” (included several drugs) in a package in 50 pieces. Take 1 dragee 3 times per day.

Rp.: Dragee “Panangin” N 50
D.S. Take 1 dragee 3 times per day.

Another way to design recipes used in prescribing complex (containing several medicines) tablets that don’t have commercial names. In this cases is decided to list names and amounts of drugs included in tablet, and then make the indication to issue the required number of tablets.

For example. Prescribe tablets included rutin 0,02 and ascorbinic acid 0,05. Take 1 tablet 3 times per day.

Rp.: Rutini 0,02
Acidi ascorbinici 0,05
D.t.d.N 30. in tabulettis
S. Take 1 tablet 3 times per day.

Test questions

1. In which case, and why in dosed powder for oral administration added indifferent substances?
2. What indifferent substances are added in powder for oral administration?
3. When prescribing a simple powder is indicated whether it to be issued in the powder: D t d N.20 **in pulvis**?
4. When prescribing a complex powder necessary to specified in recipe: **M. f. pulvis**?
5. For what purpose are made capsules?
6. What does it mean the amount of drug place behind his name when prescribing tablets: single dose of drug or dose contained in the tablet?

7. What distinguishes the prescription of complex tablets from complex powders?
8. Which substances are used as fillers in powder for sprinkling?
9. What should be the degree of fineness of powder in powder for sprinkling? Should this be done instructed in the recipe?

Soft dosage forms

Ointments and pastes

Ointments and pastes – undosed dosage forms for external use, having a soft consistency. They are manufactured in the same ointment base substances: petrolatum (vaseline), lanolin, lard with addition of paraffin and etc. **Pastes differ from ointments thick consistency** by adding of indifferent powders (talk, starch, white clay, zinc oxide). In other words, the pasta – a thick ointment, which included **at least 25% and not more than 65% powders.**
For prescription of ointment and pastes, as well as any dosage forms for external application, it is necessary to know the concentrations of drug substances and the total amount of ointment (paste). The total number of prescribed ointments and pastes depends on application and size of affected area of skin or tissue. Eye ointment are usually written down in the amount 3,0-10,0, ointment and pastes to lubricate the skin – 10,0-100,0. Pharmaceutical factories producing ointments and pastes in finished form in the box.
Officinal ointments and pastes are issued only shorthand way.

For example. Prescribe 0,5% eye ointment in a package 20,0. Lay behind the eyelid 1 time per day.

Rp.: Unguenti Aceclidini 5% - 20.0
D.S Lay behind the eyelid 1 time per day.

Complex ointments and pastes with commercial names are issued without the concentration of active substances.

For example. Prescribe officinal geliomitsin ointment in a package 10,0. Lubricate the affected skin area 2 time per day.

Rp.: Unguenti Heliomycini 10.0
D.S. Lubricate the affected skin area 2 time per day.

All the complex ointment, not manufactured on the petrolatum (vaseline) basis and complex ointments and pastes, which include several drugs are issued only in the expanded form. In this case, lists all ingredients included in an ointment (active substances, ointment bases) and their amounts. The following is an indication of the preparation of dosage form: M.f unguentum. If the concentration of drugs in the ointment equal or more than 5%, before the total amount of ointment base indicate an excuse "ad".
For example. Prescribe 50,0 petrolatum ointment containing 5% dermatol and 3% boric acid. Lubricate the affected skin area 3 time per day.

Calculation of dermatol added to 50,0 ointment:

50,0 – 100%
x – 5%
x = 50,0 x 5 : 100 = 2,5

In a similar manner calculated amount of added boric acid.

Rp.: Dermatoli 2,5
Acidi borici 1,5
Vaselini ad 50,0
M.f unguentum
D.S. Lubricate the affected skin area 3 times per day.

When prescribing a complex paste including several ingredients, should take into account the desire degree of it density. This will determine the amount of to be added to the paste thickeners (indifferent powders).When making a recipe thickeners are written before the ointment bases.

For example. Prescribe 20,0 paste containing 10% salicylic acid. Apply to callus (corn, мозоль).

Rp.:	Acidi salicylici	2,0	
	Talci	6,0	
	Vaselini	ad	20,0
	M.f. pasta		
	D.S. Apply to callus.		

Liniments

Liniments are a homogenous mixture of a liquid, thick or gelatinous consistency, intended for external use. As a ointment base in liniments use vegetable oils: sunflower oil (Oleum Helianthi), linseed oil (Oleum Lini), olive oil (Oleum Olivari), oil henbane (Oleum Hyoscyami) or peach oil (Oleum Persicori).

Currently mainly produced ready-made liniments, which are written as all the officinal dosage forms by shorthand way with or without specifying the concentration of active substances.

For example. Prescribe the liniment aloe in a bottle of 50 g. Applied to the affected surface 2 times per day.

Rp.:	Linimenti Aloes	50.0
	D.S Applied to the affected surface 2 times per day.	

Multicomponent liniments are issued in the amount of 50,0-100,0 by expanded way. After listing all the ingredients that are part of liniment, and their amounts should be instructed to prepare dosage form: M. f. linimentum.

For example. Prescribe 100 g liniment, containing 20% chloroform and 15% methyl salicylate. For the grinding of joints.

Rp.:	Chloroformii	20 ml
	Methylii salicylatis	15 ml
	Olei Helianthi	ad 100 ml

M.f. linimentum
D S. For the grinding of joints.

Suppositories

Suppositories – dosed dosage form dense consistency, to be administered into the rectum (suppositorium rectale) or vagina (suppositorium vaginale). Suppositories are composed of active substances and base (forming) material, having at room temperature a dense texture, and at human body temperature passing the liquid state. It promotes rapid and complete absorption of the drug. As a base is often used cocoa butter. Weight of rectal suppositories should be in the range 2,0-4,0, vaginal – 2,0-6,0. Usually the amount of the forming material replaced "quantum satis " (q.s.) – as required. In this case rectal suppositories are prepared by weighing 3,0, vaginal – 4,0. Since suppositories are dosed dosage form when prescribing required specifying the desired number of extradition candles. Currently suppositories produced by pharmaceutical industry as a finished product.

Officinal suppositories prescribed by shorthand way. The name of drug is common to use with the Latin preposition

“cum” – with. Commercial names of suppositories with a complex composition are indicated in quotes.

For example. Prescribe vaginal suppositories with aminophylline (s.d. 0,3) in a package of 10 pieces. Administered 1 suppository into vagina 1 time per day.

Rp.: Suppositoria vaginalia cum Aminophyllino 0,3 N. 10
D. S.Administered 1 suppository into vagina 1 time per day

For example. Prescribe officinal rectal suppositories “Neoanuzol” in a package of 10 pieces. Administered 1 suppository into rectum 3 times per day.

Rp.: Suppositoria rectalia "Neoanusolum" N. 10
D. S. Administered 1 suppository into rectum 3 times per day.

If necessary, suppositories can be made in a pharmacy. **These suppositories are written in expanded form with a list of all ingredients and their amounts**.

For example. Prescribe rectal suppositories, containing belladonna extract (s.d. 0,01) and dermatol (s.d. 0,2). Enter 1 suppository into the anus 2 times per day.

Rp: Extracti Belladonnae 0,01
Dermatoli 0,2
Olei Cacao q s
ut fiat suppositorium rectale
D.t.d. N. 10
S. Enter 1 suppository into the anus 2 times per day.

Test questions

1. Which substances are used as base substances for the preparation of ointments, pastes and liniments?
2. What is different the paste from ointment? What is the content of powder substances in each of these dosage forms?
3. Bring the Latin names of indifferent powders, which are used as thickeners in pastes?
4. What form of prescription is used when prescribing officinal liniments?
5. Which method is used when prescribing suppositories, containing several drugs? What is used in suppositories as a forming material?

Other dosage forms

Aerosols

Aerosols are solid or liquid substances, which are in gaseous medium in a suspended (взвешенном) state. Drugs or cosmetic aerosols – liquid preparations under pressure in special packaging (spray).

In medical practice use metered aerosols, containing vapors of volatile liquids or solid drug substances. In recent years, for the treatment of outpatients widely used the prefabricated aerosol packages, which are small cylinders with the valving and the spray head. Within the cylinder at high pressure are drug (solution, emulsion or suspension) and evacuating gas (propellant), which after pressing the vale allocated as aerosol. Advantages of aerosol packages are portability, ease of use, reliable protection against drying and contamination and the possibility of rapid accurate dosing. In medical practice aerosols used for inhalation or external application.

For inhalation are used aerosols with the size of aerosol particles 0,5-10 micrometers, which are used for treat diseases

of the lungs and upper respiratory tracts (bronchial asthma, bronchitis). Aerosols are written in shorthand for.

For example. Write out two packs aerosol "Salbutamol" (Aerosolum "Salbutamolum"). Conduct 4 inhalations per day.

Rp.: Aerosoli "Salbutamolum" N. 2
D.S. Conduct 4 inhalations per day.

For external application used aerosols in the forms of solutions, foams, emulsions or plastic membrane.

Section 2
TASKS FOR PRESCRIBING VARIOUS DOSAGE FORMS
Liquid dosage forms
Solutions

Solutions for external application

Prescribe:

1. Eye drops, containing 0,25% of copper sulfate (Cupri sulfas) and 1% of boric acid (Acidum boricum). Instilled 2 times per day.
2. 500 ml solution of furatsilin (Furacillinum) 1:5000. For washing wounds.
3. 1000 ml 2% solution of chloramine B (Chloraminum B). For disinfection of patients care items. .
4. 50 ml 5% glycerol solution of tannin (Tanninum). To lubricate the pharyngeal mucosa 2 times per day..
5. 30 ml 1% alcoholic solution of brilliant green (Viride nitens). For the treatment of abscesses 1 times per day. .
6. 25 ml 10% glycerol solution of tannin (Tanninum). To lubricate the gums 3 times per day..
7. Solution, containing 1% of protargolum (Protargolum) and 0,5% of cocaine hydrochloride (Cocaini hydrochloridum). The drops in the nose. Bury 3 times per day.
8. 0,1% solution of silver nitrate (Argenti nitras). Release in a dark bottle. Instilled into the eyes 1-2 drops 2 times per day.
9. 0,5% menthol solution (Mentholum) in vaseline oil (Oleum Vaselini) for nasal instillation 3 times per day.
10. 500 ml solution of ethacridine lactate (Aethacridini lactas) in concentration 1:2000. For the treatment of wounds.
11. 50 ml 3% solution of hydrogen peroxide (Hydrogenii peroxidum) for mouthwash 3 times per day.
12. 300 ml 2% solution of alum (Alumen). For throat rinse 2

times per day.
13. 3% alcoholic solution of boric acid (Acidum boricum) for instillation into the right ear 3 times per day.

Solutions for enteral application

1. Sodium salicylate (Natrii salicylas, s.d. 1,0) in solution for orally use. Assign 6 times per day.
2. Atropine sulfate (Atropini sulfas, s.d. 0,0005) in solution for orally use 3 times per day.
3. Barbital-sodium (Barbitalum-natrium, s.d. 0,5) for one enema.
4. Analgin (Analginum, s.d. 0,5) with amidopyrine (Amidopyrinum, s.d. 0,5) in solution for orally use 3 times per day.
5. 200 ml 20% oil solution of anestesin (Anaesthesinum). For administration as an enema for the night with 50 ml.
6. Sodium bromide (Natrii bromidum, s.d. 0,5) with caffeine-benzoate sodium (Coffeinum-natrii benzoas, s.d. 0,05) in solution for orally use 3 times per day.
7. Strychnine nitrate (Strychnini nitras, s.d. 0,001) orally in a 0,1% solution. Assign 3 times per day.
8. Calcium chloride (Calcii chloridum, s.d. 1,5) orally in a 0,1% solution. Assign 3 times per day.
9. Dibalzol (Dibazolum, s.d. 0,03) with papaverine hydrochloride (Papaverini hydrochloridum, s.d. 0,03) in orally solution. Assign 3 times per day.
10. Hydrochloric acid diluted (Acidum hydrochloricum dilutum, s.d. 10 drops) in solution for orally administration. Take one tablespoon before eating.
11. Ethylmorphine hydrochloride (Aethylmorphini hydrochloridum, s.d. 0,01)) in orally solution. Assign 4 times per day.

12. A solution of sodium bromide (Natrii bromidum, s.d.0,15) for orally use 3 times per day.

Solutions for injection

Nonampouled solutions

1. 5% solution of sodium nucleinat (Natrii nucleinas, s.d. 0,25) for intramuscular administration 1 time per day.
2. 500 ml isotonic solution of sodium chloride (Natrii chloridum) for intravenous drip introduction.
3. 500 ml isotonic solution of glucose (Glucosum) for intravenous drip introduction.
4. 200 ml of 0,25% novocaine solution (Novocainum) prepared with isotonic sodium chloride solution. For infiltration anesthesia.
5. Solution of apomorphine hydrochloride (Apomorphini hydrochloridum, s.d. 0,005) for subcutaneous injections 1 time per day. Issue in a dark bottle.
6. 1% solution of papaverine hydrochloride (Papaverini hydrochloridum, s.d. 0,02) for subcutaneous administration 2 times per day.

Ampouled solutions

1. 2% solution of promedol (Promedolum, s.d. 0,01) in 1 ml ampoules. Enter subcutaneously for pain.
2. 10% solution of calcium chloride (Calcii chloridum, s.d. 1,5) in 10 ml ampoules. Enter intravenously 1 time per day.
3. 30% solution of linkomitsin (Lincomicinum, s.d. 3 ml) in 1 ml ampoules. Enter intramuscularly 4 times per day.
4. Officinal drug tsititon (Cytitonum) in 1 ml ampoules. Single dose 0,5 ml. Administered intravenously while stopped breathing.
5. Thiopental-sodium (Thiopentalum-natrium, s.d. 0,5) in the bottles containing 1,0 dry preparation. Before use diluted in

sterile isotonic sodium chloride solution. Administered as a 2% solution intravenously.
6. 0,05% solution of strophanthin (Strophanthinum, s.d. 0,00025) in 1 ml ampoules. Before use diluted in 10 ml sterile isotonic glucose solution. Enter intravenously slowly 2 times per day.
7. 1% solution of morphine hydrochloride (Morphini hydrochloridum , s.d. 0,01) in 1 ml ampoules. Enter subcutaneously for pain.
8. .0,05% solution of neostigmine methylsulfate (прозерин) (Proserinum,s.d.0,0005) in 1 ml ampoules. Enter subcutaneously 3 times per day.
9. 0.1% solution of atropine sulfate (Atropini sulfas, s.d. 0,0005) in 1 ml ampoules. Enter subcutaneously 1 time per day.
10. 0,1% solution of adrenaline hydrochloride (Adrenalini hydrochloridum, s.d. 0,001) in 1 ml ampoules. Enter subcutaneously for bronchial asthma attack.
11. Officinal medicine polyglukin (Polyglucinum) in vials (bottles) of 400 ml. For intravenous drip introduction.
12. 10 vials containing streptomycin (Streptomycinum) 500000 UA (unit action). Enter intramuscularly 500000 UA 2 times per day. Before use, the contents of vial is dissolved in 5 ml 0,5% novocaine solution.
13. 10 vials containing 0,5 of oxacillin (Oxacillinum). Enter 0,5 intramuscularly every 4 hours. Before use, the contents of vial is dissolved in 3 ml sterile water for injection.
14.10 ampoules containing 5ml 2% solution of novocaine (Novocainum). For conductive anesthesia.
15. 20 ml 2% solution of ultrakain (Ultracainum) For infiltration anesthesia.

Suspensions

1. 2,5% hydrocortisone acetate suspension (Hydrocortisoni acetas, s.d. 0,025) in bottles of 5 ml. Administered into the joint cavity 1 time per week.

2. Zink-insulin suspension (Zinc-insulinum) in vials of 5 ml with content in 1 ml 40 UA insilin. Administered subcutaneusly 40 UA 1 time per day.

Infusions and decoctions

1. Infusion of herbs Leonurus (Leonurus) for orally use (s.d. 1,0) 3 times per day.
2. Decoction of marshmallow root (Althaea) for orally use (s.d. 0,3) 3 times per day.
3. 200 ml infusion of chamomile flowers (flores Chamomilae). Rinse mouth after eating.
4. Decoction of leaves bear ears (Uva ursi, s.d. leaves 1,0) for orally use 3 times per day.
5. Infusion of leaves foxglove (Digitalis, s.d. leaves 0,05) for orally use 3 times per day.
6. Infusion of herbs thermopsis (Thermopsis, s.d. herbs 0,05) for orally use 6 times per day.
7. Infusion of valeriana roots (Valeriana, s.d. roots 0,5) for orally use 3 times per day.
8. Decoction of ipecac root (Ipecacuanha, s.d. root 0,05) for orally use 5 times per day.

Tinctires and liquid extracts

1. Liquid extrat of bucktorn (Frangula, s.d. extract 30 drops) orally for the night.
2. Tincture motherwort (Leonurus, s.d. tincture 30 drops) for orally use 3 times per day.
3. Liquid extrat of water pepper (Polygonum hydropiper, s.d. extract 25 drops) for orally use 3 times per day.
4. Tincture artemisia (Absinthium, s.d. tincture 10 drops). Take before eating.
5. Liquid extrat of shepherd's purse (Bursa pastoris, s.d. extract 15 drops) with liquid extrat of water pepper (Polygonum

hydropiper, s.d. extract 15 drops) for orally use 3 times per day.
6. Valerian tincture (Valeriana, s.d. tincture 10 drops) with tincture lily of the valley (Convallaria, s.d. tincture 15 drops) for orally use 3 times per day.
7. A mixture of belladonna tincture (Belladonna, s.d. tincture 5 drops), valerian tincture (Valeriana, s.d. tincture 10 drops) and tincture lily of the valley (Convallaria, s.d. tincture 10 drops) for orally use 3 times per day.

Mixtures

1. Infusion of leaves foxglove (Digitalis, s.d. leaves 0,1) with tincture strophantus (Strophanthus, s.d. 5 drops) for orally use 3 times per day.
2. Sodium bromide (Natrii bromidum, s.d. 0,3) with Tincture motherwort (Leonurus, s.d. 20 drops) for orally use 3 times per day.
3. Infusion of leaves foxglove (Digitalis, s.d. leaves 0,1) with simple syrup for orally use 3 times per day.
4. Infusion of Adonis spring grass (Adonis vernalis, s.d. grass 0,5) with valerian tincture (Valeriana, s.d. 10 drops for orally use 3 times per day.
5. Decoction of the root of snow (Senega, s.d. root 1,0) with water mint (Aqua Menthae) for orally use 4 times per day.
6. Infusion of Adonis spring grass (Adonis vernalis, s.d. grass 0,3) with tincture lily of the valley (Convallaria, s.d. 20 drops) and sodium bromide (Natrii bromidum, s.d. 0,3) for orally use 3 times per day.
7. Chloral hydrate (Chlorali hydras, s.d. 1,0) in the enema. Substance irritates mucous.
8. Infusion of herbs thermopsis (Thermopsis, s.d. herbs 0,05) with codeine phosphate (Codeini phosphas, s.d. 0,02) for orally use 4 times per day.
9. Decoction of istod root (Polygala, s.d. root 0,5) with

ammonia-anise drops (Liquor Ammonii anisatus, s.d. 10 drops) and sodium bicarbonate (Natrii hydrocarbonas, s.d. 0,3) for orally use 4 times per day.

10. Adonizid (Adonisidum, water extraction, s.d. 10 drps) with temisal (Themisalum, s.d. 0,5) for orally use 3 times per day.

11. Decoction of ipecac root (Ipecacuanha, s.d. root 0,05) with sodium bicarbonate (Natrii hydrocarbonas, s.d. 0,5) and simple syrup (Sirupus simplex) for orally use 4 times per day.

12. Pepsin (Pepsinum, s.d. 0,2) with hydrochloric acid diluted (Acidum hydrochlorioum dilutum, s.d. 10 drops) for orally use in with eating.

13. Infusion of herbs thermopsis (Thermopsis, s.d. herbs 0,1) with codeine phosphate (Codeini phosphas, s.d. 0,015) and simple syrup (Sirupus simplex) for orally use.

Solid dosage forms

Powders

1. Thiamine bromide (Thiamini bromidum, s.d. 0,005) with ascorbic acid (Acidum ascorbinicum, s.d. 0,05) in powders. Assign 3 times per day.
2. Sodium nucleinat (Natrii nucleinas, s.d. 0,2) in powders. Take 3 times per day on an empty stomach.
3. 50,0 of powder for sprinkling for skin containing 10% zinc oxide (Zinci oxydum) and 10% of dermatol (Dermatolum).
4. Camphor grated (Camphora trita, s.d. 0,2) in powders. Volatile matter. Assign 3 times per day.
5. Ampicillin trihydrate (Ampicillini trihydras , s.d. 0,5). The gelatin capsules to 0,25. Packing 6 capsules. Take 6 times per day.
6. Calcium gluconate (Calcii gluconas, s.d. 1,0) in powders. Take 4 times per day.

7. 20,0 magnesium oxide (Magnesii oxydum). Take during heartburn (pyrosis) ¼ teaspoons.

8. Dibazol (Dibazolum, s.d.0,02) with papaverine

hydrochloride (Papaverini hydrochloridum, s.d. 0,02) in powders. Take 3 times per day.

9. 20,0 of powder for sprinkling with streptocid (Streptocidum) and norsulfazol (Norsulfazolum) equally. For the treatment of wounds.

10. Belladonna extract (Extractum Belladonnae, s.d.0,015) in waxed paper. Take 3 times per day.

11. Riboflavin (Riboflavinum, s.d. 0,01) in powders. Assign 3 times per day.

12. Analgin (Analginum, s.d. 0,5) in powders. Take for toothache.

13. 50,0 sodium sulfate (Natrii sulfas). Tablespoon take on an empty stomach, previously dissolved in 0,5 cups of warm water.

14. 50,0 of powder for sprinkling for skin containing 5% xeroform (Xeroformium).

15. Caffeine (Coffeinum, s.d. 0,05) in powders. Take 3 times per day.

1. 16. Levopa (Levopa, s.d.1,0) in capsules to 0,5 in the package of 50 pieces. Take 4 times per day.

17. Castor oil (Oleum Ricini, s.d. 15,0) in gelatin capsules to 1,0 in the package of 15 capsules. Assign 1 time in morning on an empty stomach.

18. Codeine (Codeinum, s.d. 0,02) with sodium bicarbonate (Natrii hydrocarbonas, s.d. 0,2) in powders. Take 3 times per day.

19. 5,0 of potassium permanganate (Kalii permanganas). For rinse of the throat. Before use few crystals dissolve in warm water until a pale pink color.

20. 12 powders containing 0,15 sodium sulfate (Natrii sulfas), 0,02 papaverine hydrochloride (Papaverini hydrochloridum) and 0,02 dibazol (Dibazolum) for orally use.

21. 10 powders of rhubarb root (radix Rhei) of 0,05 for orally use.

22. 50,0 of streptocid (Streptocidum) in form of 25% powder for sprinkling.
23. Powders, containing digoxin (Digoxinum, s.d. 0,00025) and spironolactone (Spironolactonum, s.d. 0,025). Assign orally 2 times daily.

Tablets and dragee

1. Dimedrol (Dimedrolum, s.d. 0,05) in tablets to 0,05 in a package of 10 pieces. Take 3 times per day.
2. Dragee " Hexavit" (Hexavitum) in a package of 50 pieces. Assign 1 dragee 2 times per day.
3. Aminazin (Aminazinum, s.d. 0,05) in dragee to 0,025 in a package of 30 pieces. Take 3 times per day.
4. Enalapril (Enalaprilum), s.d. 0,005) in tablets to 0,01 in a package of 20 pieces. Take 1 time per day.
5. Tablets containing anesthesin (Anaesthesinum), dermatol (Dermatolum) to 0,1 and magnesium oxide (Magnii oxydum) 0,3 in a package of 50 pieces. Take 1 tablet 3 times per day.
6. Officinal tablets "Teofedrin" (“Theophedrinum”) in a package of 10 pieces. Take 1 tablet 1 time per day.
7. Diazolin (Diazolinum, s.d. 0,2) in dragee to 0,1 in a package of 20 pieces. Take 1 tablet per day after eating.
8. Tablets " Papazol " (“Papazolum”) in a package of 10 pieces. Take 1 tablet 3 times per day.
9. Tablets containing 0,25 of amidopyrine (Amidopyrinum) and 0,1 caffeine-sodium benzoate (Coffeinum-natrii benzoas) in a package of 6 pieces. Take for headache.
10. Nitroglycerine (Nitroglycerinum, s.d. 0,00025) in tablets to 0,0005 in a package of 40 pieces. Assign under the tongue for pain in the heart.
11. Raunatin (Raunatinum, s.d. 0,002) in tablets to 0,002 in a package of 100 pieces. Take 2 times per day.
12. Elenium (Elenium, s.d. 0,02) in dragee to 0,01 in a package of 50 pieces. Take 3 times per day.

13. Furatsilin (Furacillinum)) in tablets to 0,02 in a package of 10 pieces. Dissolve 1 tablet in ½ cup of warm water. For rinse of the throat 4 times per day.
14. 20 tablets containing 0,25 of amidopyrine (Amidopyrinum) and analgin (Analginum) for orally use for headache.
15. 50 dragee of nystatin (Nystatinum) 500000 UA for orally use 4 times per day.
16. Nebivolol (Nebivololum, s.d. 0,01) in tablets to 0,005 in a package of 50 pieces. Assign orally 1 time daily.

Soft dosage forms

Ointments and pastes

1. 0,5% hydrocortisone ointment (Hydrocortisonum) in tubes of 2,5 g. Lay behind the eyelids in the morning and evening.
2. Officinal gramicidin paste (Pasta Gramicidini) in tubes of 30,0 g. Bandage the wound with paste 1 time every 2 days.
3. 1% dibiomitsin eye ointment (Dibiomycinum) in tubes of 3,0 g. Lay behind the eyelid 1 time per day.
4. 30 g ointment containing resorcinol (Resorcinum) and salicylic acid (Acidum salicylicum) 10%. Ointment bases – lanolin and petrolatum (vaseline) equally. Lubricate the affected area of skin.
5. 50 g paste containing 2% of salicylic acid (Acidum salicylicum) and 20% of zinc oxide (Zinci oxydum). Applied to the affected skin areas.
6. 50 g ointment containing 10% of birch tar (Pix liquida) and sulfur precipitated (Sulfur praecipitatum). Lubricate the affected areas of skin. 2 times per day.
7. 25 g paste containing 3% of benzocaine (Anaesthesinum) and 4% of iodoform (Iodoformium). Applied to the affected skin areas 1 time per day.
8. Officinal sulfuric ointment (Unguentum sulfuratum) in tubes of 40,0 g. Lubricate the affected skin areas 3 times per day.

9. 25 g officinal zinc-salicylic paste (Pasta Zinci-salicylata). Applied to the affected skin areas 2 times per day.
10. 40 g paste containing 3% of salicylic acid (Acidum salicylicum), 2% of boric acid (Acidum boricum) and 10% of zinc oxide (Zinci oxydum). Applied to the affected skin areas in the morning and evening.
11. 5 g 0 1% of hydrocortisone ointment (Hydrocortisonum) to lubricate the lips.

Liniments

1. Officinal 10% sintomotsin liniment (Synthomycinum) in a package of 25 g. For tratment of burn surface.
2. Officinal liniment “Naftalgin”" (“Naphthalginum”) in a package of 100 g. For the rubbing of waist. .
3. 90 g liniment containing chloroform (Chloroformium), methyl salicylate Methylii salicylas) and oil henbane (Oleum Hyoscyami) equally. Rub the aching joints.
4. 100 g liniment containing 10% of turpentine (Oleum Terebinthinae), 20% of chloroform (Chloroformium) and 20% of methyl salicylate (Methylii salicylas). For the rubbing of joints.
5. Officinal 5% of streptocid liniment (Streptocidum) in a package of 50 g. Applied to the wound.

Suppositories

1. Officinal rectal suppositories "Anusol" (“Anusolum”) in a package of 10 pieces. Enter 1 suppository 3 times per day into the rectum.
2. Rectal suppositories containing kordigit (Cordigitum) 0,00012 in a package of 10 pieces. Enter 1 suppository 3 times per day.

3. Rectal suppositories containing 0,1 of benzocaine (Anaesthesinum). Enter 1 suppository into the rectum with pain.
4. Vaginal suppositories containing 0,2 of ichthiol (Ichthyolum) in a package of 10 pieces. Enter 1 suppository into vagina 1 time per day.
5. Rectal suppositories with extract of belladonna (Extractum Belladonnae, s.d. 0,01) and tannin (Tanninum, s.d. 0,3). Enter at night.
6. Officinal rectal suppositories containing 0,5 of chloramphenicol (Laevomycetinum) in a package of 10 pieces. Enter 3 times per day.
7. Rectal suppositories containing 0,3 of eufillin (Euphyllinum). Enter 3 times per day.
8. Officinal vaginal suppositories "Osarbon" (“Osarbonum”) in a package of 10 pieces. Enter 1 suppository at night.
9. Rectal suppositories containing indomethacin (Indomethcinum, s.d. 0,05) in a package of 10 pieces. Enter 1 suppository 3 times per day.

Section 3
RIGHT RECIPE FORMULATIONS FOR TASKS SECTION 2

Liquid dosage forms

Solutions

Solutions for external application

1. Rp.: Cupri sulfatis 0,025
   Acidi borici 0,1
   Aquae destillatae 10 ml
   M.D.S. Instilled 2 drops in both eyes 2 times per day.

   Rp.: Solutionis Cupri sulfatis 0,25% - 10 ml
   Acidi borici 0,1
   M.D.S. Bury 2 drops in both eyes 2 times per day.

2. Rp.: Solutionis Furacilini 1:5000 - 500 ml
   D.S. For washing wounds.

3. Rp.: Solutionis Chloramini B 2 % - 1000 ml
   D.S. For disinfection of patients care items.

4. Rp.: Solutionis Tannini glycerinosae 5 % - 50 ml
   D.S. To lubricate the pharyngeal mucosa 2 times per day.

   Rp.: Tannini 2,5
   Glycerini ad 50 ml
   M.D.S. To lubricate the pharyngeal mucosa 2 times per day.

5. Rp.: Sol. Viridis nitentis spirituosae 1 % - 30 ml
   D.S. For the treatment of abscesses 1 times per day.

   Rp.: Viridis nitentis 0,3
   Spiritus aethylici. 50 ml
   M.D.S. For the treatment of abscesses 1 times per day.

6. Rp.: Sol. Tannini glycerinosae 10% - 25ml
   D.S. To lubricate the gums 3 times per day..

7. Rp.: Cocaini hydrochloridi 0,05
   Protargoli 0,1
   Aquae destillatae 10 ml
   M.D.S. Bury 3-4 drops into the nose 3 times per day.

   Rp.: Cocaini hydrochloridi 0,05
   Sol. Protargoli 1 % - 10 m1
   M.D.S. по 3-4 капли в нос 3 раза в день.

8. Rp.: Sol. Argenti nitratis 0,1 % - 10 ml
   D. in vitro nigro
   D.S. Instilled into the eyes 1-2 drops 2 times per day.

9. Rp.: Mentholi 0,05
   Olei Vaselini 10 ml
   M.D.S. For nasal instillation 3 drops 3 times per day.

   Rp.: Sol. Mentholi oleosae 0,3 % -10 ml
   D.S. Bury 3 drops into the nose 3 times per day.

10. Rp.: Sol. Aethacridini lactatis 1:2000 - 500 ml
    D.S. For the treatment of wounds.

11. Rp.: Sol.Hydrogenii peroxydi 3%- 50ml
D.S. For mouthwash 3 times per day.

12. Rp.: Sol. Aluminis 2 % - 300 ml
D.S. For throat rinse 2 times per day.

13. Rp.: Solutionis Acidi borici spirituosae 3% - 20 ml
D.S. Bury 3-4 drops into the right ear 3 times per day.

Rp.; Acidi borici 0,6
Spiritus ethylici 20 ml
M.D.S. For instillation 3-4 drops into the right ear 3 times per day.

Solutions for enteral application

1. d_1 - 1,0
v_1 - 1 tablespoon (15 ml)
n - 12

Rp.: Natrii salicylatis 12,0
Aquae destillatae ad 180 ml
M.D.S. Assign 1 tablespoon 6 times per day.

2. d_1 - 0,0005
v_1 - 10 drops (0,5 ml)
n – 20

Rp.: Atropini sulfatis 0,01
Aquae destillatae 10 ml
M.D.S. Take 10 drops 3 times per day.

Rp.: Sol. Atropini sulfatis 0,1 % - 10 ml
D.S. Assign 10 drops 3 times per day.

3. Rp.: Sol. Barbitali natrii 1 % - 50 ml
D.S. For 1 enema. (Enter into the rectun once).

4. d_1 - 0,5; d_2 - 0,5;
v_1 - 1 dissert spoon (10 ml), n-10.

Rp.: Analgini
Amidopyrini aa 5,0
Aquae destillatae ad 100 ml
M.D.S. Assign 1 tablespoon 3 times per day.

5. Rp.: Sol. Anaesthesini oleosae 20 % - 200 ml
D.S. Intriduce 50 ml into the rectum for the night in the form of enema.

6. d_1 - 0,5; d_2 - 0,05
v_1 -1 tablespoon (15 ml), n-10.

Rp.: Natrii bromidi 5,0
Coffeini-natrii benzoatis 0,5
Aquae destillatae ad 150 ml
M.D.S. Assign 1 tablespoon 3 times per day.

7. Rp.: Sol. Strychnini nitratis 0,1 % - 10 ml
D.S. Assign 20 drops 3 times per day.

8. Rp.: Sol. Calcii chloridi 10 % - 150 ml
D.S. Assign 1 tablespoon 3 times per day.

9. d_1 - 0,03; d_2 - 0,03
v_1 - 1 tea spoon (5 ml), n-10.

Rp.: Dibazoli

Papaverini hydrochloridi aa 0,3
Aquae destillatae 50 ml
M.D.S. Assign 1 teaspoon 3 times per day.

10. d_1 -10 drops (0,5 мл)
v_1 - tablespoon (15 ml)
n – 12.

Rp.: Acidi hydrochlorici diluti 6 ml
Aquae destillatae 180 ml
M.D.S. Take one tablespoon before eating.

11. d_1 - 0,01
v_1 - 20 drops (1ml)
n – 20.

Rp.: Sol. Aethylmorphini hydrochloridi 1 % - 20 ml
D.S. Assign 20 drops 4 times per day.

Rp.:Aethylmorphini hydrochloridi 0,2
Aquae destillatae 20 ml
M.D.S. Take 20 drops 4 times per day.

12. Rp. : Sol. Natrii bromidi 1% - 150ml
D.S. Assign 1 tablespoon 3 times per day.

Solutions for injection

Nonampouled solutions

1. Rp.: Sol. Natrii nucleinatis 5 % -15 ml
Sterilisetur !
D.S. Assign 5 ml intramuscularly 1 time per day.

2. Rp.: Sol. Natrii chloridi isotonicae 500 ml
Sterilisetur!
D.S. For intravenous drip introduction.

Rp.: Sol. Natrii chloridi 0,9 % - 500 ml
Sterilisetur!
D.S. For intravenous drip introduction.

3. Rp.: Sol. Glucosi isotonicae 500 ml
Sterilisetur!
D.S. For intravenous drip introduction.

Rp.: Sol. Glucosi 5 % - 500 ml
Sterilisetur!
D.S. For intravenous drip introduction.

4. Rp.: Novocaini 0,5
Sol. Natrii chloridi isotonicae 200 ml
M. Sterilisetur!
D.S. For infiltration anesthesia.

5. d_1-0,005
v_1-1ml
n – 5.

Rp.: Solutionis Apomorphini hydrochloridi 0,5 % - 5 m1
Sterilisetur!
D.in vitro nigro
S. For subcutaneous administration 1 ml 1 time per day.

Rp.: Apomorphini hydrochloridi 0,025
Aquae destillatae 5 ml
M. Sterilisetur!
D.in vitro nigro

S. Enter 1 ml subcutaneously 1 time per day.

6. Rp.: Sol. Papaverini hydrochloridi 1% - 10 ml
Sterilisetur!
D.S. Enter 2 ml subcutaneously 2 times per day.

Ampouled solutions

1. Rp.: Sol. Promedoli 2 % - 1 ml
D.t.d. N. 10 in ampullis
S. Enter 0,5 ml subcutaneously for pain.

2. Rp.: Sol. Calcii chloridi 10 % - 10 ml
D.t.d.N. 20 in ampullis
S. Enter 15 ml intravenously 1 time per day.

3. Rp.: Sol. Lincomicini 30% - 1 ml
D.t.d.N. 10 in ampullis
S.Inroduce 3 ml intramuscularly 4 times per day.

4. Rp.: Cytitoni 1 ml
D.t.d.N. 10 in ampullis
S. Administered 0,5 ml intravenously while stopped breathing. Before use, 0,5 ml is diluted in 10 ml of isotonic glucose.

5. Rp.: Thiopentali-natrii 1,0
D.t.d.N. 5
S. Before use, the contents of the bottle is dissolved in 50 ml of sterile isotonic sodium chloride solution. Use 25 ml for intravenous drip introduction.

6. Rp.: Sol. Strophanthini 0,05 % - 1 ml
D.t.d.N 10 in ampullis
S. Enter 0,5 ml intravenously slowly 2 times per day.

Before use 0,5 ml diluted in 10 ml sterile isotonic glucose solution.

7. Rp.: Sol. Morphini hydrochloridi 1 % - 1 ml
D.t.d.N. 10 in ampullis
S. Enter 1 ml subcutaneously for pain.

8. Rp.: Sol. Proserini 0,05 % - 1 ml
D.t.d. N 20 in ampullis
S. Enter 1 ml subcutaneously 3 times per day.

9. Rp.: Sol. Atropini sulfatis 0,1 % - 1 ml
D.t.d. N 10 in ampullis
S. Enter 0,5 ml subcutaneously 1 time per day.

10. Rp.: Sol. Adrenalini hydrochloridi 0,1 % - 1 ml
D.t.d. N 10 in ampullis
S. Enter 1 ml subcutaneously for bronchial asthma attack.

11. Rp.: Polyglucini 400 ml .
D.S. For intravenous drip introduction.

12. Rp.: Streptomycini sulfatis 500000 ED
D.t.d. N 10
S. Enter intramuscularly 500000 UA 2 times per day. Before use, the contents of vial is dissolved in 5 ml 0,5% novocaine solution.

13. Rp.: Oxacillini 0,5
D.t.d. N 10
S. Introduce 0,5 intramuscularly every 4 hours. Before use, the contents of vial is dissolved in 3 ml of sterile water for injection.

14. Rp.: Sol.Novocaini 2%- 5ml
D.t.d.N 5 in ampullis
S. For conductive anesthesia.

15. Rp.: Sol.Ultracaini 2% - 20ml
D.t.d.N 5 in ampullis
S. For infiltration anesthesia.

Suspensions

1. Rp.: Suspensionis Hydrocortisoni acetatis 2,5 % - 5 ml
D.t.d. N 3
S. Administered 1 ml into the joint cavity 1 time per week.

2. Rp.: Suspensionis Zinc-insulini, 5 ml (1ml - 40 UA) or (a 40 UA)
D.t.d. N 10
S. Enter 1 ml (40 UA) subcutaneusly 1 time per day.

Infusions and decoctions

1. Rp.: Infusi herbae Leonuri 10,0 - 150 ml
D.S. Take 1 tablespoon 3 times per day.

2. Rp.: Decocti radicis Althaeae 3,0 – 150 ml
D.S. Take 1 tablespoon 3 times per day.

3. Rp.: Infusi flores Chamomilae 20,0 - 200 ml
D.S. Rinse mouth after eating.

4. Rp.: Decocti foliorum Uvae ursi 10,0 - 150 ml
D.S. Assign 1 tablespoon 3 times per day.

5. Rp.: Infusi foliorum Digitalis 0,5 - 150 ml

D.S. Assign 1 tablespoon 3 times per day.

6. Rp.: Infusi herbae Thermopsidis 0,6 - 120 ml
D.S. Take 1 dessert spoon 6 times per day. .

7. Rp.: Infusi rhizomatis Valerianae 5,0 - 150 ml
D.S. Assign 1 tablespoon 3 times per day.

8. Rp.: Decocti radicis Ipecacuanhae 0,6 - 60 ml
D.S. Take 1 teaspoon 5 times per day.

Tinctires and liquid extracts

1. Rp.: Extracti Frangulae fluidi 30 ml
D.S. Take 30 drops for the night.

2 . Rp.: Tincturae Leonuri 30 ml
D.S. Take 30 drops 3 times per day.

3. Rp.: Extracti Polygoni hydropiperis fluidi 25 ml
D.S. Take 25 drops 3 times per day.

4. Rp.: Tincturae Absinthii 10 ml
D.S. Take 10 drops before the eating.

5. Rp.: Extracti Bursae pastoris fluidi
Extracti Polygoni hydropiperis fluidi aa 15 ml
M.D.S. Take 30 drops 3 times per day.

6. Rp.: Tincturae Valerianae 10 ml
Tincturae Convallariae 15 ml
M.D.S. Take 25 drops 3 times per day.

7. Rp.: Tincturae Belladonnae 5 ml
Tincturae Valerianae

Tincturae Convallariae aa 10 ml
M.D.S. Take 25 drops 3 times per day.

Mixtures

1. d_1 - 0,1;
   d_2 - 5 drops;
   v_1 - tablespoon (15 ml);
   n - 10.

Rp.: Infusi foliorum Digitalis 1,0 - 150 ml
Tincturae Strophanthi 1 ml
M.D.S. Take 1 tablespoon 3 times per day.

2. d_1 - 0,3;
   d_2 - 20 drops;
   v_1 - tablespoon (15 ml);
   n - 10.

Rp.: Natrii bromidi 3,0
Tincturae Leonuri 4 ml
Aquae destillatae ad 150 ml
M.D.S. Take 1 tablespoon 3 times per day.

3. Rp.: Infusi foliorum Digitalis 1,0 - 150 ml
   Sirupi simplicis 15 ml
   M.D.S. Take 1 tablespoon 3 times per day.

4. Rp.: Infusi herbae Adonidis vernalis 5,0 - 150 ml
   Tincturae Valerianae 2 ml
   M.D.S. Take 1 tablespoon 3 times per day.

5. Rp.: Decocti radicis Senegae 12,0 - 180 ml
   Aquae Menthae 20 ml
   M.D.S. Take 1 tablespoon 4 times per day.

6. d_1 - 0,3;
   d_2 - 20 drops;
   d_3 - 0,3;
   v_1 - dissert spoon (10 ml);
   n - 10.

Rp.: Infusi herbae Adonidis vernalis 3,0 - 100 ml
Tincturae Convallariae 4 ml
Natrii bromidi 3,0
M.D.S. Take 1 dissert spoon 3 times per day.

7. Rp.: Chlorali hydratis 1,0
Mucilaginis Amyli
Aquae destillatae aa 25 ml
M.D.S. Enter once 50 ml into the rectum.

8. Rp.: Infusi herbae Thermopsidis 0,6 - 180 ml
Codeini phosphatis 0,24
M.D.S. Take 1 tablespoon 4 times per day.

9. Rp.: Decocti radicis Polygalae 5,0 - 150 ml
Liquoris Ammonii anisatis 2 ml
Natrii hydrocarbonatis 3,0
M.D.S. Take 1 tablespoon 4 times per day.

10. Rp.: Adonisidi 2 ml
Themisali 5,0
Aquae destillatae ad 150 ml
M.D.S. Take 1 tablespoon 3 times per day.

11. Rp.: Decocti radicis Ipecacuanhae 0,6 - 180 ml
Natrii hydrocarbonatis 6,0
Sirupi simplicis 20 ml
M.D.S. Take 1 tablespoon 4 times per day.

12. Rp.: Pepsini 2,0
Acidi hydroohlorici diluti 5 ml
Aquae destillatae ad 150 ml
M.D.S. Take 1 tablespoon with eating.

13. Rp.: Infusi herbae Thermopsidis 1, 0 - 150 ml
Codeini phosphatis 0,15
Sirupi simplicis 30 ml
M.D.S. Take 1 tablespoon 4 times per day.

Solid dosage forms

Powders

1. Rp.: Thiamini bromidi 0,005
Acidi ascorbinici 0,05
Sacchari 0,2
M.f. pulvis
D.t.d. N. 20
S. Take 1 powder 3 times per day.

2. Rp.: Natrii nucleinatis 0,2
D.t.d. N. 10
S. Take 1 powder 3 times per day on an empty stomach.

3. Rp.**:** Zinci oxydi
Dermatoli aa 5,0
Talci ad 50,0
M.f. pulvis subtilissimus
D.S. Sprinkle of affected skin 2 times per day. .

4. Rp.: Camphorae tritae 0,2

D.t.d. N. 10 in charta cerata
S. Take 1 powder 3 times per day.

5. Rp.: Ampicillini trihydratis 0,25
D.t.d. N. 24 in capsulis gelatinosis
S. Assign 2 capsules 6 times per day.

6. Rp.: Calcii gluconatis 1,0
D.t.d. N. 20
S. Take 1 powder 4 times per day.

7. Rp.: Magnesii oxydi 20,0
D.S. Take during heartburn ¼ teaspoons.

8. Rp.: Dibazoli
Papaverini hydrochloridi aa 0,02
Sacchari 0,2
M.f. pulvis
D.t.d. N. 20
S. Take 1 powder 3 times per day.

9. Rp.: Streptocidi
Norsulfazoli aa 10,0
M.f. pulvis subtilissimus
D.S. Sprinkle the wound 1 time per day.

10. Rp.: Extracti Belladonnae 0,015
Sacchari 0,2
M.f. pulvis
D.t.d. N. 10 in charta cerata
S. Take 1 powder 3 times per day.

11. Rp.: Riboflavini 0,01
Sacchari 0,2
M.f. pulvis

D.t.d. N. 20
S. Take 1 powder 3 times per day.

12. Rp.: Analgini 0,5
D.t.d. N. 12
S. Take 1 powder for toothache.

13. Rp.: Natrii sulfatis 50,0
D.S. Tablespoon take on an empty stomach, previously dissolved in 0,5 cups of warm water.

14. Rp.: Aspersionis Xeroformii 5 % - 50,0
D.S. Sprinkle of affected skin 1 time per day. .

15. Rp.: Coffeini 0,05
Sacchari 0,3
M.f. pulvis
D.t.d. N. 10
S. Take 1 powder 3 times per day.

16. Rp.: Levopae 0,5
D.t.d. N 50 in capsulis gelatinosis
S. Take 2 capsules 4 times per day.

17. Rp.: Olei Ricini 1,0
D.t.d. N. 15 in capsulis gelatinosis
S. Take 15 capsules 1 time per day.

18. Rp.: Codeini 0,02
Natrii hydrocarbonati 0,2
M.f. pulvis
D.t.d. N. 10
S. Take 1 powder 3 times per day.

19. Rp.: Kalii permanganatis 5,0

D.S. For rinse of the throat. Before use few crystals dissolve in warm water until a pale pink color.

20. Rp.: Natrii sulfatis 0,15
Papaverini hydrochloridi 0,02
Dibazoli 0,02
Sacchari 0,3
M.f. pulvis
D.t.d. N. 10
S. Take 1 powder 3 times per day.

21. Rp.: Radicis Rhei 0,05
Sacchari 0,2
M.f. pulvis
D.t.d. N. 10
S. Take 1 powder 3 times per day.

22. Rp. : Aspersionis Streptocidi 25% - 50,0
D.S. Sprinkle of affected area of skin.

23. Rp.: Digoxini 0,00025
Spironolactoni 0,025
Sacchari 0,3
M.f. pulvis
D.t.d. N. 20
S. Assign 1 powder 2 times daily.

Tablets and dragee

1. Rp.: Tabulettam Dimedroli 0,05 N. 20
D.S. Take 1 tablet 3 times per day.

Rp.: Dimedroli 0,05
D.t.d. N.20 in tabulettis
S. Take 1 tablet 3 times per day.

2. Rp.: Dragee "Hexavitum" N.50
D.S. Take 1 dragee 2 times per day.

3. Rp.: Dragee Aminazini 0,025 N. 30
D.S. Take 2 dragee 3 times per day.

4. Rp.: Tabl. Enalaprili 0,01 N.20
D.S. Take 1/2 tablets 1 time per day.

Rp.: Enalaprili 0,01
D.t.d. N. 20 in tabl.
S. Take 1/2 tablets 1 time per day.

5. Rp.: Anaesthesini
Dermatoli aa 0,1
Magnesii oxydi 0,3
D.t.d. N.50 in tabl.
S. Take 1 tablet 3 times per day.

6. Rp.: Tabl. "Theophedrinum" N.20
D.S. Take 1 tablet 1 time per day.

7. Rp.: Dragee Diazolini 0,2 N.20
D.S. Take 1 dragee after eating.

8. Rp.: Tabl. «Papazolum» N.40
D.S. Take 1 tablet 3 times per day.

9. Rp.: Amidopyrini 0,25
Coffeini-natrii benzoatis 0,1
D.t.d. N.12 in tabl.
S. Take 1 tablet for headache.

10. Rp.: Tabl. Nitroglycerini 0,0005 N.40

D.S. Assign ½ tablet under the tongue for pain in the heart.

Rp.: Nitroglycerini 0,0005
D.t.d. N.40 in tabl.
S. Take ½ tablet under the tongue for pain in the heart.

11. Rp.: Tabl. Raunatini 0,002 N.100
D.S. Take 1 tablet 2 times per day.

Rp.: Raunatini 0,002
D.t.d. N.100 in tabl.
. S. Take 1 tablet 2 times per day.

12. Rp.: Dragee Elenii 0,01 N. 50
D.S. Take 2 dragee 3 times per day.

13. Rp.: Tabl. Furacilini 0,02 N.40
D.S. Dissolve 1 tablet in ½ cup of warm water.
For rinse of the throat 4 times per day.

14. Rp.: Amidopyrini
Analgini aa 0,25
D.t.d. N.12 in tabl.
S. Take 1 tablet for headache.

15. Rp.: Dragee Nystatini 500000 UA N. 30
D.S. Take 1 dragee 4 times per day.

16. Rp.: Tabl. Nebivololi 0,005 N.50
D.S. Take 2 tablets 1 time daily.

Soft dosage forms
Ointments and pastes

1. Rp.: Unguenti Hydrocortisoni 0,5 % - 2,5
D.S. Lay behind the eyelids in the morning and evening.

2. Rp.: Pastae Gramicidini 30,0
D.S. Bandage the wound with paste 1 time every 2 days.

3. Rp.: Ung. Dibiomycini 1 % - 3,0
D.S. Lay behind the eyelid 1 time per day.

4. Rp.: Resorcini
Acidi salicylici aa 3,0
Lanolini
Vaselini aa 12,0
M.f. unguentum
D.S. Lubricate the affected area of skin.

5. Rp.: Acidi salicylici 1,0
Zinci oxydi 10,0
Talci 10,0
Vaselini ad 50,0
M.f. pasta
D.S. Applied to the affected skin areas.

6. Rp.: Picis liquidae
Sulfuris praecipitati aa 5,0
Vaselini ad 50,0
M.f. unguentum
D.S. Lubricate the affected area of skin 2 times per day. .

7. Rp.: Anaesthesini 0,75
Iodoformii 1,0
Talci 10,0
Vaselini ad 25,0
M.f. pasta
D.S. Applied to the affected skin areas 1 time per day.

8. Rp.: Ung. sulfurati 40,0
D.S. Lubricate the affected skin areas 3 times per day.

9. Rp.**:** Pastae Zinci - salicylatae 25,0
D.S. Applied to the affected skin areas 2 times per day.

10. Rp.: Acidi salicylici 1,2
Acidi borici 0,8
Zinci oxydi 4,0
Talci 12,0
Vaselini ad 40,0
M.f. pasta
D.S. Applied to the affected skin areas in the morning and evening.

11. Rp.: Ung. Hydrocortisoni 0,1 % - 5,0
D.S. Lubricate the lips 2 times per day.

Liniments

1. Rp.: Linimenti Synthomycini 10 % -25,0
D.S. For tratment of burn surface.

2. Rp.: Linimenti "Naphthalginum" 100,0
D.S. For the rubbing of waist.

3. Rp.: Chloroformii

Methylii salicylatis
Olei Hyoscyami aa 30 ml
M.f. Linimentum
D.S. Rub the aching joints.

4. Rp.: Olei Terebinthinae 10 ml
Chloroformii
Methylii salicylatis aa 20 ml
Olei Helianthi ad 100 ml
M.f. linimentum
D.S. For the rubbing of joints.

5. Rp.: Linimenti Streptocidi 5 % - 50,0
D.S. Applied to the wound.

Suppositories

1. Rp.: Suppositoria rectalia "Anusolum" N.10
D.S. Enter 1 suppository into the anus 3 times per day.

2. Rp.: Supp. rectale cum Cordigito 0,00012 N.10
D.S. Enter into the anus 1 suppository 3 times per day.

3. Rp.: Supp. rectale cum Anaesthesino 0,1 N. 20
D.S. Enter 1 suppository into the rectum with pain.

Rp.: Anaesthesini 0,1
Olei Cacao q.s.
ut f. supp. rectale
D.t.d. N. 20
S. Enter 1 suppository into the rectum with pain.

4. Rp.: Supp. vaginale cum Ichthyolo 0,2 N. 10

D.S. Enter 1 suppository into vagina 1 time per day.

5. Rp.: Extracti Bellaaonnae 0,01
Tannini 0,3
Olei Cacao q.s.
ut f. supp. rectale
D.t.d. N. 10
S. Enter 1 suppository into vagina at night.

6. Rp.: Supp. rectale cum Laevomycetino 0,5 N. 20
D.S. Enter 1 suppository into the anus 3 times per day.

7. Rp.: Supp. rectale cum Euphyllino 0,3 N. 10
D.S. Enter 1 suppository into the anus 3 times per day.

Rp.: Euphyllini 0,3
Olei Cacao q.s.
ut f. supp. rectale
D.t.d. N. 10
S. Enter 1 suppository into the anus 3 times per day.

8. Rp.: Supp. vaginalia "Osarbonum" N. 20
D.S. Enter 1 suppository into vagina at night.

9. Rp.: Supp. rectale cum Indomethacino 0,05 N. 20
D.S. Enter 1 suppository into the anus 3 times per day.

Pharmaceutical dictionary

A

Adonis vernalis	Adonis vernalis
Adrenaline hydrochloride	Adrenalini hydrochloridum
Aerosol	Aerosolum
Alcohol	Spiritus
Alum	Alumen
Amidopyrine	Amidopyrinum
Aminasin (Chlorpromasine)	Aminasinum
Ampicillini trihydrate	Ampicillini trihydras
Ammonia-anise drops	Liquor Ammonii anisatusi
Analgin (Analgene)	Analginum
Apomorphine hydrochloride	Apomorphini hydrochloridum
Atropine sulfate	Atroini sulfas

B

Bear ears	Uva ursi
Barbital-sodium	Barbital-natrium
Belladonna	Belladonna
Birch tar (деготь березовый)	Pix liquida
Boric acid	Acidum boricum
Brilliant green	Viride nitens

Buckthorn (крушина)	Frangula
Burnet (кровохлебка)	Sanguisorba
Butirol	Butirolum
Butter	Butirum

C

Caffeine	Coffeinum
Caffeine-sodium benzoate	Coffeium-natrii bensoas
Calcium gluconate	Calcii gluconas
Calcium carbonate	Calcii carbonas
Calcium chloride	Calcii chloridum
Camphor grated	Camphora trita
Castor oil	Oleum Ricini
Chamomile (ромашка)	Chamomila
Chloral hydrate	Chloralum hydratum
Chloramphenicol	Laevomycetinum
Chloramine	Chloraminum
Composite	Compositus
Codeine	Codeinum
Codeine phosphate	Codeini phosphas
Cocaine hydrochloride	Cocaini hydrochloridum

D

Dermatol	Dermatolum
Diasolin	Diasolinum
Dibazolum	Dibasolum
Dicain	Dicainum
Dilute	Dilutus
Diphenhydramine (димедрол)	Dimedrolum
Drop	Gutta

E

Extract	Extractum
Elenium	Elenium
Emulsion	Emulsum
Ethacridine lactate	Aethacridini lactas
Ethylmorphine hydrochloride	Aethylmorphini hydrochloridum

F

Foxglove (наперстянка)	Digitalis
Furatsilin	Furacillinum
Furozalidon	Furosalidonum

G

Glycerol	Glycerinum
Glucose	Glucosum
Gramicidin	Gramicydinum
Granule	Granulum

H

Henbane (белена)	Hyoscyamus
Henbane oil	Oleum Hyoscyami
Hydrocortisone	Hydrocortisonum
Hydrocortisone acetate	Hydrocortisoni acetas
Hydrogen peroxide	Hydrogenii perosidum
Hydrochloric acid	Acidum hydrochloridum

I

Ipecac	Ipecacuanha
Istoda (истод)	Polygala
Ichthyol	Ichthyolum
Immediately	Statim
Iron lactate	Ferri lactas

L

Lanolin	Lanolinum

Lidase	Lidasa
Lilly of the valley	Convallaria
Liniment	Linimentum
Linseed oil	Oleum Lini

M

Magnesium carbonate	Magnii carbonas
Magnesium oxide	Magnii oxidum
Menthol	Mentholum
Methyl salicylate	Methylii salicylas
Mint	Mentha
Motherwort (пустырник)	Leonurus
Morphine hydrochloride	Morphini hydrochloridum
Mucus starch	Mucilago Amyli

N

Norsulfazol	Norsulfasolum
Novocaine	Novocainum
Nystatin	Nystatinum

O

Ointment	Unquentum
Olive oil	Oleum Olivarum

Oxacillin	Oxacillinum

P

Papaverine hydrochloride	Papaverini hydrochloridun
Paste	Pasta
Pepsin	Pepsinum
Perhydrol	Perhydrolum
Pilocarpine hydrochloride	Pilocarpini hydrochloridum
Polyglukin	Polyglucinum
Potassium permanganate	Kalii permanganas
Powder smallest	Pulvis subtilissimus
Powder for sprinkling	Aspersio
Prednisolone	Prednisolonum
Promedol	Promedolum
Proserine	Proserinum

R

Rhubarb (ревень)	Reus
Rezortsin	Resorcinum
Riboflavin	Riboflavinum

S

Sage (шалфей)	Salvia

Senega	Senega
Silver nitrate	Argenti nitras
Simple syrup	Sirupus simplex
Sodium bromide	Natrii bromidum
Sodium hydrocarbonate	Natrii hydrocarbonas
Sodium salicylate	Natrii salicylas
Sodium chloride	Natrii chloridum
Sodium fluoride	Natrii phthoridum
Solution	Solutio
Streptomycin sulfate	Streptomycini sulfas
Strophanthus	Strophanthus
Strophanthin	Strophantinum
Strychnine nitrate	Strychnini nitras
Syrup	Sirupus
Sulfur precipitated	Sulfur precipitatum
Sunflower oil	Oleum Helianthy
Suppository	Suppositorium

T

Tablet	Tabuletta
Talc	Talcum
Tannin	Tanninum
Thiamine bromide	Thiamini bromidum

Tincture	Tinctura
Thiopental sodium	Thiopentalum natrium
Turpentine	Oleum Terebinthine
Tutsan (зверобой)	Hypericum

U

Ultracain	Ultracainum
Urodan	Urodanum

Z

Zinc oxide	Zinci oxydum

Literature list

1. Харкевич Д.А. Фармакология. Учебник. Изд-во ГЭОТАР-Медиа. – Москва, 2013. – 780 с.

2. Аляутдин Р.Н. Фармакология. Учебник. Изд-во ГЭОТАР-Медиа. – Москва, 2015. – 1104 с.

3. Кузьмин О.Б., Жежа В.В., Ландарь Л.Н. Общая рецептура. Учебное пособие для педиатрического факультета. Изд-во ОрГМА. – Оренбург, 2012. – 74 с.

4. Кузьмин О.Б., Бучнева Н.В., Сердюк С.В. Общая рецептура. Учебное пособие для стоматологического факультета. Изд-во ОрГМА. – Оренбург, 2013. – 104 с.